UPM

UNIVERSITI PUTRA MALAYSIA

TOWARDS A WORLD CLASS UNIVERSITY

laporan tahunan
annual report
2004

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PERPUSTAKAAN SULTAN ABDUL SAMAD UPM

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Perpustakaan Sultan Abdul Samad
Universiti Putra Malaysia

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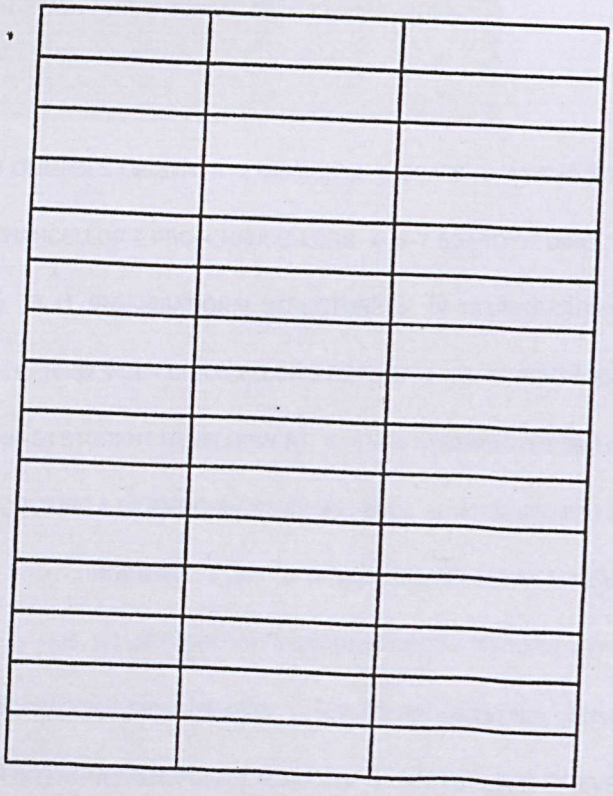

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Selayang Pandang

Glimpses of 2004

PERPUSTAKAAN SULTAN ABDUL SAMAD
UNIVERSITI PUTRA MALAYSIA
ARKIB
Perpustakaan Sultan Abdul Samad
Universiti Putra Malaysia

Koleksi Malaysiana

PENCAPAIAN PENYELIDIKAN

- Khawarizmi International Award ke-17
- Malaysia Toray Science Foundation Award
- Anugerah Inovasi Perkhidmatan Awam
- The Outstanding Young Malaysian Awards
- 2 emas, 6 perak, 2 gangsa di Palexpo, Geneva
- 3 emas, 1 perak, 1 gangsa, 3 Anugerah Khas di Inpex, USA
- 5 emas, 3 perak di BIS, London
- 3 emas, 2 perak, 1 Anugerah Khas di IENA, Jerman
- 1 emas, 2 perak, 5 gangsa di I-TEX, Kuala Lumpur
- 23 pingat di Pameran S&T, Kuala Lumpur
- Geran berjumlah RM 191.48 juta

PATEN DAN KOMERSIALISASI

- 33 produk dikomersilkan
- 250 dalam proses pengkomersilan
- 4 berjaya menerima sijil paten
- 74 produk telah didaftarkan (patent pending)
- 32 dalam proses permohonan paten

PENERBITAN

- 1,362 artikel jurnal, 2,123 kertas persidangan, 319 abstrak, 117 buku, 49 laporan konsultasi, 314 lain-lain penerbitan

ISO 9001:2000

- Fakulti Ekonomi dan Pengurusan
- Pusat Kesihatan Mahasiswa
- Pejabat Pendaftar

AGROBIO

- Pusat Kecemerlangan Pendidikan Pertanian
- 35% daripada peruntukan Belanja Mengurus
- 121 projek penyelidikan daripada 498 yang diluluskan

ENTITI BARU

- Fakulti Bioteknologi dan Sains Biomolekul
- Fakulti Pengajian Alam Sekitar
- Akademi Sukan
- Pusat Pembangunan Akademik (CADe)

PENGAJARAN DAN PEMBELAJARAN

- Sekolah Pengajian Siswazah Pengurusan terbaik di Malaysia dan tangga ke-7 di Asia
- Enrolmen pelajar siswazah 4,682
- Enrolmen pelajar pra siswazah 21,425
- Jumlah graduan 10,386

RESEARCH ACHIEVEMENTS

- 17th Khawarizmi International Award
- Malaysia Toray Science Foundation Award
- Public Service Innovation Award
- The Outstanding Young Malaysian Awards
- 2 gold, 6 silver, 2 bronze medals at Palexpo, Geneva
- 3 gold, 1 silver, 1 bronze, 3 Special Awards at Inpex, USA
- 5 gold, 3 silver at BIS, London
- 3 gold, 2 silver, 1 Special Award at IENA, Germany
- 1 gold, 2 silver, 5 bronze at I-TEX, Kuala Lumpur
- 23 medals at S&T, Exhibition, Kuala Lumpur
- Grants amounting RM 191.48 million

PATENT AND COMMERSIALISATION

- 33 commercialised products
- 250 products in the process of commercialisation
- 4 products have successfully received patent certificates
- 74 products have been registered (patent pending)
- 32 products in the process of patent application

PUBLICATION

- 1,362 journal articles, 2,123 conference papers, 319 abstracts, 117 books, 49 consultation reports, 314 other publications

ISO 9001:2000

- Faculty of Economics and Management
- Student Health Centre
- Registry

AGROBIO

- Agricultural Education Excellence Centre
- 35 % of the Operating Expenditure allocation
- 121 research projects out of 498 has been approved

NEW ENTITIES

- Faculty of Biotechnology and Biomolecular Science
- Faculty of Environmental Science
- Sports Academy
- Centre for Academic Development (CADE)

TEACHING AND LEARNING

- Best Graduate Management School in Malaysia and the 7th Best in Asia
- Enrolment of 4,682 graduate students
- Enrolment of 21,425 undergraduates
- Total of 10,386 graduates

MISI

Wawasan Universiti

ialah untuk menjadi Universiti

Bertaraf Dunia

Misi Universiti adalah menjadi Pusat Pembelajaran dan Penyelidikan yang unggul, yang memberikan sumbangan bukan sahaja kepada kemajuan manusia dan penerokaan ilmu, tetapi juga kepada pembentukan kekayaan dan pembangunan negara.

Mission

The University's Vision is to be a World Class University

The University's mission is to be a leading Centre of Learning and Research, contributing not only towards human advancement and discovery of knowledge, but also to the creation of wealth and nation building.

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PERPUSTAKAAN SULTAN ABDUL SAMAD
UNIVERSITI PUTRA MALAYSIA

MATLAMAT

GOALS

UPM telah menetapkan lapan matlamat untuk merealisasikan wawasannya. Setiap matlamat berikut mempunyai objektif khusus, iaitu dalam bentuk yang boleh diukur pencapaiannya. Pencapaian setiap objektif bergantung kepada pelaksanaan strategi dan pelan tindakan masing-masing. Kelapan-lapan matlamat tersebut adalah seperti berikut :

- Melahirkan graduan yang berkualiti, berdaya saing dan berupaya untuk terus maju melalui pembelajaran yang berterusan;
- Menjadikan UPM, Universiti yang terkemuka dalam bidang penyelidikan;
- Meningkatkan keupayaan UPM sebagai pusat pengajian dan perkhidmatan pertanian dan biosumber terkemuka di peringkat antarabangsa;
- Memantapkan sistem pengurusan berkualiti yang cekap dan berkesan, telus dan mesra pelanggan;
- Membangunkan sumber manusia serta persekitaran profesional yang cemerlang;
- Membudayakan teknologi maklumat dan komunikasi (ICT) melalui e-Universiti;
- Menjana dan mengurus sumber kewangan Universiti secara cekap dan berkesan; dan
- Meningkatkan kedudukan UPM sebagai Pusat Perkhidmatan Pembangunan Profesional dan Pendidikan Lanjutan

DASAR KUALITI

Kami, staf Universiti Putra Malaysia beriltizam ke arah kecemerlangan melalui penerapan budaya kualiti dalam pengajaran, penyelidikan dan perkhidmatan profesional untuk memenuhi ekspektasi pelanggan.

UPM has established eight goals to realize its vision. Each goal has its own specific objectives, set forth in such a way that achievements can be measured.The achievement of each objective depends on the execution of the respective master plans.The eight goals are as follows:

- To produce quality graduates who are competitive and resilient through lifelong learning;
- To transform UPM into a renowned research university;
- To enhance UPM's capability as a centre for learning and teaching in agricultural knowledge and technology.
- To enhance a quality management system that is effective, efficient, transparent and client-friendly;
- To create and develop an excellent human resources and professional environment;
- To promote an Information and Communication Technology(ICT) culture through e-University;
- To generate and manage University's financial resources effectively, and
- To establish UPM as a centre for professional development services and continuing education.

QUALITY POLICY

We, the staff of University Putra Malaysia, are committed towards excellence through the inculcation of quality culture in teaching, research and professional service, to fulfil the expectations of our clients.

ETIKA KERJA
Work Ethics

ETIKA KERJA

Takrif

Etika kerja merupakan prinsip dan panduan tingkah laku yang menjadi pegangan oleh setiap staf Universiti Putra Malaysia yang berlandaskan nilai murni sejagat.

Objektif

- Menanamkan sifat positif dalam melaksanakan tugas yang diberi serta dapat meningkatkan kualiti perkhidmatan
- Meningkatkan disiplin diri bagi menghasilkan perkhidmatan cemerlang dengan memenuhi kehendak pelanggan dan organisasi
- Memberikan sumbangan positif yang berterusan kepada negara

Prinsip

Etika Kerja Universiti Putra Malaysia perlu dilaksanakan dan dihayati berdasarkan prinsip yang berikut :

- Niat yang betul
- Perlakuan yang baik
- Penggerak ke arah kebaikan
- Memperkotakan apa yang dikatakan
- Beradab
- Kekitaan, kesetiaan, syura dan muafakat

Nilai Murni

Terdapat dua belas nilai murni yang menyokong Etika Kerja Universiti Putra Malaysia, iaitu :

- Amanah
- Adil
- Benar dan Telus
- Bijaksana
- Bersyukur dan Sabar
- Cekap, Cepat dan Tepat
- Ikhlas
- Penyayang
- Berdisiplin
- Jujur
- Bertanggungjawab
- Berdedikasi

WORK ETHICS

Definition

Work ethics are the conduct principles and behavioural guidelines that are based on good universal values adhered to by every staff of University Putra Malaysia.

Objectives

- To instill positive attitudes in discharging given tasks and duties that will improve the quality of service.
- To improve the level of self-discipline towards producing excellent services that meet the needs of the clients, as well as the organisation.
- To provide continuous, positive contributions to the nation.

Principles

University Putra Malaysia's work ethics should be implemented and practised based on the following principles.

- Having the right intention
- Showing excellent conduct
- Promoting goodness in society
- Executing all duties as promised
- Exhibiting good manners
- Upholding the spirit of loyalty, togetherness,consensus and unity

Noble Values

There are twelve core values that are the underlying cornerstone of UPM's Work Ethics and they are as follows :

- Trustworthiness
- Justice
- Truthfulness and transparency
- Wisdom
- Gratefulness and patience
- Efficiency, promptness and accuracy
- Sincerity
- Compassion
- Discipline
- Honesty
- Responsibility
- Dedication

Canselor / Chancellor

DYMM Sultan Sharafuddin Idris Shah Ibni Almarhum
Sultan Salahuddin Abdul Aziz Shah Al - Haj

Pro-Canselor / Pro-Chancellors

Y. Bhg. Tan Sri Dato' Thong Yaw Hong

Y. Bhg. Tan Sri Dato' Dr. Nayan Ariffin

Lembaga Pengarah

Pengarah

Y. Bhg Tan Sri Dato' Seri Dr. Haji Zainul Ariff Haji Hussain

Y. Bhg. Dato' Dr. Mohd Yahya Nordin

Y. Bhg. Datuk Dr. Abdul Aziz Sheikh Abdul Kadir

Y. Bhg. Profesor Dato' Dr. Ir. Mohd Zohadie Bardaie

Board of

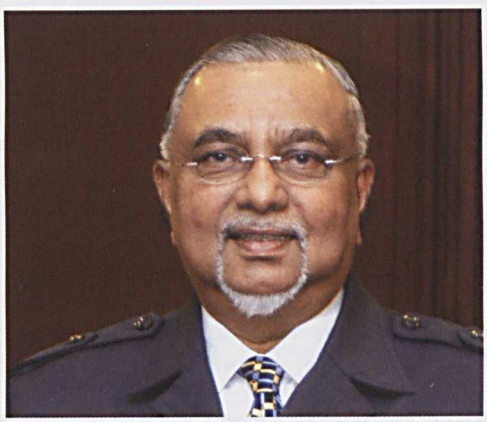
Directors

Y. Bhg. Tan Sri Dato' Lee Shen Cheng

Encik Md. Saad Hashim

Encik Kamalul Aripin Musa

Y. Bhg. Datuk Sulaiman Daud



Y. Bhg Datuk Haji Isahak Mohd. Yusuf

PENGERUSI / CHAIRMAN

* Y. Bhg. Datuk Ramly Ahmad
(Sehingga 14 Mac 2004 / until 14 March 2004)

Y.Bhg Tan Sri Dato' Seri Dr. Haji Zainul Ariff Haji Hussain (Mulai 23 Jun 2004 / effective 23 June 2004)

AHLI / MEMBERS

Y. Bhg. Profesor Dato' Dr. Ir. Mohd Zohadie Bardaie
(Naib Canselor / Vice Chancellor)

* Y. Bhg. Dato' Ambrin Buang
(sehingga 9 April 2004 / until 9 April 2004)

Y. Bhg. Dato' Mohd Yahya Nordin
(mulai 1 Jun 2004 / effective 1 June 2004)

* Dr. Wan Abdul Aziz Wan Abdullah
(sehingga 24 Januari 2004 / until 24 January 2004)

Encik Md. Saad Hashim
(mulai 1 Ogos 2004 / effective 1 August 2004)

Y. Bhg. Datuk Dr. Abdul Aziz Sheikh Abdul Kadir

Y. Bhg Datuk Haji Isahak Mohd. Yusuf

Y. Bhg. Tan Sri Dato' Lee Shen Cheng

* Y. Bhg. Datuk Patrick Lim Soo Kit
(sehingga 14 Mac 2004 / until 14 March 2004)

Y. Bhg. Datuk Sulaiman Daud
(mulai 15 Mac 2004 / effective 15 March 2004)

SETIAUSAHA / SECRETARY

Encik Kamalul Aripin Musa
(Pendaftar / Registrar)

* *Tiada dalam gambar*

SENAT

Senate

Prof. Dato' Dr. Ir. Mohd Zohadie Bardaie
- Naib Canselor / Vice - Chancellor

AHLI / MEMBERS

Prof. Dr. Hj. Muhamad Awang
- Timbalan Naib Canselor (Akademik)
- Deputy Vice - Chancellor (Academic Affairs)

Prof. Dr. Nik Mustapha R. Abdullah
- Timbalan Naib Canselor (Pembangunan)
- Deputy Vice - Chancellor (Development)

Prof. Madya Dr. Azali Mohamed
- Timbalan Naib Canselor (Hal Ehwal Pelajar)
- Deputy Vice Chancellor (Student Affairs)

Prof. Madya Dr. Rosli Talif
- Dekan, Fakulti Bahasa Moden dan Komunikasi
- Dean, Faculty of Modern Languages and Communication

Prof. Dr. Rozumah Baharuddin
- Dekan, Fakulti Ekologi Manusia
- Dean, Faculty of Human Ecology

Prof. Madya Hj. Zainal Abidin Kidam
- Dekan, Fakulti Ekonomi dan Pengurusan
- Dean, Faculty of Economics and Management

Prof. Dr. Mohd Zamri Saad
- Dekan, Fakulti Perubatan Veterinar
- Dean, Faculty of Veterinary Medicine

Prof. Ir. Dr. Radin Umar Radin Sohadi
- Dekan, Fakulti Kejuruteraan
- Dean, Faculty of Engineering

Prof. Madya Dr. Zakaria Kasa
- Dekan, Fakulti Pengajian Pendidikan
- Dean, Faculty of Educational Studies

Prof. Dr. Mohd Hamami Sahri
- Dekan, Fakulti Perhutanan
- Dean, Faculty of Forestry

Prof. Dr. Mohd. Khanif Yusop
- Dekan, Fakulti Pertanian
- Dean, Faculty of Agriculture

Prof. Madya Dr. Mustafa Kamal Mohd Shariff
- Dekan, Fakulti Rekabentuk dan Senibina
- Dean, Faculty of Design and Architecture

Prof. Madya Dr. Abd. Azim Abdul Ghani
- Dekan, Fakulti Sains Komputer dan Teknologi Maklumat
- Dean, Faculty of Computer Science and Information Technology

Prof. Dr. Jinap Selamat
- Dekan, Fakulti Sains dan Teknologi Makanan
- Dean, Faculty of Food Science and Technology

Prof. Dr. Azhar Md. Zain
- Dekan, Fakulti Perubatan dan Sains Kesihatan
- Dean, Faculty of Medicine and Health Sciences

Prof. Dr. Wan Md. Zin Wan Yunus
- Dekan, Fakulti Sains
- Dean, Faculty of Science

Prof. Dr. Aini Ideris
- Dekan, Sekolah Pengajian Siswazah
- Dean, School of Graduate Studies

Prof. Madya Dr. Arfah Salleh
- Pemangku Dekan, Sekolah Pengajian Siswazah Pengurusan
- Acting Dean, Graduates School of Management

Prof. Dr. Dahlan Ismail
- Dekan, Fakulti Sains Pertanian dan Makanan (UPMKB)
- Dean, Faculty of Agriculture and Food Science (UPMKB)

Prof. Dr. Abu Bakar Salleh
- Dekan, Fakulti Bioteknologi dan Sains Biomolekul
- Dean, Faculty of Biotechnology and Biomolecular Science

Prof. Dr. Md. Nasir Shamsuddin
- Dekan, Fakulti Pengajian Alam Sekitar
- Dean, Faculty of Environmental Studies

Prof. Dr. Mohd Azmi Mohd Lila
- Pengarah, Institut Biosains
- Director, Institute of Bioscience

Prof. Dr. Syed Tajuddin Syed Hassan
- Pengarah, Akademi Hutan Hujan
- Director, Rainforest Academy

Prof. Dr. Abdul Aziz Sahari
- Pengarah, Pusat Pendidikan Luar
- Director, Centre for External Education

Prof. Dr. Rahim Md Sail
- Pengarah, Institut Pengajian Komuniti dan Keamanan (PEKKA)
- Director, Institute of Community and Peace Studies (PEKKA)

Prof. Dato' Dr. Kamel Ariffin Mohd Atan
- Pengarah, Institut Penyelidikan Matematik (INSPEM)
- Director, Institute of Mathematical Research (INSPEM)

Prof. Dr. Borhanuddin Mohd Ali
- Pengarah, Institut Multimedia dan Perisian (IMP)
- Director, Institute of Multimedia and Software (IMP)

Y.M Prof. Madya Dr. Tengku Aizan Tengku Abdul Hamid
- Pengarah, Institut Gerontologi
- Director, Institute of Gerontology

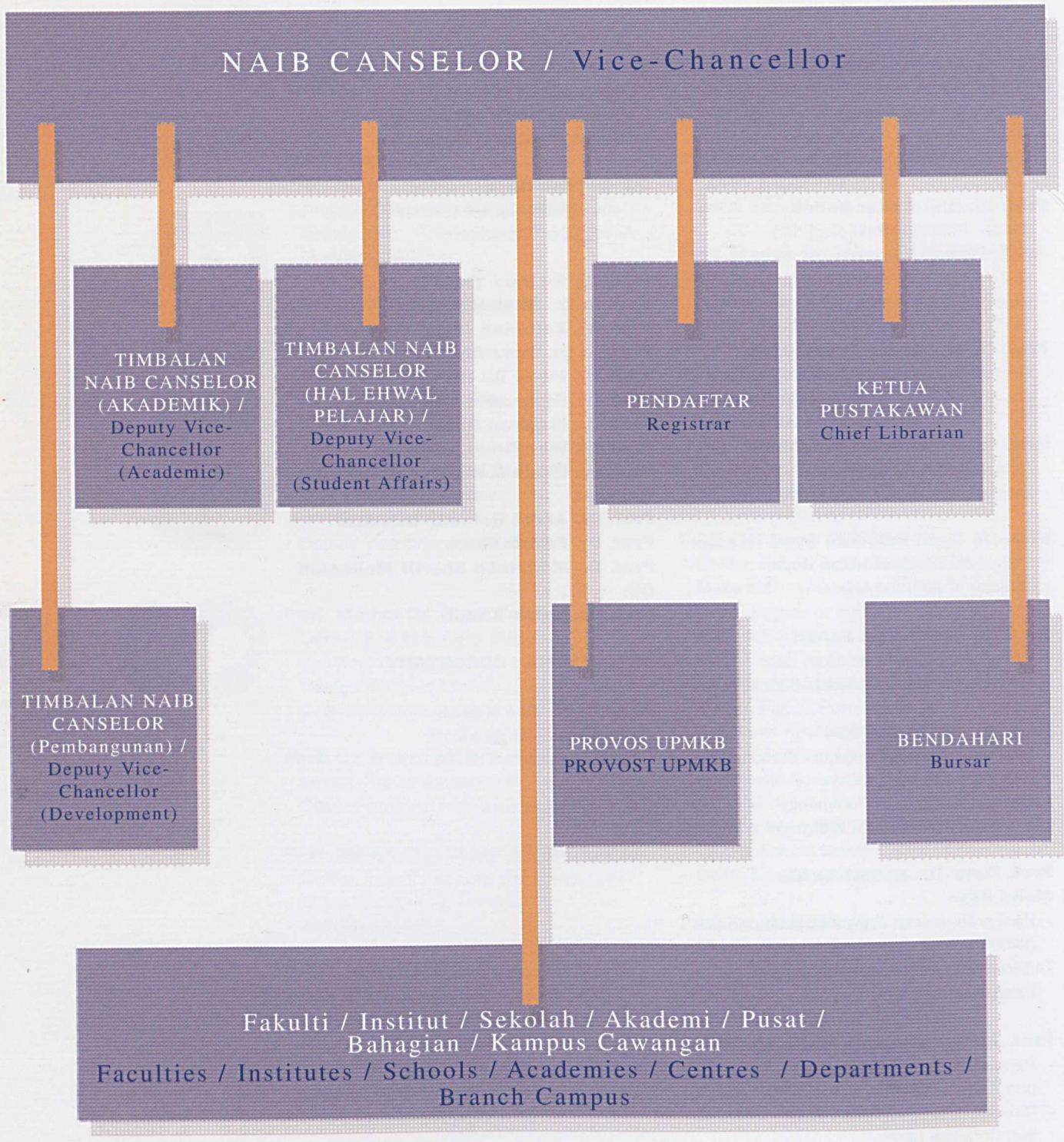
Cik Badilah Saad
- Pemangku Ketua Pustakawan
- Acting Chief Librarian

Prof. Dr. Salmah Yusof
Prof. Ir. Dr. Shahnon Basri
Prof. Dr. Zakariah Abdul Rashid
Prof. Ir. Dr. Desa Ahmad
Prof. Dr. Mohd Ali Hassan
Prof. Dr. Fatimah Mohd. Arshad
Prof. Dr. Mahiran Basri
Prof. Dr. Wan Omar Abdullah
Prof. Dr. Shaik Mohd Noor Alam SM Hussain
Prof. Dr. Abdul Rahman Md. Aroff
Prof. Dr. Sariah Meon
Prof. Dr. Mohamed Shariff Mohamed Din
Prof. Dr. Kaida Khalid

SETIAUSAHA / SECRETARY

Puan Chek Zan Kasah
- Ketua Bahagian Akademik
- Head of Academic Section

Struktur Organisasi



Organisational

FAKULTI/ INSTITUT/ SEKOLAH AKADEMI/ PUSAT

Fakulti Bahasa Moden dan Komunikasi
Fakulti Ekologi Manusia
Fakulti Ekonomi dan Pengurusan
Fakulti Kejuruteraan
Fakulti Pengajian Pendidikan
Fakulti Perhutanan
Fakulti Pertanian
Fakulti Perubatan dan Sains Kesihatan
Fakulti Perubatan Veterinar
Fakulti Rekabentuk dan Senibina
Fakulti Sains
Fakulti Pengajian Alam Sekitar
Fakulti Sains Komputer dan Teknologi Maklumat
Fakulti Sains dan Teknologi Makanan
Fakulti Bioteknologi dan Sains Biomolekul
Fakulti Sains Pertanian dan Makanan (Kampus Bintulu)
Sekolah Pengajian Siswazah
Sekolah Pengajian Siswazah Pengurusan
Institut Biosains
Institut Multimedia dan Perisian
Institut Pengajian Komuniti dan Keamanan (PEKKA)
Institut Teknologi Maju (ITMA)
Institut Gerontologi
Institut Penyelidikan Matematik
Akademi Sukan
Akademi Hutan Hujan
Pusat Pendidikan Luar
Pusat Islam
Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah
Pusat Pengurusan Penyelidikan
Pusat Pembangunan Perniagaan
Pusat Pembangunan Akademik (CADe)
Pusat Perkhidmatan Kerjaya & Alumni
Pusat Pemajuan Profesional (PACE)
Taman Pertanian Universiti

FACULTIES/ INSTITUTES / SCHOOLS/ ACADEMIES/ CENTRES

Faculty of Modern Languages and Communication
Faculty of Human Ecology
Faculty of Economics and Management
Faculty of Engineering
Faculty of Educational Studies
Faculty of Forestry
Faculty of Agriculture
Faculty of Medicine and Health Science
Faculty of Veterinary Medicine
Faculty of Design and Architecture
Faculty of Science
Faculty of Environmental Studies
Faculty of Computer Science and Information Technology
Faculty of Food Science and Technology
Faculty of Biotechnology and Biomolecular Sciences
Faculty of Agriculture and Food Science (Bintulu Campus)
School of Graduate Studies
Graduate School of Management
Institute of Bioscience
Institute of Multimedia and Software
Institute of Community and Peace Studies (PEKKA)
Institute of Advanced Technology (ITMA)
Institute of Gerontology
Institute of Mathematical Research
Sports Academy
Rainforest Academy
Centre for External Education
Islamic Centre
Sultan Salahuddin Abdul Aziz Shah Cultural and Arts Centre
Research Management Centre
University Business Centre
Centre for Academic Development (CADe)
Centre for Career Services and Alumni
Professional Advancement Centre (PACE)
University Agriculture Park

Structure

Pihak

Pengurusan UNIVERSITI

Prof. Madya Dr. Azali Mohamed

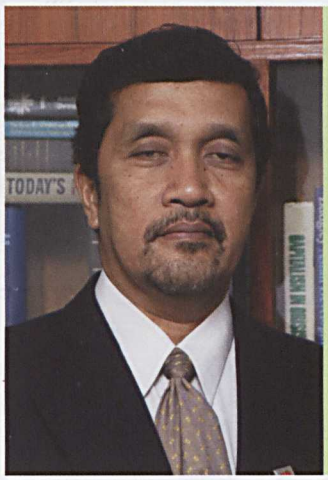
Prof. Dr. Muhamad Awang

Prof. Dato' Dr. Ir. Mohd Zohadie Bardaie

University

Management

Encik Zulkifli Othman



Tuan Haji Kamalul Aripin Musa

Prof. Dr. Nik Mustapha Raja Abdullah

NAIB CANSELOR / VICE - CHANCELLOR
Prof. Dato' Dr. Ir. Mohd Zohadie Bardaie
Dip. Agric. (Malaya), B.S., M.S.
(California, Davis), Ph.D.(Cornell), M.I.E.M., P.Eng.

TIMBALAN NAIB CANSELOR (AKADEMIK) /
DEPUTY VICE - CHANCELLOR(ACADEMIC AFFAIRS)
Prof. Dr. Muhamad Awang
Drs.(ITB), Ph.D.(Sheffield)

TIMBALAN NAIB CANSELOR (PEMBANGUNAN) /
DEPUTY VICE - CHANCELLOR (DEVELOPMENT)
* Prof. Dr. Makhdzir Mardan
Dip. Agric.(UPM),B.S. (California, Davis),M.S.,Ph.D. (Oregon State)
(sehingga 31Mei 2004 / until 31 May 2004)
Prof. Dr. Nik Mustafa Raja Abdullah
Dip. Agric.(UPM), B.S., M.S.(Louisiana State), Ph.D.(Guelph)
(mulai 1Jun 2004 / effective 1 June 2004)

Cik Badillah Saad

TIMBALAN NAIB CANSELOR (HAL EHWAL PELAJAR) /
DEPUTY VICE - CHANCELLOR (STUDENT AFFAIRS)
* Prof.Dr. Abdullah Al-Hadi Mohamed
B.A. (Hons.) (UKM), M.S.
(sehingga 29 Februari 2004 / until 29 February 2004)
(Eastern Michigan), Ph.D. (Malaya)
Prof. Madya Dr. Azali Mohamed
Dip.Agric.,B.Sc.(UPM),M.Sc., Ph.D. (Cardiff)
(Mulai 16 Mei 2004 / effective 16 May 2004)

PENDAFTAR / REGISTRAR
Tuan Haji Kamalul Aripin Musa
B.A.(Hons) (Malaya)

PEMANGKU BENDAHARI / ACTING BURSAR
Encik Zulkifli Othman

KETUA PUSTAKAWAN / CHIEF LIBRARIAN
* Kamariah Abdul Hamid
A.L.A.(London), M.L.S. (Hawaii)
(sehingga 22 Februari 2004 / *until 22 February 2004)*

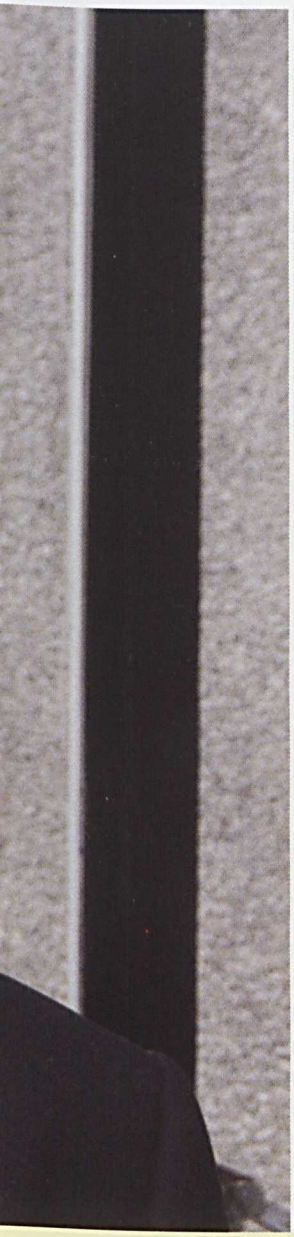
PEMANGKU KETUA PUSTAKAWAN /
ACTING CHIEF LIBRARIAN
Cik Badillah Saad
(mulai1 Mei 2004 /effective 1 May 2004)

* *Tiada dalam gambar*

Y. Bhg. Prof. Dato' Dr. Ir. Mohd Zohadie Bardaie

Laporan Naib Canselor
Vice Chancellor's Report

Misi Universiti adalah menjadi Pusat Pembelajaran dan Penyelidikan yang unggul, yang memberikan sumbangan bukan sahaja kepada kemajuan manusia dan penerokaan ilmu, tetapi juga kepada pembentukan kekayaan dan pembangunan negara.



Pendahuluan

Tahun 2004 mencatatkan pelbagai peristiwa pahit dan manis dalam diari Universiti Putra Malaysia (UPM). Ia merupakan satu tahun yang penuh dengan cabaran dan catatan peristiwa turut menggambarkan kematangan UPM untuk bersaing di pentas antarabangsa. Bagi UPM, sesuatu halangan yang mendatang dianggap sebagai cabaran yang seharusnya dihadapi secara bersama oleh seluruh warganya. Namun demikian, sesuatu cabaran itu sentiasa dipandang secara positif baharulah kita dapat mengharunginya dengan penuh ketabahan dan akhirnya kejayaan menyebelahi kita.

Enrolmen dan Pengambilan Pelajar

Enrolmen pelajar pra siswazah pada Semester Pertama 2004/2005 adalah seramai 23, 266 orang manakala enrolmen pelajar Semester Kedua 2004/2005 adalah seramai 21, 425 orang.

Bagi pelajar pasca siswazah pula, enrolmen untuk tahun 2004 ialah seramai 4,682 orang. Daripada jumlah tersebut enrolmen untuk pelajar Master ialah seramai 3,526 orang dan pelajar Doktor Falsafah (Ph.D) seramai 1,156 orang.

Pada sesi akademik 2004/2005, pengambilan pelajar pra siswazah iaitu di peringkat Bacelor dan Diploma mencatatkan jumlah keseluruhannya seramai 6,249 orang. Daripada jumlah tersebut seramai 5,572 mengambil ijazah peringkat Bacelor dan selebihnya iaitu 670 mengikuti program Diploma. Pengambilan ini melibatkan Kampus Induk di Serdang dan juga di Kampus Bintulu.

Introduction

The year 2004 saw the recording of many bitter and sweet memories in the diary of Universiti Putra Malaysia. It was a year filled with great challenges and events that reflected UPM's maturity in the international arena. For UPM, each obstacle that comes in its way is seen as a challenge faced by the entire university community. It is only when each emerging challenge is seen from a positive viewpoint will be able to overcome it with great resolution and courage so that in the final analysis, success can be on our side.

Student Intake and Enrolment

The first semester 2004/2005 saw the enrolment of 23,266 undergraduates while in the second semester two 2004/2005, UPM enrolled 21,425 students at the undergraduate level.

For the post-graduate level, the enrolment for the year 2004 was 4,682 students.From this total 3,526 were Masters students and 1,156 Doctor of Philosophy(Ph.D) candidates who registered to pursue their studies at UPM. On the whole,during the academic session 2004/2005, the undergraduate intake at the Bachelor's and Diploma levels totalled 6,249

segala perancangan dan aktiviti sepanjang tahun 2004 disusun lebih rapi ke arah pencapaian matlamat

JADUAL PENGAMBILAN PELAJAR / PRA SISWAZAH SESI AKADEMIK 2004/2005		
Bil. Peringkat Pengajian / Kampus	**Semester Pertama**	**Semester Kedua**
1. Kampus Induk, Serdang		
a) Ijazah Bacelor	5,500	7
b) Diploma	437	0
2. Kampus Bintulu		
a) Ijazah Bacelor	72	0
b) Diploma	233	0
JUMLAH BESAR	**6,249**	**7**

Seramai 5,500 pelajar peringkat Bacelor dan 437 pelajar peringkat Diploma mendaftar di Kampus Induk, Serdang. Kampus Bintulu menerima seramai 72 pelajar peringkat Bacelor dan 233 pelajar peringkat Diploma. Pengambilan sesi akademik kali ini menyaksikan Semester Kedua hanya menerima kemasukan seramai 7 orang pelajar iaitu di Fakulti Rekabentuk dan Senibina yang mengikuti program Bacelor Seni Bina.

students. From this total, 5,572 of them registered for the Bachelor's degree while the other 670 enrolled for the Diploma programme. This intake encompassed both the main Sedang Campus as well as the one in Bintulu. A total of 5,500 students at Bachelor level and 437 at Diploma level enrolled at the Main Campus in Serdang. The Bintulu Campus received a total of 72 students at Bachelor's

UNDERGRADUATE INTAKE SCHEDULE FOR 2004/2005 ACADEMIC SESSION		
No. Study Level / Campus	**First Semester**	**Second Semester**
1. Main Campus, Serdang		
a) Bachelor's degree	5,500	7
b) Diploma	437	0
2. Bintulu Campus		
a) Bachelor's degree	72	0
b) Diploma	233	0
GRAND TOTAL	**6,249**	**7**

level and 233 students at Diploma level. Semester two saw the registration of only 7 students and these students enrolled in the Faculty of Design and Architecture to take up the Bachelor of Architecture degree.

Penyelidikan dan Pembangunan

Selaras dengan matlamat menjadikan UPM sebuah universiti yang terkemuka dalam bidang penyelidikan, segala perancangan dan aktiviti sepanjang tahun 2004 disusun lebih rapi ke arah pencapaian matlamat tersebut. Dalam aspek peruntukan dana penyelidikan atau geran, UPM masih mengekalkan reputasi sebagai penerima *Intensification of Research in Priority Areas* (IRPA) tertinggi sejak Rancangan Malaysia ke-6 (RMK-6). Di bawah Rancangan Malaysia Ke-8 (RMK-8) iaitu sehingga Disember 2004, UPM berjaya menerima peruntukan sebanyak RM 167 juta.

Menerusi geran ini, UPM berjaya menjalankan pelbagai penyelidikan dan pembangunan produk baru terutamanya dalam sektor agroindustri. Sektor ini berjaya menjalankan penyelidikan sebanyak 121 projek daripada jumlah keseluruhan projek yang diluluskan iaitu sebanyak 498. Hal ini bersesuaian dengan *niche* UPM iaitu AgroBio.

Selain itu, UPM turut memperolehi geran *Top Down National Biotechnology* daripada Kementerian Sains, Teknologi dan Inovasi berjumlah RM14,999,611. Daripada peruntukan tersebut sebanyak 9 projek penyelidikan telah dimulakan. Jumlah tersebut lebih besar berbanding tahun yang lalu iaitu hanya RM9,954,594.

Research and Development

In line with the aim of making UPM a world class research institution for learning, intense efforts and planning were carefully initiated and geared towards the achievement of that goal. In the aspect of research grants, UPM still maintains its reputation as the highest recipient of the Intensification of Research in Priority Areas (IRPA) grant since the Sixth Malaysian Plan (EMP-6). Under the Eighth Malaysian Plan (EMP-8),ending December 2004, UPM secured an allocation of RM 167 million.

Using this grant, UPM successfully carried out various research projects and developed new research products especially in the agro-industrial sector. This sector carried out 121 out of the total 498 projects that were approved. This is synonymous with the fact that UPM's niche is AgroBio.

Apart from the above, UPM obtained the Top Down National Biotechnology grant from the Ministry of Science, Technology and Innovation amounting RM14,999,611. This allocation was used to initiate 9 research projects. This is a big increase when compared to the amount of RM9,954,594 received the previous year.

In 2004, UPM researchers continued to carry out research activities that were

Pada 2004, penyelidik UPM juga masih meneruskan kerja-kerja penyelidikan yang diperuntukkan di bawah Geran Penyelidikan Fundamental iaitu anjuran Kementerian Pendidikan. Sebanyak 105 projek penyelidikan masih berterusan menggunakan peruntukan tersebut.

Sepanjang 2004, UPM menggiatkan usaha mempatenkan hasil penyelidikan dan mengkomersialkannya. Daripada keseluruhan hasil penyelidikan UPM untuk tahun 2004, sebanyak 111 permohonan paten telah dibuat sama ada di Malaysia atau di luar Malaysia. 74 daripadanya telah didaftarkan (pending) ke Perbadanan Harta Intelek (PHIM) di bawah Akta Paten 1983 dan 32 yang lainnya sedang dalam proses permohonan. Empat reka cipta telah berjaya mendapat sijil paten dengan tiga daripadanya adalah daripada Fakulti Kejuruteraan iaitu *Putra Block* (Prof. Madya Dr. Mohd. Razali Abdul Kadir), *HO-meter* (Prof. Madya Dr. Husaini Omar) dan *Stone Mastic Asphalt With Cellulose Oil Palm Fiber* (En. Ratnasamy Muniandy). Manakala reka cipta daripada Fakulti Sains yang berjaya mendapatkan sijil paten ialah *Latexometer* (Prof. Dr. Kaida Khalid).

Anugerah dan Pencapaian

Menyentuh soal pencapaian dan kejayaan penyelidikan di UPM sudah tentu memberikan khabar gembira kepada semua pihak. Kejayaan meraih pelbagai anugerah di peringkat nasional mahu pun antarabangsa sedikit sebanyak berjaya mengangkat reputasi UPM sebagai sebuah universiti terunggul.

Pada tahun 2004, UPM berjaya meraih sebanyak 34 pingat atau anugerah di peringkat antarabangsa. Di *Geneva 32nd International Exhibition and Invention of New Techniques and Products,* saintis UPM berjaya menggondol 2 pingat Emas, 6 Perak, dan 2 Gangsa. Manakala di Pameran INPEX (*Inventionand New Product Exposition),* Pittsburgh, USA, delegasi UPM seramai 4 saintis telah memenangi 3 pingat Emas, 1 Perak dan 1 Gangsa. Wakil UPM juga turut memenangi 3 anugerah khas dalam pameran itu. UPM juga berjaya mencipta sejarah baru apabila memenangi 5 Emas dan 3 Perak di *British Invention Show*. Dalam Pameran IENA yang berlangsung di Jerman sekali lagi penyelidik UPM berjaya membuktikan keunggulannya apabila memenangi 3 emas, 2 perak dan 1 anugerah khas.

Pada Pameran *I-TEX (International Invention, Innovation and Technology Exhibition and Competition) 2004* yang diadakan di Kuala Lumpur, panyelidik UPM memenangi 1 emas, 2 perak dan 5 gangsa

allocated under the Fundamental Research Grant provided by the Ministry of Education. A total of 105 projects still continue to use this allocation.

Throughout 2004, UPM stepped up its efforts to patent its research findings and commercialise them. From the total number of UPM's research findings for 2004, 111 patent applications were made both locally and internationally. 74 of them were registered (pending) with the Intellectual Property Authority (PHIM) under the Patent Act 1983 dan 32 others are in the process of application. Four designs successfully obtained patent certificates and three of them were were from the Faculty of Engineering. They are Putra Block (Prof. Madya Dr. Mohd. Razali Abdul Kadir), HO-meter (Prof. Madya Dr. Husaini Omar) dan Stone Mastic Asphalt With Cellulose Oil Palm Fiber (Mr. Ratnasamy Muniandy). Whereas the design from the Faculty of Science that was successfully patented was Latexometer (Prof. Dr. Kaida Khalid).

Awards and Achievements

On the issue of achievement and successful research carried out at UPM, it was definitely a joyous one for all parties. The winning of numerous awards at both national and international levels has successfully enhanced the UPM's reputation as a university of excellence.

In 2004, UPM won 34 medals or awards at the international level. At the Geneva 32nd International Exhibition and Invention of New Techniques and Products, UPM scientists wrested 2 gold, 6 silver and 2 bronze medals. Whereas at the INPEX exhibition (Invention and New Product Exposition), Pittsburgh, USA, the UPM delegation of 4 scientists won 3 gold, 1 silver and 1 bronze. UPM's representatives also won 3 special awards in that exhibition. UPM succeeded in creating a historic milestone when it won 5 golds and 3 silvers at the British Invention Show. In the IENA exhibition that took place in Germany, UPM's researchers once again proved their mettle when they won 3 golds, 2 silvers and 1 special award.

In the I-TEX exhibition (International Invention, Innovation and Technology Exhibition and Competition) 2004 that was held in Kuala Lumpur, UPM researchers won 1 gold, 2 silver and 5 bronze medals. Profesor Dr. Mahiran Basri was selected as the winner of the special Ram Rais Bio-Technology Award.

PERPUSTAKAAN SULTAN ABDUL SAMAD
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Manakala Profesor Dr. Mahiran Basri dipilih sebagai pemenang anugerah khas: *Ram Rais Bio-Technology Award*.

Pameran peringkat kebangsaan juga mencatat kejayaan buat penyelidik UPM yang menyertainya di Pameran Sains dan Teknologi pada Ogos 2004. UPM berjaya membawa pulang sebanyak 23 pingat daripada 26 penyertaan di pameran tersebut.

Selain kejayaan yang dicapai di pameran reka cipta, UPM juga telah berjaya memperoleh anugerah 18th *Khawarizmi International Award* melalui Profesor Dr. Yaakob Che Man dari Fakulti Sains dan Teknologi Makanan. Profesor Dr. Yaakob juga telah memenangi Anugerah *Malaysia Toray Science Foundation*. Anugerah Saintis Cemerlang 2004, telah dianjurkan oleh Kementerian Pengajian Tinggi, dan seramai 14 saintis UPM berjaya menerima pengiktirafan di majlis yang berprestij itu.

Satu lagi pencapaian yang membanggakan universiti ini ialah pengiktirafan kepada Profesor Dr. Mohd Azmi Lila apabila diumumkan pemenang Anugerah Inovasi Perkhidmatan Awam 2004 melalui penyelidikannya bertajuk 'Nucleoceptin Vaksin Unggul Untuk Pemandulan Haiwan'. Sekali lagi Profesor Dr. Mohd Azmi dan Dr. Wong Shaw Voon diumum sebagai '*The Outstanding Young Malaysian Awards 2004*' dalam kategori Pembangunan Teknologi Saintifik.

UPM researchers also received accolades at the national level Science and Technology exhibition in August 2004 by bringing home 23 medals out of the 26 submissions for participation at the exhibition.

Besides the success achieved in design exhibitions, UPM also received the 18th Khawarizmi International Award through Profesor Dr. Yaakob Che Man from the Faculty of Food Science and Technology. Profesor Dr. Yaakob also won the Malaysia Toray Science Foundation award. The Excellent Scientist Award 2004 was sponsored by the Ministry of Higher Education and a total of 14 scientists successfully received their recognition at this very prestigious event.

Another achievement that made the University proud was the recognition given to Profesor Dr. Mohd Azmi Lila who was announced as the winner of the coveted Public Service Innovation 2004 Award for his research entitled 'Nucleoceptine Vaccine for the infertility of animals'. Once again Profesor Dr. Mohd Azmi dan Dr. Wong Shaw Voon were announced as winners of 'The Outstanding Young Malaysian Awards 2004' in the Scientific Technology Development category.

ANUGERAH PERINGKAT ANTARABANGSA				
Pameran dan Tempat	**Emas**	**Perak**	**Gangsa**	**Anugerah khas**
32nd International Exhibition & Invention of New Techniques and Products, Geneva	2	6	2	
INPEX, Pitsburgh, USA	3	1	1	3
British Invention Show	5	3		
IENA, Jerman	3	2		1

Pertanian dan Biosumber

UPM sentiasa terkedepan dalam merencanakan agenda pertanian negara. Dalam ucapan Bajet 2005 di Parlimen pada September 2004, Perdana Menteri, Datuk Seri Abdullah Ahmad Badawi telah mengumumkan bahawa UPM akan dijadikan Pusat Kecemerlangan Pendidikan Pertanian. UPM menganggap pengumuman itu sebagai satu pengiktirafan di atas usaha universiti dalam memberi sumbangan kepada pembangunan ekonomi negara.

Agriculture and Bioresources

UPM is always in the forefront of planning the agricultural agenda for this nation. In his 2005 Budget speech at Parliment in September 2004, the Honourable Prime Minister Datuk Seri Abdullah Ahmad Badawi, announced that UPM will be made as the Centre of Excellence for the Education of Agriculture. UPM regards this announcement as one of recognition for the efforts taken by the university and its contribution to the development of the economic sector of the country.

In line with this, UPM has taken proactive steps to make itself the Centre of Excellence for the Education of Agriculture as well as enhancing its contribution in the agricutural sector. This matter was raised in the visit made by the UPM delegation to meet the Prime Minister at Putrajaya on 8 November 2004. The initiatives are as follows:

- Firstly, to establish the Institute of Research for Agricultural Policies and Food to identify,analyse and provide solutions for major problems in the agricultural and food sector ;
- Secondly, to set up the Institute of Halal food as a reference centre for the system of identifying and certifying halal food;

Dalam ucapan Bajet 2005 di Parlimen pada September 2004, Perdana Menteri, Datuk Seri Abdullah Ahmad Badawi telah mengumumkan bahawa UPM akan dijadikan Pusat Kecemerlangan Pendidikan Pertanian

Selaras dengan itu, UPM mengambil langkah proaktif dengan menyusun inisiatif bagi menjadikan UPM sebagai Pusat Kecemerlangan Pendidikan Pertanian serta memantapkan lagi sumbangan UPM dalam kemajuan sektor pertanian. Perkara ini telah dibentangkan dalam pertemuan delegasi UPM dengan Perdana Menteri di Putrajaya pada 8 November 2004. Inisiatif tersebut adalah seperti berikut:

- Pertama, menubuhkan Institut Kajian Dasar Pertanian dan Makanan untuk mengenal pasti, menganalisis dan memberi opsyen dasar kepada masalah utama sektor pertanian dan makanan;
- Kedua, menubuhkan Institut Makanan Halal sebagai pusat rujukan sistem pengesahan dan pensijilan makanan halal;
- Ketiga, menubuhkan Institut Biokomposit Tropika untuk menjalankan penyelidikan penerokaan biokomposit bagi produk baru.
- Keempat, menubuhkan Institut Pengembangan Pertanian bagi menjalankan kajian pengembangan dan memberi latihan kepada agen pengembangan;

INTERNATIONAL AWARDS

Exhibition and Place	Gold	Silver	Bronze	Special Awards
32nd International Exhibition& Invention of New Techniques and Products, Geneva	2	6	2	
INPEX, Pitsburgh, USA	3	1	1	3
British Invention Show	5	3		
IENA, Germany	3	2		1

- Thirdly, to set up the Institute of Tropical Biocomposite to carry out pioneering research for new products;
- Fourthly, to establish the Institute for Agricultural Extension to carry out extension research and provide training to extension agents ;
- Fifthly, to initiate the Centre for the Development of Agricultural Entrepreneurs for the incubating and producing agriculture entrepreneurs;
- Sixthly, to set up a Centre for Strategic Research and Food Innovation to focus on research in safety and quality

UPM sebagai Institusi Pengajian Tinggi yang sekian lama memberi sumbangan penting dalam mendidik dan melatih tenaga berpengetahuan serta mahir dalam bidang pertanian.

- Kelima, menubuhkan Pusat Pembangunan Usahawan Tani bagi menginkubasi dan melahirkan usahawan pertanian;
- Keenam, menubuhkan Pusat Kajian Strategik dan Inovasi Makanan bagi menumpukan penyelidikan dalam keselamatan dan kualiti makanan, makanan fungsian dan ramuan makanan bernilai tinggi serta teknologi pemprosesan makanan maju dan inovatif;
- Ketujuh, menubuhkan Pusat Mekanisasi dan Pengautomatan Pertanian dan Makanan bagi menjalankan penyelidikan dan pembangunan secara berterusan dalam mekanisasi dan pengautomatan untuk sektor pengeluaran pertanian dan makanan;
- Kelapan, meningkatkan kedudukan UPM sebagai Pusat Rujukan Pertanian
- Kesembilan, menubuhkan Pusat Matrikulasi Pertanian (AgroBio) UPM sebagai pusat bimbingan dan persediaan lulusan SPM menceburi bidang pertanian;
- Kesepuluh, menubuhkan Sekolah Pengajian Siswazah Pertanian untuk menyediakan program latihan dan penyelidikan yang mantap bagi pelajar siswazah di peringkat Master Sains dan Ph. D yang ditawarkan oleh UPM;
- Kesebelas, menawarkan program baharu bagi menyediakan k-pekerja untuk membangun dan memajukan sektor pertanian;
- Kedua belas, membangunkan Taman Pertanian Universiti bagi menyediakan kemudahan pengajaran dan penyelidikan yang terbaik dan terkini bagi melatih pelajar dalam bidang pertanian.

Selain melalui kepakaran akademik, UPM juga mengambil bahagian yang aktif dalam aktiviti yang dapat meningkatkan citra pertanian sebagai penjana ekonomi negara. Sebagai contoh, pada tahun 2004 UPM mencipta sejarah apabila muncul Institusi Pengajian Tinggi (IPT) pertama dinobatkan

standards of food, functional food and food ingredients of high quality as well as the advanced and innovative technology of food processing;

- Seventhly, to establish the Centre for Mechanisation and Automation of Agriculture and Food to carry out continuous research and development in the said areas for the agriculture and food output sector.
- Eighthly, to raise the standing of UPM as the Centre of Agricultural Reference;
- Ninthly, to initiate the Centre of Matriculation for Agriculture (AgroBio) UPM for the preparation and training of post–SPM students who would like to be involved in the field of agriculture;
- Tenthly, to set up a Graduate School for Agriculture that will provide training programmes and research avenues for post-graduate students at the Master of Science and Ph.D levels offered by UPM.
- Eleventhly, to offer new programmes that will prepare k-workers to help develop and promote the agricultural sector; and
- Finally, to develop the University Agricultural Park so that it will provide modernised and excellent teaching and research facilities for the training of students in the field of agriculture.

Besides using academic expertise, UPM also took an active part in activities that are able to raise the image of the agriculture sector an engine of national economic growth. For example, in the year 2004 UPM created an historic milestone when it emerged as the first institution of higher learning to be declared as the march past winner of the procession held to mark the 47th Merdeka celebrations, which took place in Kuantan, Pahang. With the theme 'The Wave of Agricultural Excellence' UPM's participation in the procession symbolised the role and contribution of UPM as an Institute of Higher Learning in educating and training the workforce in the areas of agricultural knowledge and skill.

sebagai johan perbarisan sempena Perarakan Hari Kemerdekaan ke-47 yang berlangsung di Kuantan, Pahang. Dengan tema 'Arus Pertanian Gemilang' penyertaan UPM dalam perarakan tersebut melambangkan peranan dan sumbangan UPM sebagai Institusi Pengajian Tinggi yang sekian lama memberi sumbangan penting dalam mendidik dan melatih tenaga berpengetahuan serta mahir dalam bidang pertanian.

Seramai 258 orang pelajar dan staf UPM terlibat dalam perarakan yang bertemakan kecemerlangan dan kegemilangan pertanian di Malaysia. Dalam masa yang sama, UPM turut menyertai perarakan kereta berhias yang menampilkan kepelbagaian sumbangan UPM kepada pengeluaran pertanian moden berasaskan sains dan teknologi menerusi aktiviti pengajaran, penyelidikan dan pembangunan serta perkhidmatan profesional.

Tahun 2004, UPM turut menyertai satu pameran pertanian peringkat antarabangsa yang terbesar iaitu Pameran Pertanian, Holtikultur dan Agro Pelancongan (MAHA 2004). Penyertaan dalam pameran kali ini telah membawa dimensi baru kepada UPM khususnya dalam mempromosi aktiviti pengajaran, penyelidikan dan pembangunan serta perkhidmatan profesional khususnya dalam bidang pertanian dan biosumber. Ia juga menangkis tanggapan sesetengah pihak tentang peranan UPM dalam pembangunan pertanian negara sudah berkurangan. Malah, melalui pameran itu UPM telah menunjukkan bahawa sumbangan UPM kepada inovasi pertanian moden berasaskan sains dan teknologi.

Pameran UPM bertemakan 'Teknologi Peneraju Pertanian Komersial' telah menampilkan 25 produk dan hasil penyelidikan termasuk jentera dan mesin yang digunakan dalam teknologi pertanian.

A total of of 258 students and staff of UPM were invoved in this parade that carried the theme of excellence and glory of agriculture in Malaysia. At the same time, UPM also participated in the floats procession which brought forth the variety of contributions UPM had made towards modern agricultural products based on science and technology through teaching activities, research and development as well as professional services.

In 2004, UPM also participated in the biggest international agricultural exhibition namely, the Agriculture, Horticulture and Agro Tourism exhibition (MAHA 2004). UPM's participation,, this time around brought about a new dimension especially in its promotion of learning activities, research and development and professional services especially in the the fields of agriculture and bioresources. It also repudiated the perceptions of certain quarters that the role of UPM in agricultural development in this country had dimished. Using this exhibition as an avenue, UPM demonstrated its contribution towards modern agricultural innovation based on science and technology.

The UPM exhibition with the theme 'Technology: The power behind Commercial Agriculture' brought forth 25 products and research findings including machinery and equipment used in agriculture.

Konvokesyen dan Graduan

UPM berjaya menganjurkan Majlis Konvokesyen UPM Ke-28 pada tahun 2004 dan telah dilangsungkan dalam tiga (3) sidang iaitu pada 7-9 Februari 2004, 17-19 Julai 2004 dan 18-20 September 2004. Tuanku Canselor UPM, Duli Yang Maha Mulia Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj telah berkenan merasmikan majlis tersebut dan turut menganugerahkan Ijazah Kehormat, Ijazah Ph.D, Master dan Bacelor kepada graduan. Turut menyempurnakan penganugerahan tersebut ialah Pro Canselor Tan Sri Thong Yaw Hong dan Tan Sri Dr. Nayan Ariffin. Pada Majlis Konvokesyen Ke-28 (Sidang Kedua), UPM menganugerahkan Ijazah Kehormat Doktor Sains kepada bekas Perdana Menteri Malaysia iaitu Yang Amat Berbahagia Tun Dr. Mahathir Mohamad.

Selain itu, Tuanku Canselor juga berkenan menyampaikan anugerah kepada pemenang-pemenang Hadiah Peringkat Universiti Sesi 2003-2004 iaitu Encik Razik Hussein Mohamed Ganny (Pingat Emas Canselor), Encik Muhamad Nor Asnawi Saaman (Anugerah Pelajar DiRaja), Cik Ang Poh (Anugerah Pelajaran DiRaja), Cik Nurzi Juana Mohd Zaizi (Pingat Emas Almuni) dan Cik Moniza Waheed (Pingat Emas Yayasan Pak Rashid).

Secara keseluruhannya jumlah pelajar yang bergraduat tahun 2004 ialah 10, 386 orang. Daripada jumlah tersebut seramai 97 orang berjaya memperoleh ijazah Doktor Falsafah (Ph.D), Master (1,272), Bacelor (7,826) dan Diploma (1,191).

Convocation and Graduation

UPM successfully organised the 28th Convocation Ceremony in three sittings that is from 7-9 February 2004, 17-19 July 2004 dan 18-20 September 2004. The Chancellor of UPM Duli Yang Maha Mulia Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj officiated the convocation and conferred Honorary degrees, doctorates, Masters and Bachelor degrees to the graduates. The Pro Chancellors Tan Sri Thong Yaw Hong dan Tan Sri Dr. Nayan Ariffin were also present. During the second sitting of the 28th Convocation ceremony, UPM conferred the Honorary Science Doctorate upon the previous Prime Minister of Malaysia, Yang Amat Berbahagia Tun Dr. Mahathir Mohamad.

Besides that, the Chancellor also presented awards to the winners of various prizes at University level for the session 2003-2004. They were Encik Razik Hussein Mohamed Ganny (Chancellor's Gold Medal), Encik Muhamad Nor Asnawi Saaman (Royal Student Award), Cik Ang Poh (Royal Education Award), Cik Nurzi Juana Mohd Zaizi (Golden Alumni Award) dan Cik Moniza Waheed (Pak Rashid Foundation Gold Award).

On the whole, the number of students who graduated in 2004 were 10, 386. From this total, 97 postgraduates secured Doctor of Philosophy (Ph.D) degrees, Masters (1,272), Bachelor (7,826) and Diploma (1,191).

BILANGAN GRADUAN UPM TAHUN 2004 /
NUMBER OF UPM GRADUATES 2004

IJAZAH / DEGREE	SIDANG / SITTING			JUMLAH / TOTAL
	1	2	3	
Ph. D / Ph. D	22	32	43	97
Master / Masters	482	306	484	1,272
Bacelor / Bachelor	2,184	3,089	2,553	7,826
Diploma / Diploma	468	665	58	1,191
Jumlah Besar / Grand Total				10,386

Pengajian Siswazah

Bagi mencapai status universiti penyelidikan Malaysia, UPM telah berusaha sebaik mungkin dan hasilnya banyak kriteria telah berjaya dipenuhi sepanjang 2004. Pengajian siswazah merupakan satu kriteria penting dalam penilaian untuk mencapai taraf tersebut. Pada 2004 nisbah pelajar siswazah dan staf ialah 3.25:1 berbanding nisbah 3:1 yang ditetapkan. Dari sudut pelajar antarabangsa pula, UPM mempunyai 17.18 peratus pelajar siswazah antarabangsa dan telah melebihi kriteria yang ditetapkan iaitu 10 peratus.

Selain itu, UPM juga mempunyai peratusan pelajar siswazah yang terdiri daripada mereka yang mencapai purata timbunan sekurang-kurangnya 3.00 sebanyak 59.35 peratus berbanding kriteria yang ditetapkan iaitu 50 peratus. Walaupun kriteria tersebut telah dipenuhi namun UPM masih berusaha keras untuk memenuhi satu lagi cabaran untuk menjadi Universiti Penyelidikan Dunia. Setakat 2004 UPM telah pun memenuhi satu kriteria bagi Universiti Penyelidikan Dunia apabila berjaya mencapai angka 17.18 peratus bilangan pelajar antarabangsa berbanding 15 peratus yang ditetapkan. Ini merupakan satu pencapaian yang membanggakan dan UPM terus berusaha

Graduate Studies

To achieve its status as a research university, UPM tried its level best and as a result many criteria were met throughout the year 2004. Graduate studies was an important criterion to evaluate the university's standards. In 2004 the graduate student / staff ratio was 3.25:1 compared to the ratio 3:1 that had been fixed. Where international students were concerned, UPM had 17.18 percent of post graduates and that was more than the criteria that had been fixed (10%).

Besides that, UPM also had 59.35 % of postgraduates who achieved a grade point average of 3.00 compared to the set target which was 50%. Even though the criterion was fulfilled UPM continues to strive hard to meet another challenge that is to become a World Research University. Until 2004, UPM had fulfilled one criterion when it successfully achieved the 17.18 % quota of international students compared to the 15% quota that had been set. This is a proud achievement for the University and UPM will continue to promote its graduate studies programme so that the percentage of students will continue to see an increase from time to time.

UPM mempunyai 17.18 peratus pelajar siswazah antarabangsa dan telah melebihi kriteria yang ditetapkan iaitu 10 peratus.

mempromosikan pengajian siswazah agar peratusan tersebut bertambah dari semasa ke semasa.

Kalau dilihat enrolmen pelajar, bilangan pelajar siswazah di UPM pada tahun 2004 adalah berjumlah 4,682 orang. Manakala jumlah graduan yang berjaya dikeluarkan ialah seramai 1,369 orang. Daripada jumlah graduan tersebut seramai 170 orang merupakan pelajar antarabangsa. Jumlah pengambilan pelajar siswazah pada tahun 2004 pula ialah seramai 2,338 orang Daripada jumlah tersebut seramai 1,903 orang adalah pelajar master dan 435 orang mengikuti pengajian peringkat PhD.

Tahun 2004, UPM berjaya mengekalkan kedudukan Sekolah Pengajian Siswazah terbaik di Malaysia dan di kedudukan ke-7 dalam senarai sekolah MBA terbaik di Asia. Pencapaian ini mengulangi kejayaan yang dicapai pada 2003 melalui kajian yang dilakukan oleh majalah *AsiaInc*.

Pelantikan Lembaga Pengarah

Tahun 2004 menyaksikan perubahan besar dalam senarai Ahli Lembaga Pengarah Universiti (LPU). Perubahan ini melibatkan jawatan Pengerusi LPU dan juga ahli-ahli lain lembaga. UPM menerima Pengerusi Lembaga Pengarah yang baru iaitu Tan Sri Dato' Seri Dr. Zainul Arif Hussein menggantikan Datuk Ramly Ahmad yang tamat tempoh lantikan. Pelantikan beliau berkuat kuasa pada 23 Jun 2004 untuk tempoh selama dua tahun iaitu sehingga 22 Jun 2006. Sebelum ini, beliau adalah Ketua Pengarah, Unit Penyelarasan Pelaksanaan (ICU), Jabatan Perdana Menteri.

Selain itu, UPM menerima beberapa lagi ahli LPU yang baru iaitu Ketua, Setiausaha Kementerian Pengajian Tinggi, Datuk Dr. Mohd Yahya Nordin, Timbalan Ketua Setiausaha Pembendaharaan yang mewakili Kementerian Kewangan, Encik Mohd Saad Hashim dan Pengerusi Bank Pertanian, Datuk Sulaiman Daud. Mereka bertiga

The graduate student enrolment at UPM in 2004 was 4,682. and the number of students who graduated is 1,369 . From that total number of students, 170 were international students. The total graduate student intake in the year 2004 was 2,338 with 1,903 Masters Students and another 435 pursuing PhD Students.

In 2004, UPM successfully maintained its standing as the Best Graduate Studies School in Malaysia and was given the seventh place in the list of the best MBA schools in Asia. This success was a repeat performance that was achieved in 2003 according to a study that was carried out by the AsiaInc magazine.

Appointment of the Board of Directors

The year 2004 was witness to a great change in the list of the University Board of Directors (LPU). This change involved the post of chairman as well as other board members. UPM received a new Chairman, Tan Sri Dato' Seri Dr. Zainul Arif Hussein who replaced Datuk Ramly Ahmad when his tenure ended. His appointment, effective on 23 June 2004 continued for a period of two years until 22 June 2006. Prior to this , he was the Director General, Implementation and Coordination Unit (ICU) in the Prime Minister's Office.

The other new members who were received by UPM were the Secretary General of the Ministry of Higher Education, Datuk Dr. Mohd Yahya Nordin, Deputy Secretary General, Treasury, Ministry of Finance, Encik Mohd Saad Hashim and the Chairman of the Agriculture Bank, Datuk Sulaiman Daud. They took over from Datuk Ambrin Buang, Encik Wan Abdul Aziz Wan Abdullah and Datuk Patrick Lim Soo Kit whose tenures had ended.

menggantikan Datuk Ambrin Buang, Encik Wan Abdul Aziz Wan Abdullah dan Datuk Patrick Lim Soo Kit yang telah tamat tempoh lantikan.

Pelantikan Timbalan Naib Canselor

Dalam tahun 2004 juga berlaku pelantikan baru dalam jawatan utama pihak pengurusan UPM di mana dua jawatan iaitu Timbalan Naib Canselor (Hal Ehwal Pelajar) dan Timbalan Naib Canselor (Pembangunan) disandang oleh muka baru. Pensyarah Fakulti Ekonomi dan Pengurusan, Profesor Madya Dr. Azali Mohamad telah dilantik sebagai Timbalan Naib Canselor (HEP) menggantikan Profesor Datuk Dr. Abdullah Al-Hadi. Pelantikan beliau berkuat kuasa pada 16 Mei 2004 untuk tempoh selama tiga tahun.

Manakala untuk jawatan Timbalan Naib Canselor (Pembangunan), UPM telah menerima pelantikan bekas Dekan Fakulti Ekonomi dan Pengurusan iaitu Profesor Dr. Nik Mustapha R. Abdullah. Beliau menggantikan Profesor Dr. Makhdzir Mardan yang tamat tempoh lantikan. Pelantikan ini berkuat kuasa 1 Jun 2004 untuk tempoh selama tiga tahun sehingga 31 Mei 2007.

Hubungan Luar dan Kerjasama

UPM sentiasa berusaha untuk meningkatkan jalinan kerjasama dengan pihak luar khususnya institusi dan agensi yang lebih maju dalam sesuatu bidang termasuk pihak industri. Namun dalam masa yang sama pelbagai agensi luar turut berminat untuk menjalin kerjasama lebih erat dengan UPM khususnya dalam bidang pengajaran, penyelidikan dan pembangunan serta perkhidmatan profesional. Sepanjang 2004 sebanyak 8 memorandum persefahaman (MoU) telah ditandatangani bersama dengan institusi pendidikan dan penyelidikan luar negara. Antaranya ialah Tokyo University Of Agriculture, Jepun, The Forestry and Forest Products Research Institute, Jepun, Chiba University, Jepun, Chungam National University, Korea, Institut Pertanian Bogor, Indonesia dan Cantho University, Vietnam.

Kerjasama yang termeterai dalam bentuk Memorandum Persefahaman (MoU) dan Memorandum Perjanjian (MoA) dengan agensi dalam negeri pula membabitkan 21 pihak yang mewakili badan kerajaan, pertubuhan bukan kerajaan (NGO), industri, badan pendidikan dan syarikat korporat. Antaranya dengan FELDA, BERNAS, Kementerian Belia dan Sukan, Majlis Paralimpik Malaysia, Institut Teknologi Nuklear Malaysia (MINT) dan Biovate Research Sdn. Bhd.

Appointment of the Deputy Vice-Chancellor

In 2004 there were also new appointments to the key positions in the University Management team.The posts of Deputy Vice-Chancellor (Student Affairs) dan Deputy Vice-Chancellor (Development) were taken over by new people. Assoc. Professor Dr. Azali Mohamad from the Faculty of Economics and Management was appointed as the Deputy Vice-Chancellor(Student Affairs) to replace Profesor Datuk Dr. Abdullah Al-Hadi. His tenure began on 16 May 2004 and will be effective for three years.

For the post of Deputy Vice-Chancellor (Development), UPM received the appointment of the ex-Dean of the Faculty of Economics and Management, Profesor Dr. Nik Mustapha R. Abdullah. He replaced Professor Dr. Makhdzir Mardan whose term had expired. This appointment became effective on 1 June for a period of three years until 31 May 2007.

External Relationships and Cooperation

UPM continously takes effort to develop and improve its cooperative network with others especially in industries and agencies that are far more progressive in certain fields. At the same time, there are external agencies who showed interest in networking with and building closer ties with UPM, especially in the areas of teaching, research,development as well as professional services. Throughout 2004, as many as 8 Memorandums of Understanding (MoUs) were signed with foreign institutions of education and research. Among them were the Tokyo University of Agriculture, Japan, the Forestry and Forest Products Research Institute, Japan, Chiba University, Japan, Chungam National University, Korea, Bogor Institute of Agriculture, Indonesia and Cantho University, Vietnam.

This cooperation that has been sealed is seen in the Memorandum of Understanding (MoU) and Memorandum of Agreement (MoA) with agencies within the country involving 21 authorities that represent government bodies,non-governmental organisations (NGOs), industries, educational bodies and corporate companies. Among them are Federal Land Development Authority, Padiberas National Berhad, Ministry of Youth and Sports, the Paraolympic Council of Malaysia, Institute of Nuclear Tecnology Malaysia (MINT) and Biovate Research Sdn. Bhd.

Fakulti Baru / Pusat baru

Tahun 2004 mencatat satu lagi sejarah bagi UPM dengan penubuhan dua buah fakulti baru iaitu Fakulti Bioteknologi dan Sains Biomolekul dan Fakulti Pengajian Alam Sekitar menerusi penstrukturan semula Fakuti Sains Makanan dan Bioteknologi dan Fakulti Sains dan Pengajian Alam Sekitar. Penubuhan dua fakulti baru ini membolehkan UPM menghimpunkan tenaga akademik daripada pelbagai disiplin yang berkaitan di bawah satu bumbung yang sama dan dapat memberikan impak yang lebih berkesan. Selain dua buah fakulti baru itu, penstrukturan tersebut turut menyaksikan perubahan nama Fakulti Sains Makanan dan Bioteknologi kepada Fakulti Sains dan Teknologi Makanan dan Fakulti Sains dan Pengajian Alam Sekitar kepada Fakulti Sains.

Tahun 2004 juga telah menyaksikan penubuhan Akademi Sukan. Wujudnya Akademi Sukan di UPM telah mencetuskan anjakan paradigma dalam sukan negara dengan membina *niche* dalam pengaplikasian teknologi terkini dalam sukan kompetitif. Hal ini penting kerana pencapaian dalam bidang sukan bukan lagi bergantung kepada corak latihan, kemahiran dan fizikal seseorang atlet tetapi juga sains dan teknologi. Akademi Sukan UPM telah dirasmikan oleh Menteri Belia dan Sukan, Datuk Azalina Othman Said pada 28 Mei 2004.

Tahun 2004 juga menyaksikan satu lagi penubuhan pusat baru yang dikenali sebagai Pusat Pembangunan Akademik (CADe). Penubuhan CADe ini dipantau oleh Jawatankuasa Pepandu yang dipengerusikan oleh Timbalan Naib Canselor (Akademik) dan dianggotai oleh pegawai kanan universiti yang mempunyai kepakaran dalam menentukan hala tuju CADe.

Pengurusan Berkualiti

UPM juga telah menggariskan matlamat keempat Pelan Strategi 2001-2010 iaitu

New Faculties / Centres

UPM saw another historic milestone in 2004 with the setting up of another two new faculties. This was done by restructuring the then existing Faculty of Food Science and Biotechnology and the Faculty of Environment. This resulted in two new faculties with a change of name as well and they are the Faculty of Biotechnology and Molecular Sciences and Faculty of Environmental Studies. The establishment of these two faculties enabled UPM to bring together academics from various disciplines under one roof so that a greater impact can be made.

The Sports Academy was also set up in 2004. The birth of this academy created a new paradigm in national sports by creating a niche in the application of the latest technology in competitive sports. This is of importance because achievement in sports does not only depend on the type of training received, skill and physique of an athlete but also on science and technology. The Sports Academy was officially opened by the Minister of Youth and Sports, Datuk Azalina Othman Said on 28 May 2004.

Another new centre called the Centre for Academic Development (CADe) was set up in 2004. The establishment of the CADe was monitored by a steering committee that was chaired by the Deputy Vice Chancellor (Academic Affairs) and the committee consisted of senior university officials who had the expertise to determine the direction that should be taken by this Centre.

Quality Management

UPM also outlined various steps to fulfill the fourth aim of the Strategic Plan 2001-2010, that is to consolidate an efficient and effective quality management system that is client-friendly and transparent based on good values. To measure the level of achievement and to consolidate the Strategic Plan, the Balanced Score Card that was developed by

memantapkan sistem pengurusan berkualiti yang cekap dan berkesan, telus dan mesra pelanggan berteraskan nilai-nilai murni. Bagi mengukur tahap pencapaian UPM dan memantau Pelan Strategi yang telah digariskan UPM menggunakan kaedah *Balanced Score Card* yang dibangunkan oleh Havard University. Pada tahun 2004 penggunaan kaedah *Balanced Scorecard* telah diperluaskan kepada semua fakulti. Pendekatan ini dapat membantu fakulti dan seterusnya universiti memantau secara berkesan prestasi UPM secara keseluruhannya.

UPM telah memulakan usaha untuk membentuk sistem pengurusan yang berkualiti dan diiktiraf di peringkat antarabangsa melalui pensijilan ISO 9001. Tahun 2004, menunjukkan peningkatan pengurusan dan perkhidmatan yang berkualiti apabila tiga pusat tanggungjawab iaitu Fakulti Ekonomi dan Pengurusan, Pusat Kesihatan Mahasiswa dan Pejabat Pendaftar telah berjaya mendapat pengiktirafan ISO 9001. Dengan ini, secara keseluruhannya sepuluh (10) pusat tanggungjawab telah mendapat pensijilan ISO 9001:2000 sehingga kini. Bermula 2004 juga UPM memperkenalkan Hari Pelanggan bagi meningkatkan perkhidmatan yang berkualiti ke arah mencapai kepuasan pelanggan.

Pengurusan Sumber Manusia

Pada tahun 2004, seramai 361 orang telah dilantik mengisi pelbagai kekosongan jawatan. Daripada jumlah tersebut, seramai 19 orang Pegawai dari Kumpulan Pengurusan Tertinggi, 175 orang Pegawai Kumpulan Pengurusan dan Profesional dan 16 orang Pegawai Kumpulan Sokongan.

Sepanjang tahun 2004 juga seramai 243 orang pegawai UPM dinaikkan pangkat iaitu 22 orang Pegawai Kumpulan Pengurusan Tertinggi, 151 orang Pegawai Kumpulan Pengurusan dan Profesional dan 70 orang Pegawai Sokongan. Jabatan Perkhidmatan Awam juga telah bersetuju untuk memberikan pertimbangan khas Pegawai Kumpulan Pengurusan dan Profesional Gred 41 yang telah berkhidmat sekurang-kurangnya 20 tahun pada 31 Disember 2003 bagi kenaikan pangkat secara Khas Untuk Penyandang (KUP) ke Gred 48. Seramai 15 orang pegawai yang terdiri daripada Pegawai Tadbir, Pegawai Pertanian, Pustakawan dan Guru Bahasa telah menikmati pertimbangan khas ini.

Selain itu, seramai 343 orang staf UPM terdiri daripada Kumpulan Pengurusan Profesional dan Kumpulan Sokongan yang telah menerima anugerah Perkhidmatan

Harvard University was used. In 2004 the usage of the Balanced Scorecard system was extended to all the other faculties. This approach proved invaluable to all the faculties and later to the entire university as it was able to help evaluate the performance of the university effectively.

UPM began efforts to create a system of quality management and accredited internationally by the ISO 9001 certification. The 2004 showed the increase in quality management and services when the three responsible centres namely the Faculty of Economics, Student Heath Centre and the Registry achieved ISO 9001 status. With this, all the ten (10) centres of responsibility have received ISO 9001:2000 certification to date. Beginning 2004, UPM also introduced the Customer Day to increase quality services towards achieving customer satisfaction.

Management of Human Resources

In 2004, a total of 361 people were appointed to various vacant posts; 19 of them were officers from top management, 175 of them were officers in the management and professional group while 16 of them were support staff.

Throughout 2004, a group of 243 officers of the university were given promotions; 22 of them were from top management, 151 were officers from the management and professional group and 70 were support staff. The Public Services Department also agreed to give special consideration to officers from the Management and Professional grade 41 group who had worked for at least 20 years on 31 December 2003. They were promoted to grade 48. A total of 15 peoples consisting of administrative officers,agricultural officers, librarians and language teachers benefited from this consideration.

Besides that, a total of 343 UPM staff consisting of people from the Professional Management Group and Support Staff Group received Excellent Service awards. 127 people received the ' Jasa Putra' award for retirees and 38 people who had worked for a period of twenty years received the 'Setia Putra' award. Meanwhile, UPM recognised 7 more officers by awarding them the Vice-Chancellor Fellowship award. This award was given to officers in recognition of their expertise and skill in certain areas.

To coordinate human resources among academic officers, UPM introduced a Book of guidelines and criteria for promotions in general and promotions to a higher scale, in

Cemerlang tahun 2004. Sejumlah 127 orang penerima bagi anugerah Jasa Putra iaitu yang bersara daripada perkhidmatan UPM dan 38 orang penerima Anugerah Setia Putra diberikan kepada staf yang telah berkhidmat genap 20 tahun pada tahun 2004. Sementara itu, UPM turut mengiktiraf 7 lagi pegawai melalui Anugerah Fellowship Naib Canselor. Anugerah ini diberikan kepada pegawai sebagai pengiktirafan terhadap kepakaran dan kemahiran dalam sesuatu bidang.

Bagi memantapkan pengurusan sumber manusia iaitu dalam aspek kenaikan pangkat kumpulan pegawai akademik, UPM telah memperkenalkan Buku Garis Panduan dan Kriteria Kenaikan Pangkat/Lantikan ke Gred Yang Lebih Tinggi. Buku ini dapat memberi panduan kepada staf UPM berkaitan dengan elemen penting dalam kriteria kenaikan pangkat/lantikan ke gred yang lebih tinggi dalam menetapkan wajaran yang tinggi kepada aspek pengajaran dan penyeliaan pelajar, penyelidikan, perundingan dan penerbitan termasuk aspek kepimpinan akademik serta sumbangan kepada masyarakat dan negara iaitu mengikut tahap jawatan Pensyarah, Profesor Madya dan Profesor.

Pembangunan Fizikal

Universiti ini terus berusaha untuk menyediakan kemudahan infrastruktur yang terbaik untuk memastikan kelancaran seluruh aktiviti pengajaran, penyelidikan dan kemudahan pelajar di Kampus Induk, Serdang serta Kampus Bintulu. Tahun 2004

particular. This book is a guide to the UPM staff regarding important elements related to promotions and appointments to higher scales by giving preeminence to the aspects of teaching and supervision, research, consultancy, and publishing. Aspects of academic leadership and contribution to the society and country are also used in determining the posts of Associate Professor and Professor.

NEW APPOINTMENT AND PROMOTION 2004

	Top Management	Professional Management	Support Staff
New Appointments	19	175	16
Promotions	22	151	70

Physical Development

The University continues to work towards providing good infrastructural facilities to ensure the smooth progress of all teaching, research activities as well as student facilities in the Main Serdang Campus and the branch Campus in Bintulu. Year 2004 saw rapid physical development at the Serdang Campus through the completion of seven successful development projects and the initiation of six other new projects. A few other development and campus beautification projects for the comfort of the UPM community were also completed and ready for use.

UPM telah memulakan usaha untuk membentuk sistem pengurusan yang berkualiti dan diiktiraf di peringkat antarabangsa melalui pensijilan ISO 9001

menyaksikan kepesatan pembangunan fizikal di Kampus Serdang yang dapat disaksikan secara terus apabila 7 projek pembangunan berjaya disiapkan dan 6 projek lagi telah dimulakan pada tahun 2004. Beberapa projek pembangunan dan pengindahan kampus untuk keselesaan warga UPM berjalan lancar dan siap untuk digunakan.

LANTIKAN BARU DAN KENAIKAN PANGKAT TAHUN 2004

	Pengurusan Tertinggi	Pengurusan Profesional	Sokongan
Lantikan Baru	19	175	16
Kenaikan Pangkat	22	151	70

Dalam tahun 2004, sebanyak 24 projek yang dibiayai oleh kerajaan melalui Rancangan Malaysia Ke-8 (RMK-8) telah dilaksanakan dengan jumlah perbelanjaan sebanyak RM 101.97 juta. Selain itu, beberapa projek juga telah dilaksanakan dalam tahun yang sama menggunakan peruntukan Kumpulan Wang Pembangunan UPM. Daripada jumlah tersebut beberapa projek telah berjaya disiapkan meliputi pembinaan baru, kerja menaik taraf, pengubahsuaian dan perolehan peralatan utama. Antara projek utama yang berjaya di siapkan pada 2004 ialah:

a. Menaik taraf sistem saliran dan perparitan
b. Manaik taraf bangunan Pusat Pelajar

In 2004, a total of 24 projects costing RM101.97 million, sponsored by the Government under the 8th Malaysian Plan were carried out. Besides that, other projects were also carried out using allocation provided by the University Development Fund. Included in these projects that were completed were new projects, upgrading and renovation works, and acquiring new equipment. Among the projects that were successfully completed in 2004 are:

a. Upgrading the irrigation and drainage system
b. Upgrading the Student Centre building
c. Building of six additional blocks for the Faculty of Design and Architecture
d. Building additional building for the Faculty of Modern Languages and Communication
e. Upgrading the 13th Residential College
f. Building a sewerage treatment plant for the Engineering Complex (Phase 2A)

c. Pembinaan 6 Blok bangunan tambahan Fakulti Rekabentuk dan Senibina
d. Pembinaan bangunan tambahan Fakulti Bahasa Moden dan Komunikasi
e. Menaik taraf bilik penginapan pelajar Kolej 13
f. Membina loji rawatan kumbahan bagi Kompleks Kejuruteraan (Fasa 2A)

Terdapat juga beberapa projek pembinaan yang dimulakan proses kerja pada tahun 2004. Antaranya ialah:

a. Membina bangunan struktur ladang di Taman Pertanian Universiti (TPU)
b. Menaik taraf jalan masuk ke Makmal Teknologi Akuatik, TPU
c. Membina Dewan Kolegiat di Kolej 12, 13 dan 14 dan Dewan Serbaguna KPZ
d. Membina Kompleks Perkhidmatan Makanan, Fakulti Sains dan Teknologi Makanan
e. Membina bangunan Kompleks Agroteknologi, TPU.

Penutup

Sepanjang 2004 beberapa pencapaian yang dicatatkan oleh UPM merupakan usaha semua pihak bagi merealisasikan matlamat ke arah Universiti Bertaraf Dunia menjelang 2010 seperti yang terkandung dalam Pelan Strategi UPM 2001-2010. Sesungguhnya kejayaan Pelan Strategi UPM itu bukan bergantung kepada kebolehan mana-mana individu, tetapi kepada sejauh mana kemampuan semua warga UPM untuk bergerak secara berpasukan. Semua mempunyai tanggungjawab untuk membawa UPM ke mercu kejayaan yang lebih gemilang.

There were also other building projects that were initiated in 2004. Among them are:

a. Building a plantation building structure at the University Agricultural Garden (TPU)
b. Upgrading the road to the Aquatic Technology Laboratory (TPU)
c. Building the Collegiate Halls at Colleges 12, 13, 14 and a multi-purpose hall.
d. Building a Food Service Complex for the Faculty of Food Science and Technology
e. Building an Agro technology Complex (TPU).

Conclusion

Throughout 2004, many documented measures were taken by UPM in its effort towards realizing the goal of becoming a World Class University as specified in the Strategic Plan UPM 2001-2010. However, the success of this plan does not just rest on the ability of any one individual but depends on the capability of every member of UPM to move forward as part of a team. Every individual is responsible to propel UPM to a more glorious peak of success.

PERPUSTAKAAN SULTAN ABDUL SAMAD
UNIVERSITI PUTRA MALAYSIA

UPM
UNIVERSITI PUTRA MALAYSIA

Pengajaran Dan Pembelajaran

Teaching and Learning

Dengan hanya satu pengajian diploma dan satu kursus sijil tujuh dekad lalu, UPM kini telah memperkembangkan program pengajiannya kepada 16 fakulti, 7 institut, 9 pusat dan 2 akademi yang terlibat dalam perkembangan akademik, penyelidikan dan pengembangan. Dalam pada itu, UPM menawarkan 85 program peringkat pra siswazah dan kira-kira 400 bidang penyelidikan untuk pelajar pasca siswazah. Pelan Strategi UPM 2001-2010 telah menyasarkan bilangan 20,000 pelajar pra-siswazah dan 10,000 pelajar siswazah menjelang tahun 2010.

Pengajaran dan pembelajaran (P&P) yang berkesan adalah merupakan aspek penting yang menjadi pencetus kecemerlangan sesebuah universiti. Sehubungan itu, UPM memberi penekanan yang serius untuk menyedia dan memupuk suasana pengajaran dan pembelajaran yang kondusif. Pusat Tanggungjawab (PTJ) seperti fakulti, institut, pusat dan akademi terlibat secara langsung dan tidak langsung dalam usaha memantap lagi proses P&P.

Pembelajaran Berpusatkan Pelajar

UPM memperkasa sistem pengajaran dan pembelajaran melalui pelaksanaan sistem pembelajaran berpusatkan pelajar (SCL) dengan tujuan memupuk kemahiran intelek, kemahiran praktikal, sikap yang positif, kemahiran menyoal, kemahiran komunikasi, menganalisis secara kritikal dan meningkatkan penguasaan ICT dikalangan

Seven decades ago,UPM began by offering just two courses, that is one Diploma Studies programme and one Certificate level course. Today UPM has extended its academic programmes to 16 faculties, 7 institutes, 9 centres and 2 academies that are involved in the development of academic growth, research and development. UPM also offers 85 programmes at under graduate level and nearly 400 fields of research for postgraduate students. The UPM Strategic Plan UPM 2001-2010 has estimated that the number of students in the year 2010 will be 20,000 undergraduate students and 10,000 graduate students.

Effective teaching and Learning is one of the aspects that spurs on the excellence in a university. In connection to that, UPM has given serious emphasis to the preparation and conduciveness of the learning environment. Centres of Responsiblities (PTJ's) such as faculties, institutes, centres and academies are involved in both direct and indirect ways in the efforts to consolidate the process of teaching and learning.

Student Centered Learning

UPM strengthens its teaching and learning system by carrying out student centred learning to stimulate intellectual skills,practical skills,positive attitudes, questioning skills, communication skills, critical analysis and to enhance the acquisition of ICT among the students.The skills and the efficiency of the

pelajar. Kemahiran dan kecekapan tenaga akademik dipertingkatkan melalui pengendalian kursus dan bengkel yang bersesuaian.

Fakulti

- Fakulti Pertanian
- Fakulti Perhutanan
- Fakulti Ekologi Manusia
- Fakulti Ekonomi dan Pengurusan
- Fakulti Pengajian Pendidikan
- Fakulti Perubatan Veterinar
- Fakulti Perubatan dan Sains Kesihatan
- Fakulti Sains
- Fakulti Kejuruteraan
- Fakulti Bahasa Moden dan Komunikasi
- Fakulti Sains Komputer dan Teknologi Maklumat
- Fakulti Rekabentuk dan Senibina
- Fakulti Sains dan Teknologi Makanan
- Fakulti Sains Pertanian dan Makanan UPMKB
- Fakulti Pengajian Alam Sekitar
- Fakulti Bioteknologi dan Sains Biomolekul

Fakulti Baru

Fakulti Bioteknologi dan Sains Biomolekul (FBSB) ditubuhkan pada 1hb Ogos 2004 berikutan penggabungan Jabatan Bioteknologi di Fakulti Sains Makanan dan Bioteknologi dengan Jabatan Biokimia dan Mikrobiologi di Fakulti Sains Pengajian Alam Sekitar. Penggabungan ini bertujuan untuk memberi tumpuan dan penekanan kepada bidang bioteknologi. Misi FBSB ialah untuk menjadi pusat pembelajaran, penyelidikan dan perkhidmatan profesional yang unggul dalam bidang bioteknologi dan sains biomolekul yang menyumbang kepada kemajuan manusia dan penerokaan ilmu, bagi menjana kekayaan dan pembangunan negara.

academic workforce are enhanced through through the running of courses and suitable workshops.

Faculties

- Faculty of Agriculture
- Faculty of Forestry
- Faculty of Human Ecology
- Faculty of Economics and Management
- Faculty of Educational Studies
- Faculty of Veterinary Sciences
- Faculty of Medicine and Health Science
- Faculty of Science
- Faculty of Engineering
- Faculty of Modern Languages and Communication
- Faculty of Computer Science and Information Technology
- Faculty of Design and Architecture
- Faculty of Food Science and Technology
- Faculty of Agricultural and Food Science UPMKB
- Faculty of Environmental Studies
- Faculty of Biotechnology and Biomoleculer Sciences

New Faculties

The Faculty of Biotechnology and Molecular Sciences (FBSB) was set up on 1st August 2004 following the merging of the Biotechnology Department at the Faculty of Food Science and Biotechnology with the Department of Department of Biochemistry and Microbiology at the Faculty of Environmental Sciences.This merger took place to give attention and emphasis to the field of Biotechnology. Its mission was to become a learning, research and professional services centre that is excellent in the area of biotechnology and molecular sciences which contributes to the progress of man and the pioneering of knowledge in order to generate the wealth and development of this country.

UPM memperkasa sistem pengajaran dan pembelajaran melalui pelaksanaan sistem pembelajaran berpusatkan pelajar (Student Centered Learning)

FBSB mempunyai kepakaran tenaga mahir dan berbagai kemudahan bagi menyokong aktiviti pengajaran, penyelidikan dan perkhidmatan profesional dalam semua bidang yang melibatkan bioteknologi. Fakulti menawarkan empat (4) program pengajian di peringkat Bacelor, iaitu:

1. Bacelor Sains (Bioteknologi)
2. Bacelor Sains (Kepujian) Biokimia
3. Bacelor Sains (Kepujian) Mikrobiologi
4. Bacelor Sains (Kepujian) Biokimia dan Mikrobiologi.

Sementara itu, pada 1 September 2004, UPM menubuhkan Fakulti Pengajian Alam Sekitar (FPAS). Penubuhan fakulti ini adalah ekoran daripada usaha meningkatkan taraf dan peranan Jabatan Alam Sekitar, Fakulti Sains dan Pengajian Alam Sekitar. Ia juga selari dengan hasrat kerajaan untuk menangani pelbagai isu alam sekitar semasa dan akan datang.

FPAS mempunyai dua jabatan iaitu Jabatan Sains Alam Sekitar dan Jabatan Pengurusan Alam Sekitar. Program yang ditawarkan oleh FPAS ialah Bacelor Sains (Alam Sekitar), Master Alam Sekitar (M.Env), Master Sains (M.S) dan juga di peringkat Doktor Falsafah. Fakulti ini juga merupakan satu-satunya badan akademik di Malaysia yang menawarkan ijazah di peringkat Bacelor, Master dan Ph.D dalam bidang alam sekitar.

Peringkat awal penubuhan ini fakulti mempunyai seramai 306 orang pelajar peringkat Bacelor dan 131 orang pelajar siswazah (Master dan Ph.D)

This Faculty has skilled expertise and various amenities to support its teaching, research and professional service in all areas that involve biotechnology. It offers (4) study programmes at Bachelor level and they are:

1. Bachelor of Science (Biotechnology)
2. Bachelor of Science (Honours) Biochemistry
3. Bachelor of Science (Honours) Microbiology
4. Bachelor of Science (Honours) Biochemistry and Microbiology

Meanwhile, on 1 September 2004, UPM established the Faculty of Environmental Sciences. This faculty was the byproduct of the effort to raise the standard and enhance the role of the Department of Environment, Faculty of Science and Environment Studies. It is also in line with the government's desire to face the variety of current environmental challenges and the issues that might arise later..

This faculty has two departments and they are the Department of Environmental Sciences and the Department of Environmental management. The programmes offered are Bachelor of Science (Environment), Master in Environment (M.Env), Master of Science (M.S) and also the Doctor of Philosophy. This faculty also is the only academic one in Malaysia that offers a degree at the Bachelor , Master and Ph.D levels in the field of environment.

At the point of its conception, this faculty had 306 students at Bachelor level and 131 at graduate level (Master dan Ph.D)

Institut
- Institut Biosains
- Institut Teknologi Maju
- Institut Multimedia dan Perisian
- Institut Penyelidikan Matematik
- Institut Pengajian Keamanan dan Komuniti
- Institut Gerontologi

Akademi
- Akademi Hutan Hujan
- Akademi Sukan

Penubuhan Akademi Sukan

Akademi Sukan telah mula beroperasi pada 1 Januari 2004. Penubuhannya adalah hasil ilham Yang Berbahagia Naib Canselor, Prof Dato' Dr. Ir.Mohd Zohadie Bardaie untuk melihat kepakaran yang dimiliki oleh pakar-pakar sukan di UPM dapat membangunkan sukan melalui pendekatan saintifik. Wujudnya Akademi Sukan di UPM telah mencetuskan anjakan paradigma dalam sukan negara dengan membina *niche* dalam pengaplikasian teknologi terkini dalam sukan kompetitif.

Visi Akademi Sukan ialah untuk memperoleh pengiktirafan antarabangsa sebagai pusat rujukan yang lengkap mengenai segala aspek kecemerlangan sukan. Misi utama Akademi Sukan ialah mempertingkatkan mutu sukan melalui penggunaan metadologi saintifik dalam sukan prestasi tinggi.

Akademi Sukan terdiri daripada tiga laboratori iaitu Laboratori Prestasi Fizikal, Laboratori Instrumentasi dan Analisis Kemahiran dan Laboratori Pembangunan Industri Sukan serta Bahagian Pentadbiran dan Kemudahan Sukan.

Institute
- Institute of Bioscience
- Institute of Advanced Technology
- Institute of Multimedia and Software
- Institute of Mathematical Research
- Institute of Peace and Community Studies
- Institute of Gerontology

Academies
- Academy of Rainforest
- Sports Academy

The establisment of the Sports Academy

The Sports Academy began its operations on 1 January 2004. Its formation was the brain child of the Vice-Chancellor, Prof Dato' Dr. Ir.Mohd Zohadie Bardaie who desired to see the expertise possessed by the sports experts in UPM to be used in developing the field of sports by using a scientific approach. The existence of this academy created a paradigm shift in the national sports arena by creating a niche in the application of technology in competitive sports.

The vision of the Academy is to obtain accreditation as a complete international reference centre for all aspects of excellence in sports. Its main mission is to enhance the quality of sports through the usage of scientific methodology in sports performances

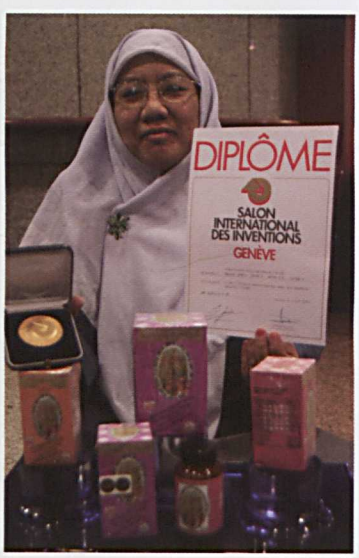
The Academy consists of three laboratories, namely, Physical Performance Laboratory, Instrumentation and Skill Analysis Laboratory and the Laboratory for the Development of the Sports Industry as well as the Department for Administration and Sports .

PUSAT PENGAJIAN, PEMBELAJARAN DAN PENYELIDIKAN

- Sekolah Pengajian Siswazah
- Sekolah Pengajian Siswazah Pengurusan
- Pusat Program Luar
- Pusat Islam
- Pusat Pengurusan Penyelidikan
- Pusat Pembangunan Perniagaan
- Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah
- Pusat Pemajuan Profesional

CENTRE FOR LEARNING AND RESEARCH STUDIES

- School of Graduate Studies
- Graduate School of Management
- External Program Centre
- Islamic Centre
- Research Management Centre
- Universiti Business Centre
- Sultan Salahuddin Abdul Aziz Shah Culture and Arts Centre
- Professional Development Centre



PROGRAM PENGAJIAN

Fakulti Perubatan dan Sains Kesihatan
- Doktor Perubatan
- Bacelor Sains (Sains Bioperubatan)
- Bacelor Sains (Pemakanan dan Kesihatan Komuniti)
- Bacelor Sains (Kesihatan Persekitaran dan Pekerjaan)
- Bacelor Kejururawatan
- Bacelor Sains (Dietatik)

Fakulti Ekologi Manusia
- Bacelor Muzik
- Bacelor Sains (Pembangunan Manusia)
- Bacelor Sains (Pembangunan Manusia dan Pengurusan)
- Bacelor Sains (Pembangunan Manusia dan Teknologi Maklumat)
- Bacelor Sains (Sains Pengguna)
- Diploma Pembangunan Manusia

Fakulti Ekonomi dan Pengurusan
- Bacelor Ekonomi
- Bacelor Perakaunan
- Bacelor Pentadbiran Perniagaan
- Bacelor Perakaunan dengan Pendidikan

Fakulti Perhutanan
- Bacelor Sains Perhutanan
- Diploma Perhutanan

Fakulti Perubatan Veterinar
- Doktor Perubatan Veterinar

Fakulti Kejuruteraan
- Bacelor Kejuruteraan (Awam)
- Bacelor Kejuruteraan (Elektrik dan Elektronik)
- Bacelor Kejuruteraan (Kimia)
- Bacelor Kejuruteraan (Biologi dan Pertanian)
- Bacelor Kejuruteraan (Mekanikal)
- Bacelor Kejuruteraan (Aero Angkasa)
- Bacelor Kejuruteraan (Proses dan Makanan)
- Bacelor Kejuruteraan (Sistem Komputer dan Komunikasi)

Fakulti Pengajian Pendidikan
- Bacelor Pendidikan (Pendidikan Jasmani)
- Bacelor Pendidikan (Bimbingan dan Kaunseling)
- Bacelor Pendidikan (Pengajaran Bahasa Malaysia sebagai Bahasa Pertama)
- Bacelor Pendidikan (Pengajaran Bahasa Inggeris sebagai Bahasa Kedua)
- Bacelor Pendidikan (Sains Rumahtangga)

STUDY PROGRAMMES

Faculty of Medicine and Health Science
- Doctor of Medicine
- Bachelor of Science (Biomedical Sciences)
- Bachelor of Science (Nutrition and Community Health)
- Bachelor of Sains (Environmental and Occupational Health)
- Bachelor of Nursing
- Bachelor of Science (Dietetics)

Faculty of Human Ecology
- Bachelor of Music
- Bachelor of Science (Human Development)
- Bachelor of Science (Human Development and Management)
- Bachelor of Science (Human Development and Information Technology)
- Bachelor of Science (Consumer Science)
- Diploma in Human Development

Faculty of Economics and Management
- Bachelor of Economics
- Bachelor of Accounting
- Bachelor of Business Administration
- Bachelor of Accounting with Education

Faculty of Forestry
- Bachelor of Forestry Science
- Diploma in Forestry

Faculty of Veterinary Medicine
- Doctor of Veterinary Medicine

Faculty of Engineering
- Bachelor of Engineering (Civil)
- Bachelor of Engineering (Electrical and Electronic)
- Bachelor of Engineering (Chemical)
- Bachelor of Engineering (Biology and Agriculture)
- Bachelor of Engineering (Mechanical)
- Bachelor of Engineering (Aerospace)
- Bachelor of Engineering (Process and Food)
- Bachelor of Engineering (Computer systems and Communication)

Faculty of Educational Studies
- Bachelor of Education (Physical Education)
- Bachelor of Education (Guidance and Counselling)
- Bachelor of Education (Teaching of Bahasa Malysia as a First Language)
- Bachelor of Education (Teaching of English as a Second Language)
- Bachelor of Education (Home Science)

- Bacelor Pendidikan (Sains Pertanian)
- Bacelor Sains (Pembangunan Sumber Manusia)
- Bacelor Pendidikan (Teknologi Maklumat)

Fakulti Sains
- Bacelor Sains (Kepujian)
  - Major Biologi
  - Major Matematik
  - Major Statistik
  - Major Fizik
  - Major Biokimia
  - Major Mikrobiologi
  - Major Kimia
  - Major Kimia Perindustrian
  - Major Kimia Petroleum
  - Major Sains Bahan
  - Major Sains Instrumentasi

- Bacelor Sains dengan Pendidikan (Kepujian)
  - Major Biologi
  - Major Fizik
  - Major Kimia
  - Major Matematik
  - Major Statistik

Fakulti Pertanian
- Bacelor Sains (Perniagaan tani)
- Bacelor Sains Pertanian
- Bacelor Sains Hortikultur
- Diploma Pertanian
- Diploma Kesihatan Haiwan dan Penternakan
- Diploma Pengurusan Perladangan Makanan

Fakulti Bahasa Moden dan Komunikasi
- Bacelor Sastera
  - Pengkhususan Bahasa Inggeris
  - Pengkhususan Bahasa & Linguistik Melayu
  - Pengkhususan Kesusasteraan Melayu
  - Pengkhususan Kesusasteraan Bahasa Inggeris
  - Pengkhususan Bahasa Asing
    - * Bahasa Mandarin
    - * Bahasa Arab
    - * Bahasa Perancis
    - * Bahasa Jerman
- Bacelor Komunikasi

- Bachelor of Education (Agricultural Science)
- Bachelor of Science Sains (Human Resource Development)
- Bachelor of Education (Information Technology)

Faculty of Sains
- Bachelor of Science (Honours)
  - Biology Major
  - Mathematics Major
  - Statistics Major
  - Physics Major
  - Biochemistry Major
  - Microbiology Major
  - Chemistry Major
  - Industrial Chemistry Major
  - Petroleum chemistry Major
  - Material Science Major
  - Instrumentation Science Major

- Bachelor of Science with Education (Honours)
  - Major in Biology
  - Major in Physics
  - Major in Chemistry
  - Major in Mathematics
  - Major in Statistics

Faculty of Agriculture
- Bachelor of Science (Agribusiness)
- Bachelor of Agricultural Science
- Bachelor of Horticultural Science
- Diploma in Agriculture
- Diploma in Animal Health and Production
- Diploma in Food Estate Management

Faculty of Modern Languages and Communication
- Bachelor of Arts
  - Specialisation in English
  - Specialisation in Malay Language and Linguistics
  - Specialisation in Malay Literature
  - Specialisation in English Literature
  - Specialisation in Foreign Languages
    - * Mandarin Language
    - * Arabic Language
    - * French Language
    - * German Language
- Bachelor of Communication

UPM mapakasa sistem pengajaran dan perbelanjaan melalui perlaksanaan sistem perbelanjaan berpusatkan pelajaran

Fakulti Rekabentuk dan Senibina
- Bacelor Seni Bina Landskap
- Bacelor Rekabentuk (Senibina)
- Bacelor Rekabentuk (Rekabentuk Perindustrian)

Fakulti Sains Komputer dan Teknologi Maklumat
- Bacelor Sains Komputer
  - Pengkhususan Sistem Komputer
  - Pengkhususan Multimedia
  - Pengkhususan Kejuruteraan Perisian
  - Pengkhususan Rangkaian Komputer

Fakulti Sains dan Teknologi Makanan
- Bacelor Sains dan Teknologi Makanan
- Bacelor Sains (Pengajian Makanan)

Fakulti Sains Pertanian dan Makanan (Kampus Bintulu)
- Bacelor Sains Bioindustri
- Bacelor Pentadbiran Perniagaan
- Diploma Pertanian

Faculty of Design and Architecture
- Bachelor of Design and Landscape
- Bachelor of Design (Architecture)
- Bachelor of Design(Industrial Design)

Faculty of Computer Science and Information Technology
- Bachelor of Computer Science
  - Major in Computer systems
  - Major in Multimedia
  - Major in Software Engineering
  - Major in Computer Network

Faculty of Food Science and Technology
- Bachelor of Science and Food Technology
- Bachelor of Science (Food Studies)

Faculty of Agriculture and Food Science (Bintulu Campus)
- Bachelor of Bioindustrial Science
- Bachelor of Business Administration
- Diploma in Agriculture

- Diploma Perhutanan
- Diploma Kejuruteraan (Kecemasan dan Keselamatan)
- Diploma Perikanan
- Diploma Pengurusan Perniagaan
- Diploma Sains Komputer

Fakulti Bioteknologi dan Sains Biomolekul

- Bacelor Sains (Bioteknologi)
- Bacelor Sains (Kepujian) Biokimia
- Bacelor Sains (Kepujian) Mikrobiologi
- Bacelor Sains (Kepujian)
- Biokimia dan Mikrobiologi.

Fakulti Pengajian Alam Sekitar

- Bacelor Sains (Alam Sekitar)

Program Pengajian Siswazah

Pengajian peringkat siswazah lanjutan berjaya menyumbang kepada keaktifan aktiviti penyelidikan dan pembangunan melalui penglibatan pelajar Master dan Ph.D. Sekolah Pengajian Siswazah dan Sekolah Pengajian Siswazah Pengurusan bertanggungjawab ke atas penawaran program peringkat siswazah di UPM. Satu pencapaian yang amat membanggakan dicatat pada 2003 apabila Sekolah Pengajian Siswazah Pengurusan tersenarai di kedudukan ke-7 dalam senarai Sekolah MBA Terbaik di Asia oleh majalah

- Diploma in Forestry
- Diploma in Engineering (Emergency and Safety)
- Diploma in Fisheries
- Diploma in Business Administration
- Diploma in Computer Science

Faculty of Biotechnology and Molecular Sciences

- Bachelor of Science (Biotecnology)
- Bachelor Sains (Honours) Biochemistry
- Bachelor of Science (Honours) Mcrobiology
- Bachelor of Science (Honours) Biochemistry and Microbiology.

Faculty of Environmental Studies

- Bachelor of Science (Environment)

Graduate Studies Programme Program Pengajian Siswazah

The Graduate Studies programme has successfully contributed to active research and development through the participation of Master and Ph.D students.The Graduate School of Management is responsible for the offering of graduate programmes in UPM. One significant achievement was recorded in 2003 when the Graduate School of Management was ranked 7th among the Top 20 MBA schools in Asia as reported by the AsiaInc

AsiaInc keluaran Ogos 2003. Tinjauan tersebut juga mendapati sekolah tersebut sebagai Sekolah MBA terbaik di Malaysia. Pada 2004 sekolah tersebut berjaya mengekalkan kejayaan yang dicatat sebelumnya.

1) Sekolah Pengajian Siswazah Pengurusan (GSM)

Antara program yang ditawarkan sekolah ini ialah:

M.B.A	**- Master Pentadbiran Perniagaan**
M.M.	**- Master Pengurusan**
MSc	**- Master Sains**
Ph.D.	**- Doktor Falsafah**

2) Sekolah Pengajian Siswazah (GSO)

Antara Program yang ditawarkan di sekolah ini ialah:

Doktor Falsafah (Ph.D)
Master Sains Pertanian (M.Agric.Sc.)
Master Sastera (M.A)
Master Ekonomi (M.Econ)
Master Alam Sekitar (M.Env.)
Master Senibina Landskap (M.L.A)
Master Pengurusan (M.M)
Master Sains (M.S.)
Master Sains Veterinar (M.V.Sc.)
Master Perubatan Veterinar (M.V.M)
Diploma Lepasan Ijazah Perubatan Reproduksi

Pendidikan Jarak Jauh (PJJ) dan Kerjasama IPTS

UPM turut menawarkan Program Pendidikan Jarak Jauh (PJJ) di peringkat Bacelor dan Master. Program ini dikelolakan oleh Pusat Pendidikan Luar (PPL). Program ini mendapat tempat di kalangan individu berkerjaya yang ingin mempertingkatkan kelulusan akademik masing-masing. Sehingga 2004 PPL menawarkan program-program seperti berikut:

Bacelor Komunikasi
Bacelor Sains (Pembangunan Manusia)
Bacelor Sains
(Pembangunan Sumber Manusia)
Bacelor Sains Komputer
Bacelor Pentadbiran Perniagaan
Bacelor Pendidikan:
Pengajaran Bahasa Inggeris
sebagai Bahasa Kedua)

magazine in its August 2003 issue. That study also showed that it was the best MBA School in Malaysia. In 2004 , this school maintained the standing and status it received the previous year.

1) Graduate School of Management (GSM)

Among the programmes offered by this school are:

M.B.A	**- Masterof Business Administration**
M.M.	**- Master of Management**
MSc	**- Master of Science**
Ph.D.	**- Doctor of Philosophy**

2) School of Graduate Studies (GSO)

Among the programmes offered by this school are:

Doctor of Philosophy (Ph.D)
Master of Agricultural Science (M.Agric.Sc.)
Master of Arts (M.A)
Master of Economics (M.Econ)
Master of Environmental Studies (M.Env.)
Master of Landscape Design (M.L.A)
Master of Management (M.M)
Master of Science (M.S.)
Master of Veterinary Science (M.V.Sc.)
Master of Veterinary Medicine (M.V.M)
Postgraduate Diploma in Reproductive Medicine

Distance Education (PJJ) IPTS collaboration

UPM also offers Distance Learning Programmes at both Bachelor's and Masters level. These programmes are administered by the Centre for External Education(PPL) and is suitable for workingindividuals who wish to upgrade their qualifications. Until 2004 PPL offered the following programmes:

Bachelor of Communication
Bachelor of Science (Human Development)
Bachelor of Sains (Human Resource Development)
Bachelor of Computer Science
Bachelor of Business Administration
Bachelor of Education:
Teaching of English as a Second Language
Guidance and Counselling
Bachelor of Arts:

UPM turut menawarkan Program Pendidikan Jarak Jauh (PJJ) di peringkat Bacelor dan Master. Program ini dikelolakan oleh Pusat Pendidikan Luar (PPL).

Bimbingan dan Kaunseling
Bacelor Sastera:
Bahasa dan Linguistik Melayu
Bahasa Inggeris
Master Sains (Pembangunan Sumber Manusia)
Master Sains (Komunikasi Korporat)
Master Sains (PBMP)
Master Sastera (BM)
Master Sains (Pengurusan Sumber Lestari)

Satu lagi pendekatan yang diperkenalkan untuk memberi peluang kepada masyarakat melanjutkan pengajian di peringkat tinggi ialah melalui program kerjasama UPM dan Institusi Pengajian Tinggi Swasta. Melalui kaedah ini peluang masyarakat untuk mendapat pendidikan tinggi lebih terbuka dan jaminan terhadap kualiti sesebuah IPTS dapat dikawal sepenuhnya. Terdapat pelbagai program yang ditawarkan melalui program kerjasama, meliputi program di peringkat diploma dan Bacelor.

Program Kerjasama
Bacelor Sastera (Bahasa Melayu)
Bacelor Sastera (Bahasa Inggeris)
Bacelor Sains Komputer
Bacelor Pentadbiran Perniagaan
Bacelor Kejuruteraan Mekanikal
Bacelor Kejuruteraan Elektrik dan Elektronik
Bacelor Kejuruteraan Awam
Bacelor Kejuruteraan Sistem Komputer dan Komunikasi
Bacelor Kejuruteraan Kimia
Diploma Sains Komputer
Diploma Pembangunan Manusia
Diploma Pengurusan Perniagaan
Diploma Pertanian
Diploma Perhutanan
Diploma Kejuruteraan Mekanikal
Diploma Kejuruteraan Elektronik
Diploma Kejuruteraan Teknologi Multimedia
Diploma Kejuruteraan Awam

Malay Language and Linguitics
English Language
Master of Science (Human Resource Development)
Master of Science (Corporate Communication)
Master of Science (Teaching of Bahasa Malaysia as a First Language)
Master of Arts (Malay Language)
Master of Science (Sustainable Resource Management)

Another avenue that was introduced to give opportunities to the public to pursue higher education were collaborative programmes between UPM and private higher learning institutions(IPTS). This approach provides a flexible educational route to the public while enabling total control of the quality of an IPTS. A variety of programmes are offered through these collaborative programmes at Both Diploma and Bachelor's levels..

Collaborative Programmes
Bachelor of Sastera (Malay Language)
Bachelor of Arts (English Language)
Bahcelor of Computer Science
Bachelor of Business Administration
Bahcelor of Mechanical Engineering
Bachelor of Electrical and Electronic Engineering
Bachelor of Civil Engineering
Bachelor of Computer Science and Communication
Bachelor of Chemical Engineering
Diploma in Computer Science
Diploma in Human Development
Diploma in Business Management
Diploma in Agriculture
Diploma in Forestry
Diploma in Mechanical Eguneering
Diploma in Electronic Engineering
Diploma in Multimedia Technology Engineering
Diploma in Civil Engineering

Senarai IPTS yang Bekerjasama dengan UPM

Institut Teknologi A.N.S.
Kolej Informasi Teknologi Cosmospect
Institut Pembangunan Sumber Manusia (Kolej Kamunting)
Kolej Teknologi Ikram
Kolej Teknologi Timur
Kolej SAL
Kolej Poly-Tech MARA (KPTM)
Kolej Teknologi Cybernetics
Kolej Karisma
Kolej Negeri
Kolej UNITI
Kolej RISDA,
Institut Kota Melaka
Kolej INSTEDT
Kolej Islam Yayasan Pelajaran Johor
Pusat Pembangunan Kemahiran Pahang (PSDC)
Institut Informasi Multimedia
Kolej SHAHPUTRA
Kolej Teknologi BESTARI (KTB)
Kolej Chermai Jaya (KCJ)
Institut Teknologi SARA

Program Eksekutif

Dalam tahun 2004 terdapat 2 buah fakulti yang menawarkan program eksekutif antaranya ialah Fakulti Ekonomi dan Pengurusan dan Fakulti Bahasa Moden dan Komunikasi. Ia juga merupakan satu alternatif untuk individu yang berkerjaya dan ingin menyambung pengajian secara separuh masa.

List of IPTS in Collaboration with UPM

A.N.S. Institute of Technology
Cosmospect College of Information Technology
Institue of Human Resource Development (Kamunting College)
Ikram College of Technology
Timur College of Technology
SAL College
MARA Poly-Tech College (KPTM)
Cybernetics Technology College
Karisma College
Negeri Sembilan College
UNITI College
Melaka Foundation College
RISDA College, Melaka
Kota Melaka Institute
INSTEDT College
Johore Islamic Students Foundation College
Pahang Skills Development Crporation (PSDC)
Multimedia Information Institute
SHAHPUTRA College
BESTARI Technology College (KTB)
Chermai Jaya College (KCJ)
SARA Institute of Technology

Executive Programmes

In 2004 2 faculties offered executive programmes, namely, the Faculty of Economics and Management as well as the Faculty of Modern Languages and Communication. This is an alternative given to working individuals to further their education on a part-time basis.

PROGRAM EKSEKUTIF
EXECUTIVE PROGRAMMES

Fakulti Ekonomi dan Pengurusan
Faculty of Economics and Management

Bacelor Ekonomi
Bachelor of Economics
Bacelor Pentadbiran Perniagaan
Bachelor of Business Administration
Bacelor Perakaunan
Bachelor of Accounting

Fakulti Bahasa Moden dan Komunikasi
Faculty of Modern Languages and Communication

Bacelor Sastera (Bahasa dan Linguistik Melayu)
Bachelor of Arts (Malay Language and Linguistics)
Bacelor Sastera (Bahasa Inggeris)
Bachelor of Arts (English Language)
Bacelor Sastera (Bahasa Asing)
Bachelor of Arts (Foreign Language)
Bacelor Komunikasi
Bacelor of Communication

PERPUSTAKAAN SULTAN ABDUL SAMAD

Selaras dengan perkembangan teknologi maklumat dan komunikasi (ICT), Perpustakaan terus berusaha untuk memastikan sistem pengurusan bahan dan perkhidmatannya berkembang selaras perkembangan berkaitan. Ini dibuat untuk membolehkan warga UPM menggunakan teknologi terkini bagi memenuhi keperluan maklumat dalam pengajaran, pembelajaran dan penyelidikan.

Koleksi

Koleksi Perpustakaan berkembang terus dengan pertambahan bahan baru untuk menyokong program yang sedia ada dan juga program baru. Sehingga 2004, jumlah keseluruhan koleksi Perpustakaaan UPM, termasuk koleksi di Perpustakaan Fakulti Perubatan dan Sains Kesihatan dan Perpustakaan Fakulti Perubatan Veterinar ialah sebanyak 481,315 naskhah. Jumlah ini meliputi semua koleksi buku dan jurnal berjilid. Dalam tempoh yang sama, koleksi bahan pandang dengar berjumlah 72,130 unit yang meliputi 40,055 judul. Untuk koleksi jurnal, Perpustakaan sentiasa berusaha untuk meningkatkan langganan kepada pangkalan data dalam talian untuk memudahkan pengguna mengakses jurnal elektronik yang mereka minati. Langganan kepada jurnal bercetak masih diteruskan dan sehingga kini Perpustakaan masih melanggan sebanyak 3,145 judul jurnal, bercetak.

Keahlian

Keahlian perpustakaan meningkat setiap tahun dengan bertambahnya pengambilan pelajar. Sehingga Disember 2004, jumlah ahli bagi semua kategori ialah 51,068.

SULTAN ABDUL SAMAD LIBRARY

In line with the rapid advance of Information and Communications Technology (ICT), the Library continued in its endeavours to ensure that its system of resource management and services grows in tandem with this development.This is to ensure that the UPM community can utilise the latest technology to fulfil their teaching, learning and research needs..

Collection

The library collection has showed continuous growth with the addition of new collections to support both existing and new programmes. As at 2004, the total collection of the library, including the collections of the libraries at the Faculty of Medicine and Health Sciences as well as the Faculty of Veterinary Medicine stands 481,315 copies. This total covers the entire collection of books and journal series. For the same priod of time, its audio-visual collection totalled 72,130 units covering 40,055 titles. As for journals, the Library takes effort to continuously increase its e-journal subscriptions to enable users to readily access their preferred journals. To date, subscriptions to as many as 3145 printed journals are still being continued.

Perkhidmatan Pinjaman
Dari Januari-Disember 2004 sebanyak 205,257 transaksi peminjaman/pemulangan buku dan jurnal telah dibuat. Rekod pinjaman juga telah mencatat 93,012 transaksi bagi bahan pandang dengar dan 4,393 bagi alat pandang dengar.

Perkhidmatan Pembekalan Dokumen
Sehingga akhir Disember 2004, sebanyak 831 permohonan untuk mendapatkan bahan dari perpustakaan lain telah diterima daripada pelajar dan staf UPM, dan 584 telah dapat dipenuhi, iaitu 70.3%. Dalam tempoh yang sama, 1331 permohonan telah diterima daripada perpustakaan luar untuk mendapatkan bahan daripada koleksi perpustakaan, jika ada. Daripada jumlah ini sebanyak 789 telah dapat dipenuhi, iaitu 59.3%.

Penggunaan Perpustakaan
Mengikut bacaan meter di pintu keluar Perpustakaan, dalam tempoh Januari hingga Disember 2004, seramai 627,363 pengguna telah datang ke Perpustakaan.

Pangkalan data dalam talian
Perkembangan ICT terkini telah membolehkan pengguna mengakses maklumat dalam jurnal dan lain-lain sumber maklumat dalam talian melalui internet. Sehubungan dengan itu, Perpustakaan telah melanggan beberapa pangkalan data untuk membolehkan warga UPM mengakses seluas mungkin sumber maklumat. Sehingga Disember 2004, Perpustakaan telah melanggan lebih kurang 30 pangkalan data dalam talian, antaranya:-

Academic Search Premier, ACM Digital Library, Business Source Premier, Blackwell Synergy, Cambridge Scientific Abstracts, Computer Database, ERIC, Emerald Fulltext, Euromonitor, Family and Society Studies Worldwide, Institute of Physics Electronic Journal, IEEE Xplore, Kluwer Online Journals, Lecture Notes in Computer Science, LINK (Springer-Verlag OnlineJournal), LawNet (Online Library of Malaysian Law, Lippincott Williams & Wilkins, OVID:Evidence Based Medical Reviews, OVID:Medline, ProQuest ABI/INFORM Global, ProQuest Agricultural Journals, ProQuest Digital Dissertations, ProQuest Education Complete, ProQuest Medical Library, Psyc Info, Psyc Articles, Science Direct and World Scientific Computer Science E Journal.

Membership
The Library's membership increases yearly as one of the contributing factors is the rise in student intake. As at December 2004, the total membership for all categories was 51,068.

Loan Services
From January-December 2004 there were 205,257 transactions involving the borrowing of books and journals. The record for audio-visual materials showed 93,012 transactions while there were 4,393 transactions for audio-visual equipment.

Document Supply Services
Until the end of December 2004, a total of 831 applications to secure materials from other libraries were received from both staff and students.70.3% of these requests or 795 were fulfilled. In the same period of time 1331 applications were received from other libraries to secure available materials from UPM's library.Of these 59.3% or 789 requests were granted.

Library Usage
According to the meter reading at the exit door of the library, 627,363 visits were made in the time period between January and December 2004..

Online Database
The latest developments in ICT have enabled users to access information and contents of journals and other sources of information online via the internet. In relation to this, the Library has subscribed to various databases to enable the UPM community to access a wide range of resources. As at December 2004, the Library subscribed to the following online :-

Academic Search Premier, ACM Digital Library, Business Source Premier, Blackwell Synergy, Cambridge Scientific Abstracts, Computer Database, ERIC, Emerald Fulltext, Euromonitor, Family and Society Studies Worldwide, Institute of Physics Electronic Journal, IEEE Xplore, Kluwer Online Journals, Lecture Notes in Computer Science, LINK (Springer-Verlag OnlineJournal), LawNet (Online Library of Malaysian Law, Lippincott Williams & Wilkins, OVID: Evidence Based Medical Reviews, OVID: Medline, ProQuest ABI/INFORM Global, ProQuest Agricultural Journals, ProQuest Digital Dissertations, ProQuest Education Complete, ProQuest Medical Library, Psyc Info, Psyc Articles, Science Direct and World Scientific Computer Science E Journal.

Keseluruhan pangkalan data ini membolehkan pengguna mengakses lebih 16,500 jurnal antarabangsa, sama ada mendapat maklumat mengenai judul, pengarang dan abstraks atau pun teks artikel itu sepenuhnya.

Selain daripada itu, warga UPM terus boleh mengakses pangkalan data dalam negara seperti MASTIC Link, NSTP E-media, PALMOILIS dan SIRIMLINK.

Pangkalan Data CD-ROM

Perpustakaan kini mempunyai 27 judul pangkalan data CD-ROM dalam berbagai bidang pengajaran dan penyelidikan, termasuk pangkalan data yang dihasilkan oleh Commonwealth Agricultural Bureau International (CABI) dan Institute for Science Information (ISI). Pangkalan-pangkalan data tersebut ialah:

ABI/INFORM, Agricola, AGRIS, ASFA (Aquatic Science and Fisheries Abstracts), BeastCD, Britannica CD, CAB Abstracts, CABPESTCD, CA on CD (Chemical Abstracrs on CD), Compendex Plus, Computer Select, Current Contents on CD, ERIC, FHN in AGRIS, Family Studies Database, Food Science and Technology Abstracts, HORTCD, KIT Abstracts, MLA International Bibliography, MEDLINE, POPLINE, SoilCD, Science Citation Index, Social Science Citation Index, Sport Discuss, TreeCD, VETCD.

Pendidikan Pengguna

Program Orientasi Perpustakaan untuk pelajar baru telah diadakan bagi pelajar peringkat Ijazah dan Diploma bagi sesi Mei dan November. Sebanyak 89 sesi program berkenaan telah diadakan sepanjang tahun 2004, dan telah mencatat kehadiran sebanyak 4512 pelajar.

Selain program untuk pelajar baru, Perpustakaan juga telah mengendalikan kelas Strategi Pencarian Maklumat yang di buat secara berjadual atau atas permintaan fakulti, selalunya untuk pelajar tahun akhir. Sebanyak 60 sesi telah diadakan. Sesi pendidikan pengguna kepada individu atau kumpulan kecil juga diadakan atas permintaan. Kelas kelas ini telah mencatat kehadiran seramai 1213 orang.

This entire database enables users to access more than 16,500 international journals whether to obtain information according to titles, authors and abstracts of entire articles. Apart from this, users can also access local online databases such MASTIC Link, NSTP E-media, PALMOILIS and SIRIMLINK.

CD-ROM DATABASE

The library now has 27 database titles in various fields of subjects and research inclusive of the one produced by the Commonwealth Agricultural Bureau International (CABI) and Institute for Science Information (ISI). They are as follows:

ABI/INFORM, Agricola, AGRIS, ASFA (Aquatic Science and Fisheries Abstracts), BeastCD, Britannica CD, CAB Abstracts, CABPESTCD, CA on CD (Chemical Abstracrs on CD), Compendex Plus, Computer Select, Current Contents on CD, ERIC, FHN in AGRIS, Family Studies Database, Food Science and Technology Abstracts, HORTCD, KIT Abstracts, MLA International Bibliography, MEDLINE, POPLINE, SoilCD, Science Citation Index, Social Science Citation Index, Sport Discuss, TreeCD, VETCD.

User Education

The Library orientation for new Diploma and Degree level students for the May and November sessions was carried out. 89 such programmme sessions were held in 2004 and they were attended by 4512 students.

Apart from programmes for new students, the Library also continued its Information Finding Strategy sessions. These sessions were scheduled on the requests made by various faculties, especially for their final year students.60 such sessions were carried out for both individuals and small groups. About 1213 people attended these user education sessions.

UPM

UNIVERSITI PUTRA MALAYSIA

Pembangunan Mahasiswa

Student Development

Universiti Putra Malaysia (UPM) meletakkan matlamat utama dalam Pelan Strategik 2001-2010 ialah melahirkan graduan yang berkualiti, berdaya saing dan berupaya untuk terus maju melalui pembelajaran yang berterusan. Untuk itu, pelbagai program telah diatur dan dilaksanakan sepanjang tahun 2004 dalam usaha universiti mencapai matlamat tersebut. Usaha ini melibatkan banyak pihak terutamanya Bahagian Hal Ehwal Mahasiswa yang berperanan menjadi pemangkin ke arah pembentukan kecemerlangan, kewibawaan dan keterampilan mahasiswa melalui pelaksanaan aktiviti yang menekankan aspek kemajuan akademik serta pembinaan sahsiah diri. Melalui tiga fungsi utamanya, iaitu;

- Kecemerlangan kemajuan akademik mahasiswa
- Kecemerlangan sahsiah dan kepimpinan mahasiswa
- Kecemerlangan kebajikan mahasiswa

A) Anugerah Naib Canselor

Pada sesi 2004/2005 seramai 44 orang mahasiswa telah dipilih menerima anugerah Naib Canselor. Daripada jumlah tersebut, seramai 23 mahasiswa daripada kluster sains dan 21 bagi kluster sains sosial/sastera. Anugerah ini diberikan kepada mahasiswa tahun akhir pengajian yang cemerlang dalam bidang akademik dan ko-kurikulum. Calon mesti menunjukkan ketokohan, kewibawaan, kesungguhan yang tinggi dalam aktiviti kepimpinan, kemasyarakatan dan penghayatan budaya ilmu dan wajib memperolehi Purata Nilai Gred Kumulatif 3.0 dan tidak pernah dikenakan tindakan tatatertib.

In its Strategic Plan 2001-2010,University Putra Malaysia (UPM) has stated that its main goal is to produce graduates of calibre who are competitive and capable of progressing forward through lifelong learning. Throughout 2004, various programmes were planned and implemented to achieve this objective. These efforts involved many divisions, especially the Student Affairs Division, whose role was to be the catalyst in shaping student excellence, authority and skill through programmes that emphasise academic progress and personality grooming, through these three main functions;

- Excellence in student academic development
- Excellence in student personality and leadership
- Excellence in student welfare

A) Vice-Chancellor's Award

A total of 44 students were chosen to receive the Vice-Chancellor's Award during the 2004/2005 session. Out of this, 23 students were from the cluster of science faculties, and the other 21 students were from the cluster of social science and arts faculties. The awards were given to students who had completed their final year and who had excelled in academic and co-curricular areas. The selection criteria was based on leadership responsibility, outstanding perfomance and dilligence in leadership and social activities, following a knowledge-oriented culture, having a Cumulative Grade Point Average (CGPA) of 3.0 and as well as being free from having any disciplinary action taken against them.

B) Anugerah Sukan

Bagi Anugerah Sukan UPM sesi 2004/2005 seramai 51 atlet UPM telah dianugerahkan anugerah tersebut. Pada kali ini jaguh olahraga dan juga atlet negara Mohd Robani Hassan, dan Citra Devi a/p Arumugam pemain hoki dianugerahkan sebagai olahragawan dan olahrahgawati. Dalam senarai anugerah ini juga telah disenaraikan anugerah khas yang diberikan kepada dua penerima, enam mahasiswa menerima Anugerah Kepimpinan Sukan, 24 menerima Anugerah Perak dan Anugerah Emas diberikan kepada 17 penerima.

C) Aktiviti-aktiviti mahasiswa

Projek Perintis Berbasikal

UPM merupakan universiti pertama di Malaysia yang memperkenalkan program berbasikal di dalam kampus. Melalui program ini, ia dapat menyumbang kepada persekitaran kampus yang jauh bebas dari pencemaran udara dan bunyi yang dihasilkan oleh kenderaan bermotor. Selain itu, ia juga dapat mengurangkan kesesakan dalam kampus justeru dapat mengurangkan kadar kemalangan. Perancangan awal program ini telah bermula pada tahun 2004. Program ini memberikan kemudahan pengangkutan alternatif kepada mahasiswa di kampus Serdang. Sebanyak 300 basikal yang bernilai RM 375 sebuah diberikan kepada mahasiswa terpilih sebagai projek perintis. Mahasiswa terlibat hanya perlu membayar insuran RM 50 dan dikenakan yuran pengangkutan sebanyak RM75 setiap semester. Projek perintis ini akan diteruskan kepada pelajar lain kerana dengan projek ini dapat menjimatkan kos pengangkutan sebanyak RM 1 juta dan merealisasikan

B) Sports Awards

51 student athletes received awards in various categories during the UPM Sports Awards function in the 2004/2005 session. This time, national athlete and Champion, Mohd Rabani Hassan,and hockey player, Chitra Devi a/p Arumugam were awarded the sportsman and sportswoman of the year awards respectively. The award list included a special category award given to two students. Six students received sports leadership awards, 24 students received silver medals whereas 17 students received gold medals.

C) Student Activities

Bicyle Pioneering Project

UPM is the first university in Malaysia to introduce a cycling programme in its campus. Implementing this programmer has contributed to the freedom from noise and smoke pollution from motorised vehicles. This move will also minimise traffic jams and accidents. Planning of this programme was carried out in early 2004.This programme has served as an alternative and convenient mode of transport for students at the Serdang Campus. A total of 300 bicycles each costing RM375 were purchased and given to selected students as a pioneer project.The selected students need only pay an insurance fee of RM50 and a transport fee of RM75 per semester. This pioneering project will be extended to other students as it will save UPM transportation costs of RM1 million annually. This programme will also help realise UPM's desire to create a green campus with peaceful serenity.

hasrat UPM untuk menjadi kampus hijau yang mesra alam.

Bengkel Aktiviti Cemerlang

Bahagian Hal Ehwal Mahasiswa (B'HEM) telah mengadakan satu bengkel selama 3 hari di Port Dickson, Negeri Sembilan yang disertai seramai 120 pemimpin mahasiswa. Pemimpin mahasiswa itu dipilih dikalangan pimpinan tertinggi persatuan dan kelab yang berdaftar dengan B'HEM. Tujuan bengkel ini adalah untuk melatih kepimpinan mahasiswa dalam merancang dan mengurus sesuatu aktiviti yang ingin dilaksanakan secara berkesan dan sistematik serta penekanan aspek pengurusan organisasi,etiket sosial, protokol dan kemahiran merancang.

Istiadat Pentauliahan ke-23 Pegawai Kadet PALAPES IPTA

Pada 2004, UPM berjaya menjadi tuan rumah kepada Istiadat Pentauliahan Ke-23 Pasukan Latihan Pegawai Simpanan (PALAPES) seluruh IPTA iaitu pada 8 Mei 2004, bertempat di Padang Kawad. Seramai 697 Pegawai Kadet PALAPES telah dikurniakan watikah oleh Sultan Selangor, Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj. Selain UPM, majlis ini turut melibatkan pegawai kadet palapes daripada UM, UKM, UiTM, USM, UUM, UTM, UMS dan UNIMAS. Seramai 15 pegawai kadet PALAPES telah dianugerahkan sebagai Pegawai Kadet Terbaik. Mereka dipilih berdasarkan kualiti semangat, disiplin, kepimpinan dan pencapaian akademik masing-masing.

Program "English Zone" UPM

Pada 2004 UPM turut melancarkan program "English Zone" bagi meningkatkan penguasaan bahasa Inggeris di kalangan mahasiswa. Program ini juga bertujuan untuk mewujudkan budaya berbahasa Inggeris di kalangan mahasiswa di sekitar kampus.

Excellence Activity Workshop

The Student Affairs Division (B'HEM) had arranged one workshop of such a nature at Port Dickson, Negri Sembilan for 3 consecutive days. The 120 student leaders who participated in this workshop were among the top leaders in their respective societies and clubs, that are registered with B'HEM.The purpose of this workshop was to train student leaders in planning and managing activities, effectively and systematically, with emphasis on managing organisations, social etiquette, protocol and planning skills.

23rd PALAPES IPTA Cadet Officer Appointment Ceremony

The year 2004 saw UPM's success in hosting the 23rd Appointment Ceremony of the Reserve Officers Training Unit (ROTU) of all the public institutions of Higher Learning (PIHL) on & 8 May 2004 at the Parade Ground. A total of 697 ROTU Cadet Officers were bestowed with credentials by the Sultan of Selangor, Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj. Apart from UPM, ROTU cadet officers from UM, UKM, UiTM, USM, UUM, UTM, UMS and UNIMAS, also took part in this prestigious gathering. A total of 15 PALAPES cadet officers were given the Best Cadet Officers award.They were selected based on their morale, discipline, leadership and individual excellent academic achievements.

UPM's "English Zone" Programme

In 2004,UPM also launched an "English Zone" programme to improve and raise the level and standard of the English Language. The aim of this programme was to introduce and establish the learning of English Language as a culture, to be practised by the students throughout the campus. It is envisaged that the programme will enable and assist students to be proficient in the

UPM telah melancarkan program "English Zone" bagi meningkatkan penguasaan bahasa Inggeris di kalangan mahasiswa

Dalam jangka masa panjang, program ini dapat membantu mahasiswa UPM untuk mahir dengan bahasa Inggeris yang menjadi syarat syarat utama untuk bersaing di pasaran kerjaya apabila bergraduat nanti. Selain itu 'English Zone' ini juga mampu meningkatkan prestasi akademik mahasiswa UPM, memudahkan komunikasi dan memantapkan kepimpinan untuk dicontohi oleh orang lain. Mengikut pelaksanaan program tersebut beberapa lokasi telah dikenal pasti termasuk beberapa tempat di Bangunan Pentadbiran, Fakulti dan kolej kediaman. Mahasiswa yang berada di tempat tersebut dikehendaki berurusan dan bertutur dalam bahasa Inggeris.

Program Kerjaya dan Keusahawanan

Usaha untuk mencapai matlamat utama universiti yang terkandung dalam pelan strategik itu juga melibatkan Pusat Perkhidmatan Kerjaya dan Alumni (PPKA). PPKA sepanjang 2004 telah menganjurkan pelbagai program dan aktiviti untuk manfaat mahasiswa dengan melibatkan penyertaan pihak alumni. Antara aktiviti yang dianjurkan ialah:

- Bengkel Get That Job
- Bengkel Menghadapi Temuduga
- Simposium Keusahawanan Siswazah IPT 2004
- Ceramah Kerjaya
- Ceramah Keusahawanan

Selain itu, PPKA juga berusaha gigih untuk membawa kembali alumni ke kampus untuk berkongsi pengalaman dengan mahasiswa baru semasa program minggu suai kenal serta program rasmi di peringkat kolej dan fakulti. Program 'Alumni Reunion- Alumni Weekend' telah diperkenalkan pada tahun 2004 dan mendapat sambutan yang menggalakkan. Program ini akan diteruskan dari semasa ke semasa.

English Language, which is the most important criteria in their being able to complete in the job market, after they some graduated. Apart from this, the "English Zone" will also help to improve UPM students' academi performance, communication skills and enhance leadership qualities to be emulated by others. To implement this programme, a number of locations at UPM have been identified including those at the administration buildings, faculties and residential colleges. All students who happen to be at these locations are required to converse and transact business in the English Language.

Career and Entrepreneurial Programme

Efforts to achieve the University's main goal as contained in the Strategic Plan, also involves the Career Service Centre and the Alumni (PPKA). Throughout 2004, the PPKA organised a variety of programmes and activities to benefit students with the involvement and participation of the Alumni. Among the activities organised were:

- Get That Job Workshop
- Preparation for Interviews Workshop
- IPT 2004,Graduate Entrepreneurship Symposium
- Career Talk
- Entrepreneurship Talk

Apart from this, the PPKA's determined efforts in bringing back the former Alumni to share their experiences at college and faculty levels with the new students during the orientation week programme proved successful. The Alumni Reunion-Alumni Weekend programme was introduced in 2004 and was met with overwhelming and encouraging response. This programme will be continued from time to time.

mahasiswa UPM memberi bantuan kepada mangsa tsunami dalam bentuk khidmat sukarela, kemahiran dan kepakaran serta wang

Mahasiswa Prihatin

Tragedi ombak besar tsunami yang melanda beberapa kawasan di negara ini iaitu di negeri Pulau Pinang, Perak dan Kedah menyebabkan semua masyarakat di Malaysia bersatu hati menghulurkan pelbagai bentuk sumbangan. Tidak terkecuali bagi mahasiswa UPM sendiri yang turut serta memberi bantuan dalam bentuk khidmat sukarela, kemahiran dan kepakaran serta wang ringgit. Sikap prihatin ditunjukkan sendiri apabila sukarelawan UPM yang terdiri pelajar dan staf merupakan sukarelawan IPTA pertama yang tiba di Kuala Muda, Kedah untuk menghulurkan bantuan. Kumpulan sukarelawan ini terdiri daripada 37 orang mahasiswa Jabatan Bimbingan dan Kaunseling, Fakulti Pengajian Pendidikan diketuai Dr. Rosnani Abdul Kadir dan Abdul Raof Abdul Rahman. Tumpuan tugas kumpulan ini adalah memberi khidmat kaunseling kepada mangsa yang masih dalam keadaan trauma dan ketakutan.

Selain itu, sekumpulan 40 orang mahasiswa dan pegawai akademik (Doktor Perubatan) dari Fakulti Perubatan dan Sains Kesihatan turut berlepas ke Kuala Muda. Kumpulan yang diketuai Prof. Madya Dr. Zarida Hambali ini dipecahkan kepada tiga kumpulan kecil. Setiap kumpulan ini memberi fokus bantuan kepada soal moral dan fizikal mangsa bencana yang terbesar melanda Asia itu.

Kumpulan terbesar mahasiswa UPM seramai 142 orang yang diiringi lapan pegawai turut memberi bantuan tenaga bagi membersihkan

Caring Students

The tsunami tragedy that swept through certain areas in this country, especially in Penang,Perak and Kedah,saw all Malaysians coming together in pooling their resources and donating in cash and kind. Without exception, UPM students and staff from the IPTA volunteer group were involved in every form of voluntary service and the offering of specialized skills and finance.This caring attitude was seen as students and staff from the UPM volunteer group were the first volunteers to arrive at the tragic scene in Kuala Muda, Kedah to offer help. This group comprised of 37 students from the Counselling and Guidance Department and from the Faculty of Educational Studies. They were led by Dr. Rosnani Abdul Kadir and Abdul Raof Abdul Rahman. The special services provided by this team included counselling the victims, who were still in a state of fear and trauma.

Apart from this a group of 40 volunteers comprising of students and academic officials (Medical Doctors) from the Faculty of Medicine and Health Science, proceeded immediately for Kuala Muda. This group, which was led by Assoc. Prof. Dr. Zarida

kawasan sekitar dan kesan kemusnahan yang melanda penempatan di sekitar Kuala Muda. Wakil UPM juga berjaya mengumpulkan sejumlah wang dan pakaian hasil sumbangan mahasiswa untuk diagihkan kepada mangsa termasuk mangsa tsunami di Acheh, Indonesia.

Bimbingan dan Kaunseling

Pada 14 Julai 2004 Bahagian Hal Ehwal Mahasiswa (BHEM) telah mengambil inisiatif untuk mewujudkan klinik kaunseling. Klinik ini bertujuan untuk memberi kemudahan kepada mahasiswa untuk mendapatkan perkhidmatan yang disediakan oleh Unit Bimbingan dan Kaunseling, B'HEM. Dengan pelaksanaan Klinik Kaunseling ini ia memberi peluang kepada mahasiswa yang tidak berkesempatan bertemu kaunselor pada waktu pejabat dapat mengambil kesempatan untuk berjumpa di luar waktu pejabat. Perkhidmatan terus menemui mahasiswa di kolej kediaman pula diadakan pada minggu kedua dan keempat setiap bulan.

Bermula 2004 juga UPM meningkatkan lagi perkhidmatan bimbingan dan kaunseling kepada mahasiswa melalui elektronik atau lebih dikenali sebagai E-Bika(Elektronik Bimbingan dan Kaunseling). Menurut statistik seramai 5,970 orang mahasiswa telah menggunakan perkhidmatan kaunseling secara dalam talian sepanjang tahun 2004.

Kompleks Perumahan Siswazah

Pada tahun 2004, UPM berjaya menyiapkan Kompleks Perumahan Siswazah dalam usaha memberi perhatian soal kebajikan pelajar siswazah terutama menyediakan

Hambali was divided into three smaller groups. Each group gave focused assistance and attention that catered to both the moral and physical needs of the victims hit by Asia's biggest disaster.

The largest group of UPM students consisting of 142 people,accompanied by 8 officers,gave physical assistance by cleaning the surroundings and the aftermath of the destruction that hit the settlements around Kuala Muda.The UPM representatives also successfully collected money and clothes donated by the students to be distributed to the victims including those in Acheh, Indonesia.

Guidance and Counselling

On the 14th of July, the Student Sffairs Division took the initiative to create a counselling clinic. The purpose of this clinic was to provide facilities to students to receive services given by the Guidance and Counselling Unit. By carrying out this counselling clinic,opportunities were given to students who did not have the chance to meet counsellors during office hours to take advantage of this privilege and meet them after office hours. These counselling services were also made available to students at the residential colleges, on the 2nd and 4th week of each month.

Beginning 2004, UPM also upgraded its guidance and counselling services to students through the electronic medium better known as E-Bika(Electronic Guidance and Counselling). According to statistics, a total of 5970 students used this form of counselling service throughout 2004.

penempatan yang selesa. Projek bernilai lebih RM 15 juta ini mengandungi 9 blok pangsapuri 5 tingkat di mana 160 unit rumah telah diperuntukan untuk menempatkan pelajar siswazah terutamanya pelajar antarabansangsa. Setiap unit rumah siswazah ini dilengkapi tiga bilik tidur, bilik belajar dan bilik air. Bilik belajar pula dilengkapi dengan kemudahan internet point. Selain daripada kemudahan penginapan kompleks ini turut mempunyai sebuah bangunan kemudahan pelajar, tempat letak kereta yang mencukupi, pondok keselamatan dan padang permainan untuk kanak-kanak.

D) Pilihan Raya Kampus

Pilihan raya kampus telah diadakan pada 15 September 2004 untuk pemilihan ahli Majlis Perwakilan Pelajar (MPP) sessi 2004/2005. Pada hari pembuangan undi sebanyak tujuh buah pusat pengundian telah dibuka, dua di kawasan fakulti, tiga di kolej kediaman kampus UPM, satu di Bahagian Teknologi Maklumat, satu di Kolej Sri Rajang, Kampus Bintulu dan satu di Panggung Percubaan, PKKSSAAS. Peratus mahasiswa turun mengundi pula melonjak sebanyak 93.97% iaitu seramai 21,544 orang berbanding hanya 19,044 orang bagi kedua-dua kampus UPM Serdang dan Bintulu pada tahun lalu. Sebanyak 48 anggota MPP telah dipilih melalui pilihanraya pada kali ini . Majlis angkat sumpah dan ikrar untuk barisan MPP pada kali ini telah diadakan pada 28 September 2004 dimana Adli Mohd Shariff telah dipilih sebagai presiden untuk sesi 2004/2005. Barisan MPP pada tahun ini memilih visi sejajar dengan visi universiti untuk menjadi universiti dunia iaitu Pemangkin Mahasiswa Universiti Kelas Pertama. MPP juga berazam dan berusaha untuk menjadi pemangkin ke arah pencapaian hasrat tersebut dengan membantu mahasiswa menyediakan diri untuk menghadapai cabaran menjadi mahasiswa di sebuah universiti bertaraf dunia.

Graduate Residential Complex

In 2004,UPM completed the graduate residential complex in its efforts to provide attention to the welfare of graduate students by providing comfortable accommodation. This project costing more than RM15 million, consists of 9 blocks of apartments, 5 stories high,where a total of 160 units were allocated to house graduate students, especially those from overseas. Each unit comes with 3 bedrooms, a study room and toilet facilities. The study room is equipped with internet points. Besides accommodation facilities, the complex also has a student facility centre, ample parking lots and a children's playground.

D) Campus Elections

The campus elections were held on 15 September 2004 to chose the members of the Student Representative Council for the 2004/2005 session. On election day, 7 voting centres were opened, 2 in the faculty areas, 3 in the residential colleges, 1 in the Information Technology Division, 1 at Sri Rajang College, Bintulu campus and 1 at the Experimental theatre, PKKSSAAS. 93.97% of the students totalling 21,544 came out to vote compared to the previous year where only 19,044 students from both the main campus and the branch campus voted. 48 members were selected in that election. The oath taking ceremony for the selected candidates was held on 28th. September 2004.Adli Mohd Shariff was elected as the president for the 2004/2005 session. The Student Representative Council selected a tagline in line with the university's vision to become a world class university that is "First Class University Student Catalysts". The Student Representative Council also by helping students prepare themselves to face the challenges of being students of a world class university.

UPM

UNIVERSITI PUTRA MALAYSIA

Kecemerlangan Penyelidikan

Research Excellence

Pencapaian UPM dalam bidang penyelidikan dan pembangunan (R & D) sepanjang tahun 2004 adalah amat membanggakan. Usaha UPM untuk menjadi sebuah universiti yang terkemuka dalam penyelidikan telah terkandung dalam matlamat kedua Pelan Strategik 2001-2010. Oleh itu, pelbagai perancangan dan pelan tindakan telah disusun ke arah pencapaian matlamat tersebut.

Geran Penyelidikan

UPM adalah penerima geran IRPA (Intensification of Research in Priority Areas) daripada Kementerian Sains, Teknologi dan Inovasi (MOSTI) yang terbesar berbanding dengan institusi penyelidikan yang lain di Malaysia. Walaubagaimanapun, sepanjang tahun 2004, hanya 41 permohonan IRPA dari UPM diluluskan oleh MOSTI. Penurunan mendadak jumlah penerimaan geran ini ialah kerana peraturan baru MOSTI yang menetapkan seorang penyelidik hanya boleh mengetuai satu projek sahaja dan hanya memberi peluang untuk sesiapa yang tidak pernah menjalankan sebarang projek IRPA.

UPM's achievements in research and development (R &D) throughout 2004 is something to be extremely proud of. Its efforts to be a university that is reputed in research are outlined as the second goal in the Strategic Plan 2001-2010. Therefore, various programmes and action plans have been arranged to achieve the above objective.

Research Grants

UPM is the biggest recipient of the IRPA Grants (Intensification of Research in Priority Areas) from the Ministry of Science, Technology and Innovation (MOSTI) when compared to other research institutions in Malaysia. Nevertheless, throughout 2004, only 41 IRPA applications from UPM have been approved by MOSTI. The sudden decrease in grants received was due to new rules of MOSTI when it decided that there will only be one researcher heading one project. Preference will be given to those who have not carried out any IRPA projects.

PERUNTUKAN RANCANGAN MALAYSIA KE - 8 (RMK8)
PROVISION IN THE 8TH MALAYSIA PLAN (EMP)

Tempoh / Period : 2001-2005 (Setakat 2004 / Until 2004)

• **Sumber Dana dari Kerajaan (MOSTI) / Source of Fund from Government**	
• RRPA - EAR(456 projek / project):	RM74,175,063
• IRPA PR (34 projek / project):	RM35,000,424
• IRPA - SR (7 projek / project):	RM57,642,750
• Top Down National Biotechnology (9 projek / project):	RM14,999,611
(MOE / MOE) Geran Penyelidikan Fundamental / Fundamental Research Grant	
• 116 projek / project	RM2,800,00
• 105 projek / project	RM4,700,000

Nota / Note:

IRPA - Intensification of Research in Priority Areas
EAR - Experimental Applied Research
PR - Prioritised Research
SR - Strategic Research
MOE - Ministry of Eduction

Bagi RMK-8 (bagi tempoh 2001-2005), jumlah geran IRPA setakat Disember 2004 ialah RM166,818,237. Geran Top Down National Biotechnology juga merupakan dana yang diperolehi dari MOSTI walaupun bukan di bawah kategori IRPA. Jumlah penerimaaan dana bagi UPM ialah RM 14,999,611 dengan jumlah 9 projek kesemuanya.

Dana Geran Penyelidikan Fundamental yang diterima daripada Kementerian Pendidikan Malaysia pula menunjukkan peningkatan dari setahun ke setahun iaitu sebanyak RM3 juta pada 2002 dan RM4.7 juta pada tahun 2003. Peruntukan diagihkan kepada 105 projek penyelidikan. Projek-projek penyelidikan fundamental yang diterima pada tahun 2003 masih dijalankan pada tahun 2004.

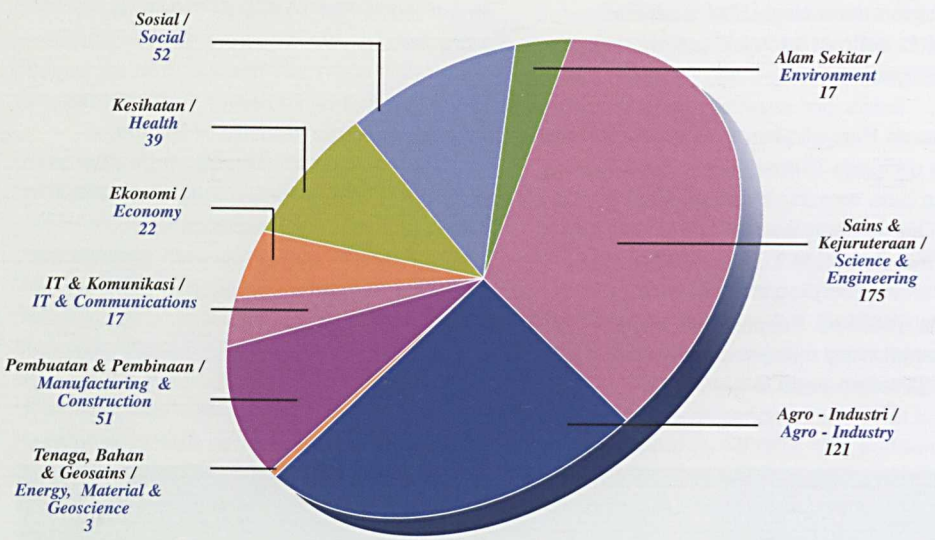
For the 8th Malaysian Plan (2001-2005), the total IRPA grants until December 2004 was RM166,818,237. Top Down National Biotechnology grants were obtained from MOSTI, although not under the IRPA category. The total fund received by UPM amounted to RM 14,999,611 for nine projects.

The Fundamental Research Fund Grants received from the Ministry of Education Malaysia showed an increase from year to year, with RM3 million in 2002 and RM4.7 million in 2003. The allocation was distributed among 105 research projects. All fundamental projects initiated in 2003 were still being continued in 2004.

STATISTIK PECAHAN PERUNTUKAN GERAN PENYELIDIKAN IRPA RMK-8 MENGIKUT SEKTOR-SETAKAT 2004
STATISTICAL BREAKDOWN OF EMP - 8 IRPA RESEARCH GRANTS ALLOCATION ACCORDING TO SECTORS UNTIL 2004

Sektor / Sector	Bil. Projek / No. of project	Jumlah Peruntukan (RM)/ Total Allocation (RM)	% No. projek/ % No. of Project	% Jumlah Peruntukan/ % Total Allocation
Agro-Industri / Agro-Industry	121	24,623,664	24.3	14.76
Tenaga, Bahan & Geosains / Power, Materials and GeoScience	3	676,622	0.6	0.41
Pembuatan & Pembinaan / Manufacturing and Construction	51	82,155,360	10.3	49.25
IT & Komunikasi / IT & Communication	17	2,494,720	3.4	1.50
Ekonomi / Economy	22	2,646,819	4.4	1.59
Kesihatan / Health	39	14,502,384	7.8	8.69
Sosial / Social	52	8,806,285	10.5	5.28
Alam Sekitar / Environment	17	2,671,168	3.4	1.60
Sains & Kejuruteraan / Science and Engineering	175	28,241,215	35.2	16.93
JUMLAH/ *TOTAL*	497	166,818,237	100.0	100.00

PECAHAN GERAN PENYELIDIKAN IRPA RMK-8
MENGIKUT SEKTOR
BREAKDOWN OF EMP IRPA GRANTS ACCORDING TO SECTOR



STATISTIK PECAHAN PERUNTUKAN GERAN PENYELIDIKAN IRPA
RMK-8 MENGIKUT TAHUN SETAKAT 2004
STATISTICAL BREAKDOWN OF EMP IRPA RESEARCH GRANTS ALLOCATION EMP ACCORDING TO YEARS UNTIL 2004

Tahun / Year	Bilangan Projek / No. of projects	Jumlah Peruntukan (RM) / Total Allocation (RM)
2001	175	36,503,908.00
2002	167	100,588,448.00
2003	114	23,693,086.00
2004	41	6,032,795.00
Jumlah / Total	**497**	**166,818,237.00**

Paten dan Pengkomersialan

Kepentingan menjaga harta intelek adalah penting bagi memastikan hasrat kerajaan merealisasikan matlamat K-Ekonomi dan Wawasan 2020 tercapai. UPM turut memainkan peranannya dengan menggalakkan para penyelidik untuk mempatenkan hasil penyelidikan mereka. Dasar UPM yang memutuskan bahawa mana-mana produk penyelidikan yang ingin menyertai pertandingan reka cipta dan penyelidikan khususnya di peringkat antarabangsa perlulah dipatenkan terlebih dahulu atau telah memulakan proses pendaftaran paten. Dasar baru yang mula dikuatkuasakan pada 2004 telah menyaksikan lonjakan dalam permohonan paten oleh para penyelidik sepanjang tahun 2004.

Patents and Commercialisation

The importance of safeguarding intellectual property is important in order to ensure the government's desire in realising its k-economy and Vision 2020 objectives. UPM also has played its role by encouraging researchers to patent their inventions. UPM's policy is that all research products that are entered into any invention competitions and research especially at international level should be patented earlier, or be in the registration process of being patented. This new policy that was enforced in 2004 has witnessed an increase in the number of patent applications by researchers throughout 2004.

Sesi Pembentangan dan Penilaian Paten telah diadakan untuk memproses permohonan paten daripada penyelidik UPM yang ingin menggunakan peruntukan dana paten yang telah di wujudkan. Sebanyak 14 permohonan telah diterima oleh Pusat Pengurusan Penyelidikan (RMC) untuk tahun 2004. Daripada jumlah tersebut, sebanyak 9 permohonan telah disokong oleh Jawatankuasa Kerja Permohonan Paten berdasarkan kriteria penilaian yang ditetapkan oleh pihak Universiti. Sebanyak 54 hasil penyelidikan yang melibatkan 33 penyelidik UPM telah dibiayai menggunakan peruntukan dana paten tersebut dan jumlah perbelanjaan yang terlibat adalah sebanyak RM405,063.84. Ini telah menjadikan baki dana paten adalah sebanyak RM94,936.16. Jumlah permohonan paten Malaysia dan di luar Malaysia secara keseluruhan bagi hasil penyelidikan UPM untuk tahun 2004 adalah sebanyak 111. Tujuh puluh empat daripadanya telah didaftarkan (pending) ke Perbadanan Harta Intelek (PHIM) di bawah Akta Paten 1983 dan 32 yang lain sedang dalam proses permohonan. 4 reka cipta telah berjaya mendapat sijil paten. 3 daripada reka cipta tersebut adalah daripada Fakulti Kejuruteraan iaitu *Putra Block* (Prof. Madya Dr. Mohd. Razali Abdul Kadir), *HO-meter* (Prof. Madya Dr. Husaini Omar) dan Stone *Mastic Asphalt With Celulos Oil Palm Fiber* (En. Ratnasamy Muniandy). Manakala reka cipta daripada Fakulti Sains yang berjaya mendapatkan sijil paten ialah *Latexometer* (Prof. Dr. Kaida Khalid).

The presentation and evaluation of patents session was held to process patent applications from UPM researchers interested in using the patent provision fund that had been established earlier. As many as 14 applications were received by the Research Management Centre (RMC) for 2004. Nine of the applications were supported by the Working Committee for Patent Application based on the evaluation criteria that had been set by the University. A total of 54 research findings involving 33 UPM researchers were funded by the patent provision fund and the total expenditure involved was RM405,063.84. This left a balance of RM94,936.16 in the Patent Fund. The total number of Malaysian patent applications both internally and externally as for UPM research findings for 2004 is 111. Seventy four of them have been sent for registration (pending) to the Agency for Intellectual property. (PHIM). Thirty two others are in the process of application. The three inventions that succeeded in getting their patent certificates were from the Faculty of Enginering namely the *Putra Block* (Prof. Madya Dr. Mohd. Razali Abdul Kadir), *HO-meter* (Prof. Madya Dr. Husaini Omar) and *Stone Mastic Asphalt With Celulos Oil Palm Fiber* (En. Ratnasamy Muniandy). The invention from the Faculty of Science that received a patent certificate is the *Latexometer* (Prof. Dr. Kaida Khalid).

Jumlah keseluruhan bilangan penerbitan bagi tahun 2004 adalah 4,029, meningkat hampir dua kali ganda berbanding dengan penerbitan pada tahun 2003

UPM dalam masa yang sama menggiatkan lagi usaha untuk mengkormersialkan hasil penyelidikannya melalui aktiviti R & D Commercialization Luncheon. Sebanyak 4 aktiviti tersebut telah disusun sepanjang 2004. Program yang disusun ini bertujuan membina rangkaian strategik terus dengan pihak industri. Ia juga dapat memperkenalkan produk penyelidikan UPM kepada pihak industri. Empat hasil penyelidikan yang terpilih ialah *Infectious Bursal Disease Vaccine* (Prof Madya Dr. Mohd Hair Bejo), *Anti Ageing Food Products* (Prof Dr Suhaila Mohamed), *High Performance Biodegradable Synthetic Lubricants From Palm Oil* (Dr. Robiah Yunus) dan *Commercializing Specialty Oil and Antioxidant Formulation from Rice Bran* (Prof Madya Dr Maznah Ismail).

Penerbitan

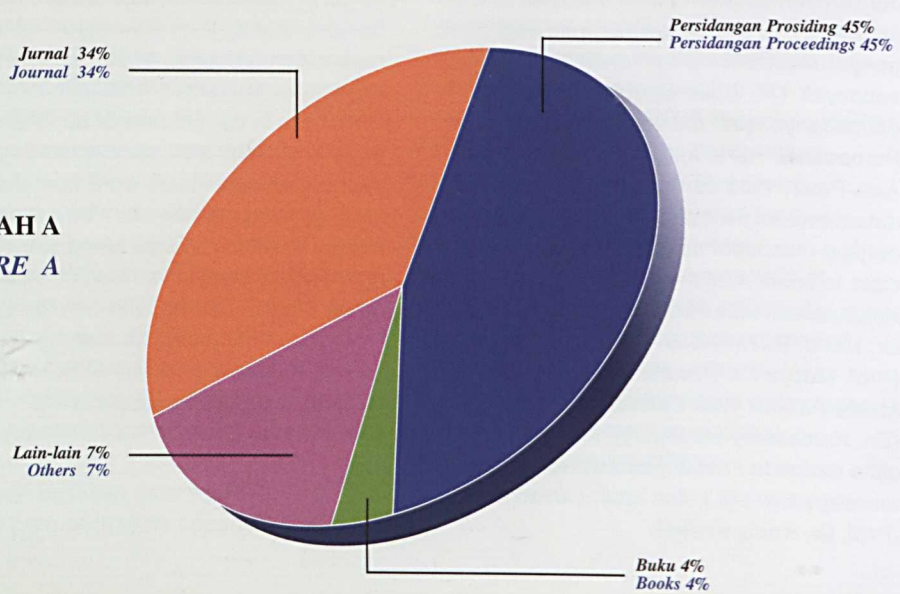
Jumlah keseluruhan bilangan penerbitan bagi tahun 2004 adalah 4,029, meningkat hampir dua kali ganda berbanding dengan penerbitan pada tahun 2003 iaitu sebanyak 2,827. Maklumat lengkap dapat dirujuk pada Rajah A dan Jadual berikut:

UPM at the same time has intensified its efforts to commercialise its research findings through the R & D Commercialization Luncheon event. This programme was arranged with the purpose of building direct strategic networks with the industry. Through this avenue, UPM was also able to introduce its research products to them. Four research findings that were selected were *Infectious Bursal Disease Vaccine (Assoc.* Prof. Dr. Mohd Hair Bejo), *Anti Ageing Food Products* (Prof Dr Suhaila Mohamed), *High Performance Biodegradable Synthetic Lubricants From Palm Oil* (Dr. Robiah Yunus)and *Commercializing Specialty Oil and Antioxidant Formulation from Rice Bran* (Assoc. Prof Dr. Maznah Ismail)

Publications

The total number of publications for the year 2004 was 4,029, almost double the number published in 2003 which was only 2,827. Complete information can be seen in Figure A and in the table below:

PENERBITAN R & D UPM 2004
R&D PUBLICATION UPM 2004



RAJAH A
FIGURE A

Sesi Pembentangan dan Penilaian Paten telah diadakan untuk memproses permohonan paten daripada penyelidik UPM yang ingin menggunakan peruntukan dana paten yang telah diwujudkan.

JADUAL : BILANGAN PENERBITAN BAGI TAHUN 2004 /
SCHEDULE: NO. OF PUBLICATION FOR YEAR 2004

Penerbitan / Publication	Jumlah / Total
Jurnal / Journal	
• Negara Asing / Foreign	892
• Malaysia / Malaysian	470
Persidangan Prosiding / Conference Proceedings	
• Negara Asing / Foreign	488
• Malaysia / Malaysian	1316
Buku / Books	181
Lain-lain / Others	682
JUMLAH	**4029**

Anugerah, Pencapaian dan Kejayaan

Tahun 2004 merupakan tahun kejayaan buat UPM. Penyertaan pameran di peringkat antarabangsa telah membuahkan hasil yang bukan sedikit apabila UPM memenangi 100% anugerah daripada penyertaan yang dibuat di dalam empat pameran. Antara pameran antarabangsa tersebut ialah:

1 **IENA: International Exhibition-Ideas-Inventions-New Products 2004**
2 **I-TEX: International Invention, Innovation and Technology Exhibition and Competition 2004**
3 **Geneva-Palexpo: International Exhibition of Inventions New Techniques and Products 2004**

Ternyata UPM mampu bersaing di peringkat antarabangsa dan membuka mata dunia terhadap bidang penyelidikan dan kepakaran di Malaysia. Tambah membanggakan apabila sekali lagi penyelidik daripada UPM memenangi anugerah Ram Rais Bio-technology Award melalui pameran ITEX 2004. Kali ini Prof. Dr. Mahiran Basri menggambil tempat sebagai penerima anugerah unggul tersebut. Kejayaan yang bukan sedikit juga dapat dilihat apabila UPM merangkul kejayaan Reka Bentuk *Booth* Terbaik (Johan) mengekalkan kejayaan lepas dan mencipta sejarah 2 kali berturut-turut sebagai *'booth'* terbaik di Pameran Expo Sains, Teknologi & Inovasi 2004, di samping memenangi 23 anugerah daripada 26 penyertaan yang dibuat. (Maklumat terperinci anugerah, adalah seperti berikut:-

Awards, Achievements and Successes

2004 was a successful year for UPM. Participations at international exhibitions ensured a clean sweep of 100% of the awards in 4 different exhibitions. Among them were:

1. **IENA: International Exhibition-Ideas-Inventions-New Products 2004**
2. **I-TEX: International Invention, Innovation and Technology Exhibition and Competition 2004**
3. **Geneva-Palexpo: International Exhibition of Inventions New Techniques and Products 2004**

It was very clear that UPM could compete at international levels and this helped to open the world's eyes towards the fields of research and expertise in Malaysia. Another moment of glory was when Prof. Dr. Mahiran Basri won the coveted 'Ram Rais Bio-technology Award' at the ITEX 2004. In addition, UPM also won the Best Designed Booth which it repeatdly won for the last two years at the Science, Technology and Innovation Expo 2004. UPM also won 23 other medals out of 26 contested. Details of the Awards are as follows:-

AKTIVITI PAMERAN PENYELIDIKAN DAN ANUGERAH PENYELIDIKAN

a) Pameran IENA : International Exhibition – Ideas-Inventions-New Products 2004

Pameran IENA ini telah berlangsung di Nuremberg, Jermany pada 28-31 Oktober 2004. Seramai 6 orang penyelidik telah mewakili UPM dan mempertandingkan 7 produk penyelidikan. Kesemua produk tersebut berjaya memenangi anugerah di mana 3 emas, 3 perak dan 1 gangsa dibawa pulang bersama Anugerah Khas Switzerland yang di berikan kepada penyelidikan oleh Prof. Madya Dr. Fakhruíl-Razi Ahmadun.

b) Pameran BIS : The British Invention Show 2004

Pada 21-24 Oktober 2004, 5 pingat emas dan 3 perak dibawa pulang oleh enam orang penyelidik yang mempertandingkan 8 hasil penyelidikan mereka di Alexandra Palace, London ini. Nyata komitmen tinggi daripada mereka hingga ke luar negara membuahkan hasil.

c) Pameran I-TEX : International Invention, Innovation and Technology Exhibition and Competition 2004

Tanggal 20-22 Mei 2004 bertempat di Mid Valley, Kuala Lumpur sekali lagi UPM berjaya memenangi anugerah bagi kesemua penyertaan dalam pameran I-TEX 2004. Lapan pingat yang dimenangi ialah 1 pingat emas, 2 perak dan 5 gangsa. Melalui pameran yang dianjurkan oleh MINDS dan Kementerian Sains, Teknologi dan Inovasi (MOSTI) ini juga Anugerah Khas: Ram Rais Bio-Technology Award menjadi milik penyelidik UPM iaitu Prof. Dr. Mahiran Basri melalui hasil penyelidikannya *MBSofax*.

d) Pameran INPEX – Inventionand New Product Exposition 2004

Pameran INPEX diadakan di Pittsburgh, USA pada 12-15 Mei 2004. Pameran bertaraf antarabangsa yang berlangsung selama 4 hari ini telah disertai seramai 4 orang penyelidik UPM. Pada pameran tersebut UPM memenangi 3 emas, 1 perak dan 1 gangsa di samping 2 anugerah khas dan 1 pemenang Grand Prix 2nd Runner Up.

RESEARCH EXHIBITIONS AND AWARDS

a) IENA : International Exhibition - Ideas-Inventions - New Products 2004

This exhibition was held in Nuremberg, Germany from 28-31 October 2004. A total of 6 researchers represented UPM and 7 research products were contested. All the products won awards; 3 gold, 3 silver and 1 bronze medal were brought home together with a Special Award that was given to Assoc. Prof. Dr. Fakhru'l-Razi Ahmadun.

b) BIS : The British Invention Show 2004

From 21-24 October 2004, 5 gold medals and 3 silvers were brought home by 6 researchers who had submitted 8 research findings at Alexandra Palace, London. It is very evident that the total commitment shown by the researchers even in overseas has brought results.

c) I-TEX : International Invention, Innovation and Technology Exhibition and Competition 2004

From 20-22 May 2004 at Mid Valley, Kuala Lumpur once again UPM succeeded in winning awards for all its entries in the I-TEX 2004. 8 medals were won: 1 gold,2 silver and 5 bronze medals. At the exhibition that was organised by MINDS and the Ministry of Science, Technology and Innovation the Ram Rais Bio-Technology Award became the property of Dr. Mahiran Basri for his research finding *MBsofax*

d) INPEX - Invention and New Product Exposition 2004

INPEX was held at Pittsburgh, USA from 12-15 May 2004. This international exhibition was held for 4 days and UPM was represented by 4 researchers. UPM won 3 golds, 1 silver and 1 bronze besides 2 special awards and 1 'Grand Prix 2nd Runner Up' award.

Pameran ini telah diadakan di Geneva, Switzerland pada 1 April hingga 4 April 2004

e) Pameran Geneva-Palexpo: International Exhibition of Inventions New Techniques and Products 2004

Melalui pameran Geneva ini, UPM telah berjaya membawa pulang 10 pingat, iaitu 2 emas, 6 perak dan 2 gangsa yang mana semua penyertaan UPM membawa pulang pingat. Pameran ini telah diadakan di Geneva, Switzerland pada 1 April hingga 4 April 2004. Sepuluh orang penyelidik yang terlibat adalah daripada Fakulti Kejuruteraan, Fakulti Sains Alam Sekitar, Fakulti Perubatan & Sains Kesihatan dan Fakulti Perubatan Veterinar.

f) Pameran S&T : Expo Science, Innovation & Technology

Pameran S&T ini telah diadakan di Dewan Dagangan Dunia Putra (PWTC) di Kuala Lumpur pada 27-29 Ogos 2004. UPM telah berjaya menggondol 23 pingat daripada 26 penyertaan pada pameran peringkat Kebangsaan ini. Di samping itu, UPM juga turut memenangi anugerah *Booth* Terbaik, yang mana merupakan kejuaraan buat kali kedua berturut-turut.

PAMERAN-PAMERAN LAIN YANG DISERTAI

National Summit on Innovation - R&D Innovation Showcase Exhibition

Pameran ini telah berlangsung pada 29 April hingga 1 Mei 2004 di Hotel Palace of The Golden Horses, Seri Kembangan dan yang dirasmikan oleh Perdana Menteri Malaysia, Datuk Seri Abdullah Hj. Badawi. Kesemua delegasi penyelidik UPM yang telah berjaya di Pameran Geneva iaitu seramai 10 orang telah mengambil bahagian dalam pameran ini.

e) Geneva-Palexpo: International Exhibition of Inventions New Techniques and Products 2004

Through this exhibition, which was held in Geneva, Switzerland, from 1-4 April 2004, UPM brought home 10 medals, comprising 2 golds, 6 silvers and 2 bronzes. The 10 researchers who represented UPM were from the Faculty of Engineering, Faculty of Environmental Studies, Faculty of Medicine and Health Sciences and Faculty of Veterinary Medicine.

f) S&T : Expo Science, Innovation & Technology

This S&T exhibition was held at the Putra World Trade Centre(PWTC) in Kuala Lumpur from 27-29 of August 2004. UPM succeeeded in winning 23 medals, from 26 entries, in this State level exhibition. In addition to this, UPM also won the best booth award, winning the award twice consecutively.

OTHER EXHIBITIONS THAT UPM PARTICIPATED

National Summit on Innovation - R&D Innovation Showcase Exhibition

This exhibition took place on the 29th of April until the 1st of May 2004, at the Golden Palace Hotel, Seri Kembangan, and was officially opened by the Prime Minister of Malaysia, Datuk Seri Abdullah Hj. Badawi. The entire winning of team 10 researchers at the Geneva Exhibition also took part in this Exhibition.

- **Pameran Penyelidikan Sempena Pesta Konvokesyen UPM**

  Pameran ini telah berlangsung pada 16-18 Julai 2004 bertempat di Bukit Expo UPM bersempena dengan Pesta Konvokesyen UPM ke-28

- **Pameran Kegemilangan Penyelidikan**

  Pameran ini telah berlangsung pada 20 Julai 2004 bertempat di Dewan Pusat Kebudayaan & Kesenian Sultan Sallehuddin Abdul Aziz Shah, UPM bersempena dengan Syarahan Awam Nobel Laureate Profesor Richard Ernst. Pameran ini telah mengumpulkan sebanyak 22 produk penyelidikan yang telah berjaya mendapat anugerah di peringkat nasional dan antarabangsa sepanjang Januari hingga Julai 2004

- **'Eco-Products International Fair 2004'**

  'Eco-Products International Fair 2004' telah diadakan pada 2-4 September 2004 di Pusat Pameran Mid Valley, Kuala Lumpur. UPM telah menghantar 5 produk penyelidikan untuk dipamerkan. Pameran ini telah disertai oleh syarikat-syarikat besar di dalam dan luar negara.

- **BioTechnology Asia 2004**

  Sebanyak 9 produk penyelidikan yang berasaskan bidang bioteknologi telah mengambil bahagian di BioTechnology Asia 2004 pada 9-11 September 2004 di PWTC ini. Ia telah diadakan buat julung kalinya di Malaysia yang merangkumi aktiviti pameran berasaskan bioteknologi dan juga persidangan dan melibatkan penyertaan daripada negara-negara Asia yang lain.

- **Research Exhibition in conjunction with UPM's Convocation Ceremony**

  This exhibition took place from 16-18 July 2004 at Bukit Expo UPM in conjunction with UPM's 28th Convocation Ceremony.

- **Research Excellence Exhibition**

  This exhibition took place on 20 July 2004 at Sultan Sallehuddin Abdul Aziz Shah Cultural and Arts Centre Hall in conjunction with a lecture given by Nobel Laureate Professor Richard Ernst. This Exhibition brought together 22 research findings which won awards at the international and national levels from January to July 2004.

- **Eco-Products International Fair 2004**

  'Eco-Products International Fair 2004' was held from 2-4 September 2004 at the Exhibition Centre, Mid-Valley, Kuala Lumpur. UPM sent 5 research products for the exhibition that saw participation from major local and foreign companies.

- **BioTechnology Asia 2004**

  As many as 9 research products from the field of Biotechnology were sent as entries to the BioTechnology Asia 2004 exhibition from the 9-11September 2004 at PWTC . This was the first time that this exhibition was held in Malaysia. It covered activities with a biotechnology base, a conference and also saw participation from other Asian countries.

Kejayaan Lain yang dimenangi oleh penyelidik UPM

Penyelidik UPM juga telah dianugerahkan Saintis Cemerlang 2004 oleh Kementerian Pengajian Tinggi Malaysia sebagai pengiktirafan dan penghargaan di atas kejayaan yang telah diperoleh di peringkat antarabangsa sepanjang 2004. Pada Majlis Anugerah Saintis Cemerlang yang telah diadakan pada 17 September 2004, seramai 14 orang penyelidik UPM telah dianugerahkan Saintis Cemerlang 2004.

Lebih membanggakan apabila Prof. Dr. Mohd Azmi Mohd Lila telah dianugerahkan Anugerah Inovasi Perkhidmatan Awam 2004 anjuran Unit Pemodenan Tadbiran dan Perancangan Pengurusan (MAMPU) dan Institut Tadbiran Awam Negara (INTAN). Kejayaan ini melalui hasil penyelidikan yang bertajuk Nucleoceptin Vaksin Unggul Untuk Pemandulan Haiwan. Sekali lagi nama UPM telah diumumkan apabila Prof. Dr. Mohd Azmi Mohd Lila dan Dr. Wong Shaw Voon telah dipilih sebagai The Outstanding Young Malaysian Awards 2004 bagi Kategori *Scientific Technology Development.*

Bengkel/Kursus/ Seminar

Tahun 2004 menyaksikan beberapa peristiwa yang penting bagi meningkatkan keupayaan dan daya saing penyelidik UPM dalam aktiviti yang berkaitan kecemerlangan penyelidikan di universiti ini. Aktiviti yang dianjurkan ini juga bertujuan mengembangkan peluang perkongsian bijak dengan agensi luar termasuk industri.

a) Majlis "R&D Commercialisation Luncheon"

Majlis ini diadakan untuk menemukan penyelidik dengan bakal rakan kongsi dari sektor industri. Selain itu aktiviti ini juga mempunyai matlamat untuk menyediakan satu platform untuk mengenalkan penyelidik-penyelidik UPM dengan pihak Industri, membina rangkaian strategik dengan industri berkenaan dalam urusan pengkomersialan produk, menjalinkan kerjasama penyelidikan dengan pihak industri yang berkenaan. Bagi meningkatkan peluang perkongsian bijak antara penyelidik dan industri beberapa aktiviti telah dijalankan seperti di dalam di mukasurat 69.

b) Bengkel Pengenalan Penyelidikan

Bengkel tersebut yang di anjurkan oleh Unit Geran Pusat Pengurusan Penyelidikan telah diadakan pada 27 Julai 2004 bertempat di

Other Successes achieved by UPM Researchers

14 UPM researchers were awarded the Excellent Scientist Award 2004 by the Ministry of Higher Education as a form of recognition and appreciation for their success at international levels throughout 2004. This ceremony was held on 17 September 2004

It was a moment of pride and joy when Prof. Dr. Mohd Azmi Mohd Lila was awarded the Public Service Innovation Award 2004 organised by the Modernisation Administration and Management Planning Unit and the National Institute of Public Administration. This success was the result of the research finding entitled Nucleoceptin-A Novel Vaccine For Fertility Control in Animals. Prof. Dr. Mohd Azmi Mohd Lila dan Dr. Wong Shaw Voon were given 'The Outstanding Young Malaysian Awards 2004' for the Scientific Technology Development Category

Workshop/Courses/Seminars

In 2004, there were many important events that enhanced the capability and competitiveness of UPM's researchers that were related to research excellence at the University. The activities that were organised were also for the purpose of expanding partnership opportunities with external agencies and industries.

a) R&D Commercialisation Luncheons

This function was held to introduce researchers to future partners from the industrial sector.This activity was also a platform to introduce UPM researchers to the industry, to build strategic networks in the commercialisation of products, create and strengthen research partnerships with the relevant industries. Finally, to further enhance partnership opportunities between researchers and the industries several activities has been carried out as set out in the schedule at page 69.

b) Introduction to Research Workshop

This workshop organised by the Grant Unit, Research Management Centre, was held on 27 July 2004 at Dewan Perdana, Palm Garden Hotel IOI Resort. A total of 80 participants comprising of lecturers who had served for less than 5 years in UPM, tutors and science officers attended this workshop. The main speaker was Encik Sakib bin Kusmi, Deputy Director, Science and Technology Division, Ministry of Science,

R & D COMMERCIALIZATION LUNCHEON /
R & D COMMERCIALIZATION LUNCHEON

Tarikh / Date	Tempat / Place	Penyelidik / Researcher	Fakulti / Faculty	Tajuk / Topic	Agensi / Agency
13/1/04	Bilik VIP I, IDEAL, UPM	Prof. Madya Dr. Mohd Hair Bejo	Fakulti Perubatan Veterinar Faculty of Veterinary Medicine	Infectious Bursal Disease Vaccine	Malaysian Vaccines and Pharmaceuticals Sdn. Bhd.
24/2/04	Bilik VIP I, IDEAL, UPM	Prof. Dr. Suhaila Mohamed	Fakulti Sains dan Teknologi Makanan Faculty of Food Science & Technolgy	Anti Ageing Food Products	GOLDEN HEALTH Sdn. Bhd
15/7/04	Perdana C, Palm Garden Hotel, Putrajaya,	Dr. Robiah Yunus	Fakulti Kejuruteraan Faculty of Engineering	High Performance Biodegradable Synthetic Lubricants From Palm Oil	PETRONAS Research & Scientific Services Sdn. Bhd.
11/10/04	Dewan Taklimat, Tingkat 1, Bangunan Pentadbiran UPM	Prof. Madya Dr. Maznah Ismail	Institut Interim Farmaseutikal dan Nutraseutikal Bioteknologi Interim Institute of Pharmaceutical and Nutraceutical Biotechnology	Commercializing Specialty Oil & Antioxidant Formulation from Rice Bran	Syarikat Faiza Sdn. Bhd. & Wonder Bran Sdn. Bhd.

Dewan Perdana, Palm Garden Hotel IOI Resort. Seramai 80 orang peserta terdiri daripada pensyarah baru yang berkhidmat kurang dari 5 tahun di UPM, tutor dan pegawai sains telah menghadiri bengkel tersebut. Penceramah utama bengkel tersebut ialah Encik Sakib bin Kusmi, Timbalan Pengarah, Bahagian Sains dan Teknologi, Kementerian Sains, Teknologi dan Inovasi (MOSTI) yang dijemput khas untuk memberi taklimat mengenai polisi penyelidikan dan R&D. Penceramah lain ialah Timbalan-timbalan Pengarah RMC.

Matlamat bengkel dianjurkan adalah untuk memperkenalkan Pusat Pengurusan Penyelidikan (RMC) dan fungsi setiap unit kepada semua penyelidik baru, memberi pendedahan kepada penyelidik-penyelidik di UPM mengenai pelbagai geran penyelidikan yang terdapat di dalam negara dan luar negara, memberi pendedahan mengenai

Technology and Innovation was invited to give a briefing about researchpolicies and R & D. The other speakers were the Deputy Directors of RMC.

The purpose of the workshop was to introduce the Research Management Centre and the function of each unit to all new researchers and to give exposure to the researchers about the availability of various grants nationally and internationally and to also inform them about research policies and how to enhance the research capabilities at UPM.

polisi penyelidikan, dan meningkatkan tahap kecemerlangan penyelidikan di UPM.

c) Bengkel Paten 2004

Susulan daripada seminar kesedaran paten yang telah dirasmikan oleh Profesor Dr. Muhamad Awang, Timbalan Naib Canselor (Akademik) pada Ogos 2003, Unit Polisi, Perancangan dan Kewangan telah menganjurkan bengkel Paten untuk para penyelidik UPM pada 29 April 2004 bertempat di Dewan Kuliah 3, Sekolah Pengajian Siswazah Pengurusan (GSM). Seramai 58 orang peserta yang terdiri daripada penyelidik dan pensyarah meliputi 18 fakulti/institut/pusat/akademi di UPM telah menghadiri bengkel ini. Bengkel yang bertujuan untuk memberi dan menyalurkan maklumat berkaitan proses permohonan paten dan mendraf spesifikasi paten telah dikendalikan oleh Encik Lok Choon Hong dengan dibantu oleh 2 orang kakitangan dari PINTAS IP Group Sdn. Bhd. yang juga merupakan salah satu panel paten yang telah dilantik oleh UPM bagi membantu menguruskan aktiviti yang berkaitan dengan proses fail paten bagi penyelidik UPM.

Sesi praktikal di makmal komputer Fakulti Ekonomi dan Pengurusan juga turut diadakan semasa program tersebut untuk para peserta yang hadir bagi memberi pendedahan dan memahirkan peserta dengan kaedah carian keaslian (novelty search) bagi penyelidikan mereka di laman-laman web yang berkaitan. Ini merupakan satu inisiatif pihak RMC ke arah membudayakan paten di UPM selain memberi kemahiran carian paten di kalangan penyelidik.

d) Klinik Paten 2004

Unit Polisi, Perancangan dan Kewangan juga mengadakan Klinik Paten mengikut permintaan daripada para penyelidik yang berminat. Bilangan peserta terhad kepada 4 - 7 orang pada satu sesi di mana seorang

c) Patent Workshop 2004

As a result of the Patent Awareness Seminar that was officiated by Profesor Dr. Muhamad Awang, Deputy Vice-Chancellor (Academic) on August 2003, the Unit for Policy, Planning and Finance organised a patent workshop for UPM researchers on 29 April 2004 in Lecture Hall 3, Graduate School of Management Studies. A total of 58 participants comprising of researchers and lecturers from 18 faculties/institutes/academies/centres attended this workshop. This workshop was organised to channel information related to the patent application process and the patent specifications and was facilitated by Mr. Lok Choon Hong who was assisted by two staff from PINTAS IP Group Sdn. Bhd. who are also one of the patent panels appointed by UPM to help manage patent filing process for UPM researchers.

A practical session in the computer lab,belonging to the Faculty of Economics and Management was also held to give participants exposure and skill on how to conduct a novelty search in specified websites. This is an initiative taken by RMC to enhance patent culture at UPM other than providing them with patent search skills.

d) Patent Clinic 2004

The Policy, Planning and Finance Unit also held a patent clinic upon request of interested researchers.The number of particpants were limited to 4 - 7 people, where each particpant was allocated 30 minutes.

peserta diperuntukkan selama 30 minit. Klinik Paten ini dikendalikan oleh Bustaman & Co. yang merupakan sebuah agensi paten yang bertauliah dan pakar dalam bidang berkenaan secara percuma. Sesi pertama telah berlangsung pada 27 Mei 2004 dan seramai 6 penyelidik daripada Fakulti Kejuruteraan, Fakulti Perubatan dan Sains Kesihatan, Fakulti Perubatan Veterinar dan Sekolah Pengajian Siswazah Pengurusan telah mengambil bahagian.

Klinik Paten yang kedua telah diadakan pada 1 September 2004, melibatkan seramai 7 penyelidik daripada Fakulti Kejuruteraan, Fakulti Perubatan dan Sains Kesihatan, Fakulti Perubatan Veterinar, Fakulti Sains dan Fakulti Perhutanan.

e) Majlis Menandatangani MoU dan Bengkel Kerjasama UPM-MINT

Majlis Menandatangani memorandum persefahaman (MoU) dan Bengkel Kerjasama UPM-MINT yang di adakan di Dewan Persidangan, Pusat Pendidikan Luar pada 1 Mac, 2004 telah disempurnakan oleh Ketua Pengarah, MINT dan Naib Canselor, UPM. Tujuan kerjasama tersebut adalah untuk melahirkan tenaga mahir dalam bidang penggunaan Teknologi Nuklear dan yang berkaitan bagi menyokong dan meningkatkan daya saing negara di Sektor Perindustrian, Perhutanan, Pertanian, Perubatan dan sektor-sektor lain.

f) Bengkel Kluster Penyelidikan

Tujuan bengkel tersebut ialah untuk membantu penyelidik menyiapkan kertas konsep bagi projek-projek PR/SR mereka dalam masa yang ditetapkan. Bengkel tersebut telah di adakan di Dewan Kuliah Putra, Fakulti Pertanian II, UPM pada 7 Mei 2004 dan dipengerusikan oleh Timbalan Naib Canselor (Akademik). Tiga orang pakar rujuk yang terlibat adalah Prof. Dr. Zulkifli Hj. Shamsuddin, Fakulti Pertanian, Prof. Dr. Mohd. Azmi Mohd. Lila, Institut Biosains (IBS) dan Y. M. Prof. Madya Dr. Tengku Aizan Tengku Abdul Hamid, Institut Gerontologi (IG).

g) Bengkel Etika Penyelidikan

Pada 22/6/04 - 23/6/04, Jawatankuasa Etika Penyelidikan UPM telah mengadakan bengkel di Hotel Equatorial, Bangi untuk membincangkan dan memperhalusi draf etika penyelidikan UPM.

This free clinic was facilitated by Bustaman & Co, an authorised patent agency and expert in the said field. The first session was held on 27 May 2004 and six researchers from the Faculty of Engineering, Faculty of Medicine and Health Science, Faculty of Veterinary Medicine and Graduate School of Management Studies, took part.

The second patent clinic was held on 1 September 2004 and involved 7 researchers from the Faculty of Engineering, Faculty of Medicine and Health Science, Faculty of Veterinary Medicine and Faculty of Forestry.

e) MoU signing ceremony and UPM-MINT workshop

This event was held at the Conference Hall, Centre for External Education on 1 March 2004 and was officiated by the Director General, MINT and the Vice-Chancellor of UPM. This cooperation was cemented to produce skilled manpower in the field of Nuclear Technology usage and also to support and enhance the competitiveness of the country in the industrial, forestry, agricultural, medical sectors and others.

f) Workshop on Research Clusters

The purpose of this workshop was to help researchers prepare their concept paper for PR/SR projects within a specified time. It was held at the Putra Lecture Hall, Faculty of Education on 7 May 2004, and was chaired by the Deputy Vice Chancellor (Academic Affairs). The three specialists who were involved were Prof. Dr. Zulkifli Hj. Shamsuddin, Faculty of Agriculture, Prof. Dr. Mohd. Azmi Mohd. Lila, Bioscience Institute and Y. M. Assoc. Prof Dr. Tengku Aizan Tengku Abdul Hamid, Institute of Gerontology (IG).

g) Workshop on Research Ethics

From 22/6/04 -23/6/04, the Committee on Research Ethics, UPM held a workshop at the Hotel Equatorial, Bangi to discuss and refine the draft on research ethics for the University.

SENARAI PEMENANG PINGAT PAMERAN IENA :
INTERNATIONAL EXHIBITION - IDEAS-INVENTIONS - NEW PRODUCTS 2004 MEDAL WINNERS LIST

Bil No	Nama / Name	Produk / Product	Pingat / Sektor Medal / Sector
1	Dr. Robiah Yunus	Rysol-High Performance Synthetic Lubricants from Palm Oil	Emas / Gold
2	En. Mohd. Hanif Yaacob	Optical Fiber Duplex Module (FDM) / Double Carrier Modulation	Emas / Gold
3	Ratnasamy Muniandy	Tura Roller Compactor (TRC) for Aspalt Mixtures	Emas / Gold
4	Dr. Fakhrul Razi Ahmadun	1. CNT and CNF Synthesis	Perak / Silver Anugerah Khas Switzerland
		2. Sludge Bioconversion	Perak / Silver
5.	Mohd Razali Abdul Kadir	Interloacking Load-bearing Hollow Block	Perak / Silver
6	Dr. Wong Shaw Voon	MechT TM Impactor	Gangsa / Bronze

SENARAI PEMENANG PINGAT PAMERAN BIS : *THE BRITISH INVENTION SHOW 2004 / LIST OF MEDAL WINNERS AT THE BIS EXHIBITION: THE BRITISH INVENTION SHOW 2004*

Bil. No.	Nama / Name	Produk / Product	Pingat / Sektor / Medal / Sector
1	Dr. Robiah Yunus	Rysol-High Performance Synthetic Lubricants from Palm Oil	Emas (Industrial) Perak (Konsumer) Gold (Industrial) Silver (Consumer)
2	Dr. Fakhrul Razi Ahmadun	Sludge Bioconversion	Emas (Industrial) Perak Khas (Industrial) Gold (Industrial) Special Silver (Industrial)
3	Dr. Wong Shaw Voon	MechT TM Impactor	Emas (Industrial) Gold (Industrial)
4	En. Mohd. Hanif Yaacob	Optical Fiber Duplex Module (FDM)	Emas (Industrial) Gold (Industrial)
5	Ratnasamy Muniandy	Tura Roller Compactor (TRC) for Aspalt Mixtures	Emas (Industrial) Gold (Industrial)
6	Dr. Mohd Razali Abdul Kadir	Interloacking Load-bearing Hollow Block	Perak (Industrial) Silver (Industrial)

SENARAI PEMENANG PINGAT PAMERAN I-TEX : /
LIST OF MEDAL WINNERS AT THE I-TEX EXHIBITION :
INTERNATIONAL INVENTION, INNOVATION AND TECHNOLOGY EXHIBITION AND COMPETITION 2004

Bil / No	Penyelidik / Researchers	Produk Penyelidikan / Research Product	Kejayaan / Success
1	Mahiran Basri, Erin Ryantin Gunawan, Keng Pei Sin, Azmahani Sulaiman, Abu Bakar Salleh, Salmiah Ahmad, Mohd. Basyaruddin Abd. Rahman, Arbakariya Arif, Rosfarizan Mohamad, Raja Noor Zaliha Abd. Rahman	MBSofax TM - New Palm-based Fine Organics for Industry	**Pingat Emas** **Anugerah Khas: Ram Rais Bio-Technology Award** **Gold Medal** **Special Award : Ram Rais Bio-Technology Award**
2	Mohd. Yunus Shukor, Azlan Baharom and Mohd. Arif Syed	Xenoassay-metal TM, a Heavy Metal Bioassay System	**Pingat Perak** Metal Bioassay
3	Norani Abd. Samad, Ahmad Said Sajap, Lau Wei Hong and Husan Abd. Kadir	SpodKill TM for Your Pest Problem	**Pingat Perak** **Siver Medalk**
4	Abdul Halim Shaari, Sidek H.A Aziz, Noorhana Yahya, Zainal Abidin Talib, Imad Hamadneh, Lim Kean Pah, Norjanah Azman, Mahiza Ismail, Roslan Abd-Shukor and Masrianis Ahmad	High Quality Bi(Pb)-Sr-Ca-Cu-O Superconductor Powders for use in Tape Fabrication for	**Pingat Gangsa** **Bronze Medal**
5	Chuah Teong Guan, Salmiah A., Rozanna D., Thomas Choong S.Y. and Sa'ari M.	Palm Oil Based Fatty Acid as Phase Change Material (PCM) in Gypsum wallboard (Thermal Energy Storage)	**Pingat Gangsa** **Bronze Medal**
6	Ishak Aris and A.K.M. Parvez Iqbal	Painting Robot for Houses and Buildings	**Pingat Gangsa** **Bronze Medal**
7	Jamilah Bakar, Harvinder Kaur, Russly Abdul Rahman and Badlishah Sham Baharin	Production of Gelatin from Red Tilapia Skins	**Pingat Gangsa** **Bronze Medal**
8	Kamel Arifin Mohd Atan, Rustem Suncheleev, Ismail Abdullah, Bekbaev Ural	Educational Software for Teaching Introductory Calculus at the University Level	**Pingat Gangsa** **Bronze Medal**

SENARAI PEMENANG PINGAT PAMERAN INPEX /
LIST OF WINNERS AT THE INPEX EXHIBITION - INVENTION AND NEW PRODUCT EXPOSITION 2004

Bil / No	Penyelidik / Researcher	Produk Penyelidikan / Research Product	Kejayaan / Success
1	Mohd. Khazani Abdullah	Fiber Optic Duplexer Module (FDM)	Pingat Emas (Kategori Sains) Grand Prix Second Runner-Up dengan wang tunai US1000 Best Invention of the Pacific RIM Gold Medal (Science Category) Grand Prix Second Runner-Up with cash prize US1000 Best Invention of the Pacific RIM
2	Azmi Yahya	Seedling Transplanter VER-1	Pingat Emas - Merit Award Gold Medal - Merit Award
3	Ishak Aris	Fiber Optic Based Lighting Detection System	Pingat Emas (Kategori Peralatan Perindustrian) Pingat Gangsa (Kategori Sains) Gold Medal (Industrial Equipment Category) Bronze Medal (Science Category)
4	Ratnasamy Muniandy	Intelligent Asphalt Mix Tester (TURAMESIN)	Pingat Perak (Kategori Pembuatan) Anugerah Kegemilangan Silver Medal (Production Category) Award of Excellence

SENARAI PEMENANG PINGAT PAMERAN GENEVA-PALEXPO:
INTERNATIONAL EXHIBITION OF INVENTIONS NEW TECHNIQUES AND PRODUCTS 2004 /
LIST OF MEDAL WINNERS AT THE GENEVA-PALEXPO EXHIBITION : EXHIBITION OF INVENTIONS NEW TECHNIQUES AND PRODUCTS 2004

Bil No	Nama / Name	Produk Penyelidikan / Research Product	Pingat / Medal
1	Prof. Dr. Mohd Azmi Mohd Lila and Lai Kit Yee	Nucleoceptin TM - A Novel Vaccine For Fertility Control in Animals	Emas Gold
2	Prof. Madya Dr. Maznah Ismail, Abdul Salam Abdullah, Azrina Azlan and Wafaa, Hailat Mustafa	E-ORY: Natural Antioxidant Rich Nutraceutical Formulation	Emas Gold
3	Dr. Robiah Yunus	Palm Oil-Based Synthetic Bio-Lubricant	Perak
4	Dr. Wong Shaw Voon	Heavy Duty Pendulum Impact Test Ring for Crashworthiness Studies	Perak Silver
5	Prof. Dr. Mohd Azmi Mohd Lila and Lai Kit Yee	Imuron TM - A Total Solution for Maximizing Antibody Responses	Perak Silver
6	Prof. Dr. Mohd Zobir Hussein, Zulkarnain Zainal, Asmah Yahaya and Dickens Wong Vui Foo	CRFNanopath: A Novel Nanocomposite-Based Controlled Release Formulation	Perak Silver
7	Prof. Madya Dr. Ahmad Husni Mohd Hanif, Syed Omar Syed Rastan and M.S. Halimi	ZAPPA-the rice seeds germination enhancer	Perak Silver
8	Prof. Madya Dr. Fakrul Razi Ahmadun	Carbon Nanotubes and Carbon Nanofibers Synthesis for Nanotechnology Applications	Perak Silver
9	En. Mohd. Hanif Yaacob	Optical Layer Automatic Protection Switch	Gangsa Bronze
10	Prof. Dr. Ir. Radin Umar Radin Sohadi	Bio-Composite Helmet for Tropical Countries	Gangsa Bronze

SENARAI PEMENANG PINGAT PAMERAN S&T :
EXPO SCIENCE, INNOVATION & TECHNOLOGY /
LIST OF MEDAL WINNERS AT THE S&T EXHIBITION : EXPO SCIENCE, INNOVATION & TECHNOLOGY

Bil / No	Penyelidik / Researchers	Tajuk Penyelidikan / Title of Research	Pingat / Medal
1	Arfah Salleh	AssessUrBook: Assessing Bookkeeping Skill Software	Emas Gold
2	Kamel Ariffin Mohd. Atan, Rustem Suncheleev, Ismail Abdullah and Bekbaev Ural	Educational Software for Teaching University Level Introductory Calculus And Algebra	Emas & Perak Gold and Silver
3	Mohd. Yunus Syukor,Shahizal Raslan, Siti Aqlima Ahmad, Evayanti Wahyunie Zamudin, Mohd. Fadhil Abdul Rahman and Mohd. Arif Syed	Enzyme assay for phosphomolybdate reductase, a novel enzyme responsible for the bioremediation of heavy metals	Emas Gold
4	Noorhana Yahya, Mansor Hashim, Abdul Halim Shaari, Rabaíah Syahidah Abdul Azis, Lim Kean Pah and Imad Hamdneh	Extremely Low Magnetic Energy Loss-Low Cost Antennae for High Frequency Operations in the Ni0.76-XMg0.04 +XCa0.005Co0.1Cu0.075Zn0.04Fe1.96O3.96 Ferrite System	Emas Gold
5	Daud Ahmad Israf Ali, Nordin Lajis, Syahida Ahmad, Habsah Mohamed and Khozirah Shaari	Cardamonin: a naturally-occuring phytochemical with anti-inflammatory drug-like properties.	Perak Silver
6	Faridah Abdullah, Nor Haida Sebran and Steven Chong	Biological Control Agent: Mass Production of *Trichoderma harzianum* for Use on Oil palms.	Perak Silver
7	Fauziah Othman, Asmah, R., Normah, H., Taufiq, Y.Y.H., Patimah, I., Sharida, F., Arnida, H., Yogespiriya, S., Susi, E. and Suherman, J.	Strobilanthes crispus tea- an anti-cancer herbal drink	Perak Silver
8	Mahiran Basri, Erin Ryantin Gunawan, Keng Pei Sin, Azmahani Sulaiman, Abu Bakar Salleh, Raja Noor Zaliha, Mohd. Basyaruddin Abd. Rahman, Arbakariya Arif and Rosfarizan Mohama	Green Production Of Palm-Based Wax Esters	Perak Silver
9	Mohd.Yunus Shukor, Azlan Baharom, Shahizal Raslan, and Mohd. Arif Syed	Detection of Copper from the Environment at the Sub Part Per Million Levels Using an Inhibitive Enzyme Assay Method	Perak Silver
10	Norhani Binti Abdullah,Professor Dr. Ho Yin Wan, Dr. Lan Ganqui, Professor Tan Sri Dato' Dr. Syed Jalaludin Bin Syed Salim	Mitsozyme TM For Poultry	Perak Silver
11	Raja Noor Zaliha Raja Abdul Rahman, Leow Thean Char, Abu Bakar Salleh and Mahiran Basri	A New Novel Thermostable Lipase for Industrial Application	Perak Silver

SENARAI PEMENANG PINGAT PAMERAN S&T :
EXPO SCIENCE, INNOVATION & TECHNOLOGY /
LIST OF MEDAL WINNERS AT THE S&T EXHIBITION : EXPO SCIENCE, INNOVATION & TECHNOLOGY

Bil / No	Penyelidik / Researchers	Tajuk Penyelidikan / Title of Research	Pingat / Medal
12	Abdul Rashid Mohamed Shariff, Abdul Razak Abdul Rahim, Khoo Yuen Hing, Ashraf Gasim Elsid Abdalla, Radzali Mispan, Shattri Mansor, Noordin Ahmad	Cell Phone Signal Strength Predictor	Gangsa Bronze
13	Anuar Kassim, Marisol Hainny Sopian, Zahariah Ismail, Roila Awang and Abdul Halim Abdullah	The Uses of Palm-Based In Colour Cosmetic	Gangsa Bronze
14	Anuar Kassim, Zulkarnain Zainal, Mohd. Zobir Hussein and Saravanan Nagalingam	Electrodeposited Metal Chalcogenide Thin Films for Photoelectrochemical Cells	Gangsa Bronze
15	Faujan Hj. Ahmad, Mahiran Basri, Manaf Ali, Nur Hana Faujan, Nor Jehar Alitheen, Muhajir Hamid	Betulinic acid: An approach to anti-leukemia drug	Gangsa Bronze
16	Irmawati Ramli, Nor Hidayaty Kamarulzaman, Noorfarizan Nasriah Mhamat Nasudin and Taufiq-Yap Yun Hin	Novel Oxygen Storage Materials From Nanocrystallized Bismuth Oxide	Gangsa Bronze
17	Marziah Mahmood and Sreeramanan S.	Biochemical Markers for Fusarium Wilt Disease in Banana Plants	Gangsa Bronze
18	Marziah Mahmood, Arbakariya A and Ali R.Z	Production of Wound Healing Agent using Bioreactor Technology	Gangsa Bronze
19	Mohd Basyaruddin Abdul Rahman, Mahiran Basri, Mohd. Zobir Hussein, Raja Nor Zaliha Raja Abdul Rahman and Abu Bakar Salleh	Advanced Nanobiomaterial as Catalyst for Green Organic Synthesis	Gangsa Bronze
20	Mohd Yazid Abd. Manap, Shuhaimi Mustafa, Abd Manaf Ali and Norihan Mohd Salleh	Bile Salt Hydrolase: Solution for Hypercholesterolemia	Gangsa Bronze
21	Mohd. Aspollah Sukari, Siti Zuraida Yaakob, Mawardi Rahmani, Neoh Bee Keat, Wan Nor Fazliyatul Wahida, Nordin Lajis, Nakisah Mat Amin and Abdul Manaf Ali	Antimicrobial and Cytotoxic Agents from Murraya koenigii and M. paniculata	Gangsa Bronze
22	Muhammad Nazrul Hakim, Solihah Mohd Hassan, Daud Israf, Zuraini Ahmad, Mohd Roslan Sulaiman, Arifah Abdul Kadir, Mohd Sater Zakaria And Abdul Manan Mat Jais	Anti-nociceptive (Pain-killing) agents from three local Channa spp. fish extracts.	Gangsa Bronze
23	Raha Abdul Rahim and Yiap Beow Chin	New Universal Extraction Kit for The 'Omic' Era	Gangsa Bronze

SENARAI PENERIMA ANUGERAH SAINTIS CEMERLANG 2004 / *LIST OF WINNERS OF THE EXCELLENT SCIENTIST AWARDS 2004*

Bil / No	Nama / Name	Fakulti / Institut / Faculty / Institute	Tajuk Inovasi / Title of Innovation
1	Mohd Azmi Mohd Lila (Prof. Dr.)	Fakulti Perubatan Veterinar Faculty of Veterinary Science	Nucleoceptin TM - A Novel Vaccine For Fertility Control in Animals
2	Maznah Ismail (Prof. Madya Dr.), Abdul Salam Abdullah, Azrina Azlan and Wafaa Hailat Mustafa	Fakulti Perubatan & Sains Kesihatan Faculty of Medicine and Health Science	E-ORY: Natural Antioxidant Rich Nutraceutical Formulation
3	Robiah Yunus (Dr.)	Fakulti Kejuruteraan Faculty of Engineering	Palm Oil-Based Synthetic Bio-Lubricant
4	Dr. Wong Shaw Voon	Fakulti Kejuruteraan Faculty of Engineering	Heavy Duty Pendulum Impact Test Ring for Crashworthiness Studies
5	Mohd Azmi Mohd Lila (Prof. Dr.)	Fakulti Perubatan Veterinar Faculty of Vetrinary Science	Imuron TM - A Total Solution for Maximizing Antibody Responses
6	Mohd Zobir Hussein (Prof. Dr.)	Fakulti Sains & Pengajian Alam Sekitar Faculty of Science and Environmental Studies	CRFNanopath: A Novel Nanocomposite-Based Controlled Release Formulation
7	Ahmad Husni Mohd Hanif (Prof. Madya Dr.)	Fakulti Pertanian Faculty of Agriculture	ZAPPA-the rice seeds germination enhancer
8	Fakrul Razi Ahmadun (Prof. Madya Dr.)	Fakulti Kejuruteraan Faculty of Engineering	Carbon Nanotubes and Carbon Nanofibers Synthesis for Nanotechnology Applications
9	Mohd. Hanif Yaacob (En.)	Fakulti Kejuruteraan Faculty of Engineering	Optical Layer Automatic Protection Switch
10	Radin Umar Radin Sohadi (Prof. Dr. Ir.)	Fakulti Kejuruteraan Faculty of Engineering	Envosafe TM Helmet
11	Mohd. Khazani Abdullah (Prof. Madya Dr.)	Fakulti Kejuruteraan Faculty of Engineering	Fiber Optic Duplexer Module (FDM)
12	Azmi Yahya (Prof. Madya Dr.)	Fakulti Kejuruteraan Faculty of Engineering	Seedling Transplanter VER-1
13	Ratnasamy Muniandy (En.)	Fakulti Kejuruteraan Faculty of Engineering	Intelligent Asphalt Mix Tester (TURAMESIN)
14	Ishak Aris (Prof. Madya Dr.)	Fakulti Kejuruteraan Faculty of Engineering	Fiber Optic Based Lighting Detection System

UPM

UNIVERSITI PUTRA MALAYSIA

Kegemilangan Pertanian & Biosumber

Agriculture & Bioresources Excellence

Seperti digariskan Matlamat Ketiga dalam Pelan Strategi UPM 2001-2010 iaitu meningkatkan keupayaan UPM sebagai Pusat Pengajian dan Perkhidmatan Pertanian dan Biosumber terkemuka di peringkat antarabangsa, UPM sentiasa terkedepan dalam merencanakan agenda pertanian negara. Dalam ucapan Bajet 2005 di Parlimen pada September 2004, Perdana Menteri, Datuk Seri Abdullah Ahmad Badawi telah mengumumkan bahawa UPM akan dijadikan Pusat Kecemerlangan Pendidikan Pertanian. UPM menganggap pengumuman itu sebagai satu pengiktirafan di atas usaha universiti dalam memberi sumbangan kepada pembangunan ekonomi negara. Pengumuman tersebut juga di anggap sebagai satu cabaran kepada UPM untuk membuktikan bahawa UPM berperanan besar mengangkat martabat pertanian negara menerusi pendidikan, penyelidikan dan pembangunan serta perkhidmatan profesional.

Pertemuan dengan Perdana Menteri

Selaras dengan itu, UPM mengambil langkah proaktif dengan menyusun 12 inisiatif bagi menjadikan UPM sebagai Pusat Kecemerlangan Pendidikan Pertanian. Perkara ini telah dibentangkan dalam pertemuan delegasi UPM dengan Perdana Menteri di Putrajaya pada 8 November 2004. Inisiatif tersebut adalah seperti berikut:

- Pertama, menubuhkan Institut Kajian Dasar Pertanian dan Makanan untuk mengenal pasti, menganalisis dan memberi opsyen dasar kepada masalah utama sektor pertanian dan makanan;
- Kedua, menubuhkan Institut Makanan Halal sebagai pusat rujukan sistem pengesahan dan pensijilan makanan halal;

In order to fulfil the Third Goal of the UPM Strategic Plan 2001 - 2010 which is to enhance its capability as a centre of studies for agricultural services an bioresources, UPM is always in the forefront in planning the national Agriculture agenda. In his Budget 2005 speech at Parliament in September 2004, the Honourable Prime Minister, Datuk Seri Abdullah Ahmad Badawi announced that UPM was to be made the Centre for Agricultural Excellence. UPM understands this announcement to be one of recognition of its contributions to the development of the economy. That announcement also is a challenge to UPM to prove that it plays a great role in raising the status of agriculture in this country through education, research and development as well as professional services.

Meeting with the Prime Minister

In line with this, UPM has taken proactive steps to make itself the Centre of Education for Agricultural Excellence as well as enhancing its contribution in the agricultural sector. This matter was raised in the visit made by the UPM delegation to meet the Prime Minister at Putrajaya on 8 November 2004. The initiatives are as follows;

- Firstly, to establish the Institute of Research for Agricultural Policies and Food in order to identify, analyse and provide solutions for major problems in the agricultural and food sector;
- Secondly, to set up the Institute of Halal Food as a reference centre for the system of identifying and certifiying halal food.

UPM berperanan besar mengangkat martabat pertanian negara menerusi pendidikan, penyelidikan serta perkhidmatan profesional.

- Ketiga, menubuhkan Institut Biokomposit Tropika untuk menjalankan penyelidikan penerokaan biokomposit bagi produk baru.

- Keempat, menubuhkan Institut Pengembangan Pertanian bagi menjalankan kajian pengembangan dan memberi latihan kepada agen pengembangan;

- Kelima, menubuhkan Pusat Pembangunan Usahawan Tani bagi menginkubasi dan melahirkan usahawan pertanian;

- Keenam, menubuhkan Pusat Kajian Strategik dan Inovasi Makanan bagi menumpukan penyelidikan dalam keselamatan dan kualiti makanan, makanan fungsian dan ramuan makanan bernilai tinggi serta teknologi pemprosesan makanan maju dan inovatif;

- Ketujuh, menubuhkan Pusat Mekanisasi dan Pengautomatan Pertanian dan Makanan bagi menjalankan penyelidikan dan pembangunan secara berterusan dalam mekanisasi dan pengautomatan untuk sektor pengeluaran pertanian dan makanan;

- Kelapan, meningkatkan kedudukan UPM sebagai Pusat Rujukan Pertanian

- Kesembilan, menubuhkan Pusat Matrikulasi Pertanian (AgroBio) UPM sebagai pusat bimbingan dan persediaan lulusan SPM menceburi bidang pertanian;

- Kesepuluh, menubuhkan Sekolah Pengajian Siswazah Pertanian untuk menyediakan program latihan dan penyelidikan yang mantap bagi pelajar siswazah di peringkat Master Sains dan Ph. D yang ditawarkan oleh UPM;

- Thirdly, to set up the Institute of Tropical Biocomposite to carry out pioneering research for new products;

- Fourthly, to establish the Institute for Agricultural Development to carry out extension research and provide training to extension agents;

- Fifthly, to initiate the Centre for the Development of Agricultural Entrepreneurs for incubating and producing agriculture entrepreneurs;

- Sixthly, to set up a Centre for Strategic Research and Food Innovation to focus on research in safety and quality standards of food, functional food and food ingredients of high quality as well as the advanced and innovative technology of food processing;

- Seventhly, to establish the Centre for Mechanisation and Automation of Agriculture and Food to carry out continuous research and development in the said areas for the agriculture and food output sector;

- Eighthly, to raise the standing of UPM as the Centre of Agricultural Reference;

- Ninthly, to initiate the Matriculation Centre for Agriculture (AgroBio) UPM for the preparation and training of post-SPM students who would like to be involved in the field of agriculture;

- Tenthly, to set up a Graduate School for Agriculture that will provide training programmes and research avenues for post-graduate students at the Master of Science and Ph.D levels offered by UPM;

- Eleventhly, to set up new programmes that will prepare k-workers to help develop and promote the agricultual sector; and

- Kesebelas, menawarkan program baharu bagi menyediakan k-pekerja untuk membangun dan memajukan sektor pertanian;

- Kedua belas, membangunkan Taman Pertanian Universiti bagi menyediakan kemudahan pengajaran dan penyelidikan yang terbaik dan terkini bagi melatih pelajar dalam bidang pertanian.

Johan Perbarisan Hari Kemerdekaan

Dalam pada itu juga, pada tahun 2004 UPM mencipta sejarah apabila muncul Institusi Pengajian Tinggi (IPTA) pertama dinobatkan sebagai johan perbarisan sempena Perarakan Hari Kemerdekaan ke-47 yang berlangsung di Kuantan, Pahang. Dengan tema '*Arus* Pertanian Gemilang' penyertaan UPM dalam perarakan tersebut melambangkan peranan dan sumbangan UPM sebagai Institusi Pengajian Tinggi yang sekian lama memberi sumbangan penting dalam mendidik dan melatih tenaga berpengetahuan serta mahir dalam bidang pertanian.

Seramai 258 orang pelajar dan staf UPM terlibat dalam perarakan yang bertemakan kecemerlangan dan kegemilangan pertanian di Malaysia. Dalam masa yang sama, UPM turut menyertai perarakan kereta berhias yang menampilkan kepelbagaian sumbangan UPM kepada pengeluaran pertanian moden berasaskan sains dan teknologi menerusi aktiviti pengajaran, penyelidikan dan pembangunan serta perkhidmatan profesional.

- Finally, to develop the University Agricultural Park so that it will provide modernised and excellent teaching and research facilities for the training of students in the field of agriculture.

Winner of the Merdeka Day Parade

In 2004, UPM created a historic milestone when it emerged as the first IPTA winner of the parade held to mark the 47th Independence Day celebrations which took place in Kuantan, Pahang. With the theme 'The *Wave* of Agricultural Excellence', UPM's participation in the parade symbolised the role and contribution of UPM in educating and training the workforce that is knowledgeable and skillful in the agriculture field.

A total of 258 students and staff of UPM were involved in this parade that carried the theme of the excellence and glory of agriculture in Malaysia. At the same time, UPM also participated in the floats procession, which embodied the variety of contributions UPM had made towards modern agricultural products based on science and technology, through teaching activities, research, development as well as professional services.

MAHA Exhibition 2004

In 2004, UPM also participated in the biggest international agricultural exhibition, namely,the Agriculture, Horticulture and Agro Tourism Exhibition (MAHA 2004). UPM's participation, this time around, brought about a new dimension especially in its promotion of learning activities, research, development

Seramai 258 orang pelajar dan staf UPM terlibat dalam perarakan yang bertemakan kecemerlangan dan kegemilangan pertanian di Malaysia

Pameran MAHA 2004

Tahun 2004, UPM turut menyertai satu pameran pertanian peringkat antarabangsa yang terbesar iaitu Pameran Pertanian, Holtikultur dan Agro Pelancongan (MAHA 2004). Penyertaan dalam pameran kali ini telah membawa dimensi baru kepada UPM khususnya dalam mempromosi aktiviti pengajaran, penyelidikan dan pembangunan serta perkhidmatan profesional khususnya dalam bidang pertanian dan biosumber. Ia juga menangkis tanggapan sesetengah pihak tentang peranan UPM dalam pembangunan pertanian negara sudah berkurangan. Malah, melalui pameran itu UPM berjaya menunjukkan sumbangannya kepada inovasi pertanian moden berasaskan sains dan teknologi.

Pameran UPM bertemakan 'Teknologi Peneraju Pertanian Komersial' telah menampilkan 25 produk dan hasil penyelidikan termasuk jentera dan mesin yang digunakan dalam teknologi pertanian. *Booth* UPM telah berjaya mendapat mendapat tempat pertama bagi kategori 'Gerai Pameran Jabatan dan Agensi Kerajaan' di dalam Pameran MAHA 2004 yang telah diadakan pada 4-10 Oktober 2004 di Mines International Exhibition and Convention Center (MIECC) Seri Kembangan Selangor Darul Ehsan.

Struktur Baru

Berkuatkuasa 1 Jun 2004, UPM Kampus Bintulu telah beroperasi dalam bentuk Fakulti di mana dua (2) Fakulti pada asalnya telah distrukturkan semula kepada

and professional services in the fields of Agriculture and Bioresources. It also repudiated the perceptions of certain quarters that the role of UPM in agricultural development in this country had diminished. Using this exhibition as an avenue, UPM demonstarted its contribution towards modern agricultural innovation based on science and technology. .

The UPM exhibition with the theme 'Technology:The Power behind Commercial Agriculture' brought forth 25 products and research findings including machinery and equipment used in agriculture. The UPM Booth won the first placing for the 'Government Department and Agency Exhibition Stall' category at the MAHA Exhibition held from the 4-10 October 2004 at the Mines International Exhibition and Convention Center (MIECC) Seri Kembangan, Selangor Darul Ehsan.

New Structure

Effective 1 June 2004, the UPM Bintulu Campus began operation with one Faculty when two original faculties were restructured. The Faculty of Food and Agricultural Science was maintained while the Faculty of Social Science and Management was downgraded to become the Department of Social Science.

In the beginning, the administration of the Bintulu Campus was spearheaded by the Provost . The position of Provost was later changed to Dean. However, the roles remain the same, that is to be responsible for the

satu fakulti. Fakulti Sains Pertanian dan Makanan (FSPM) dikekalkan sementara Fakulti Sains Sosial dan Pengurusan diturun taraf kepada berstatus jabatan iaitu dinamakan Jabatan Sains Sosial.

Pentadbiran UPMKB yang pada peringkat awalnya diterajui oleh Provos telah diubah kepada Dekan. Bagaimanapun peranan dan tanggungjawab Dekan adalah sama yakni bertanggungjawab terhadap keseluruhan pentadbiran UPMKB. Perubahan ini berlaku sebaik sahaja Provos yang dilantik bersara wajib pada 28 Julai 2004.

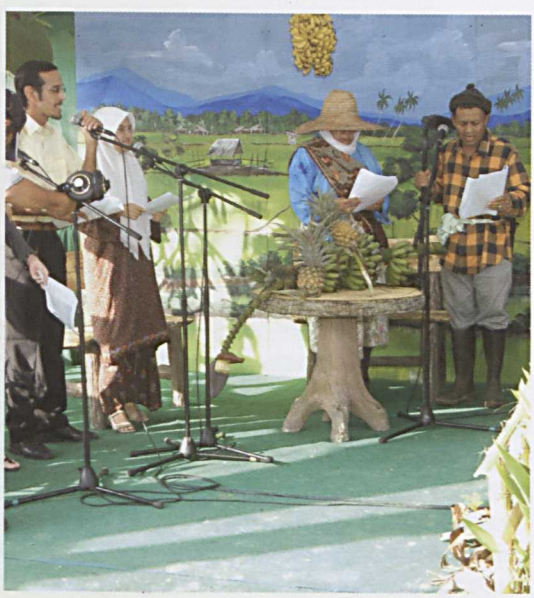
Pada 2004, UPM juga menstrukturkan semula Taman Pertanian Universiti (TPU). Bermula 1 Ogos 2004 TPU ditadbir oleh seorang ketua daripada kumpulan Pegawai Pertanian (Pengurusan dan Profesional). Dahulunya TPU diketuai pengarah daripada kumpulan Pegawai Akademik. Tujuan pengstrukturan semula ini ialah untuk menjadikan TPU sebagai sebuah pusat perkhidmatan dan kemudahan sokongan yang terbaik bagi menyokong aktiviti pembelajaran dan penyelidikan universiti terutamanya dalam bidang pertanian. Struktur pentadbiran baru TPU mengandungi 11 unit iaitu:

1. Unit Latihan
2. Unit Holtikultur
3. Unit Kejenteraan Ladang
4. Unit Bukit Ekspo dan Bank Genetik
5. Unit Ternakan
6. Unit Pengurusan Turf
7. Unit Penyelidikan Ladang Puchong
8. Unit Tanaman
9. Unit Ekuin
10. Unit Agroteknologi
11. Unit Pembangunan Teknologi

entire administration of the Bintulu Campus. This change occurred when the previous Provost went on compulsory retirement on 28 July 2004.

In 2004, UPM restructured the University Agricultural Park (UAP). Beginning 1 August 2004, the UAP was administerd by a head from the Agricultural Officers Group(Management and Professional). Previously, the UAP was headed by a Director from the Academic Officers group. The main purpose of this restructuring was to make the UAP the best service and facilities centre to support the learning and research activities especially in the fields of agriculture. The new administrative structure consists of 11 units and they are:

1. Training Unit
2. Horticulture Unit
3. Field Machinery Unit
4. Expo Hill and Genetic Bank Unit
5. Poultry Unit
6. Turf Management Unit
7. Puchong Field Research Unit
8. Plantation Unit
9. Equine Unit
10. Agrotechnology Unit
11. Technology Development Unit



UPM terlibat dalam pameran untuk mengetengahkan pengajian dan penyelidikan dalam bidang pertanian.

AKTIVITI DAN PERISTIWA-PERISTIWA PENTING

1) Agriculture Selangor Exhibition 2004 (AGRIS)

Agriculture Selangor Exhibition 2004 (AGRIS) telah diadakan pada 27 – 30 Mei 2004 di Tempat Letak Kereta Pasaraya Giant dan telah dirasmikan oleh Menteri Besar Selangor. Pada pameran ini, UPM telah diwakili Fakulti Pertanian yang terlibat mempamerkan aktiviti pengajaran dan penyelidikan yang dijalankan di fakulti.

2) Ekspo Kejayaan dalam Sektor Pertanian 2004

Ekspo Kejayaan dalam Sektor Pertanian 2004 telah diadakan pada 26 – 29 Ogos 2004 bertempat di Terminal One Shopping Centre, Seremban dengan anjuran Jawatankuasa 'Ministry of Agriculture Incorporated Malaysia' dan Jabatan Pertanian Negeri Sembilan dengan kerjasama Jabatan-jabatan dan agensi-agensi kerajaan Negeri Sembilan. Ekspo yang diadakan bersempena dengan sambutan Bulan Kemerdekaan ke-47 Peringkat Negeri Sembilan telah dirasmikan oleh Menteri Pertanian dan Asas Tani, Malaysia. UPM terlibat dalam pameran untuk mengetengahkan pengajian dan penyelidikan dalam bidang pertanian.

IMPORTANT ACTIVITIES AND EVENTS

1) Selangor Agriculture Exhibition 2004 (AGRIS)

The Selangor Agriculture Exhibition 2004 (AGRIS) was held from 27 – 30 May 2004 at the Giant Supermarket Parking Lot and was officiated by the Chief Minister of Selangor. In this exhibition, UPM was represented by the Faculty of Agriculture . Teaching and research activities carried out by this Faculty were displayed at the exhibition.

2) Success in the Agricultural Sector Expo 2004

This expo was held from the 26 – 29 August 2004 at the Terminal One Shopping Centre, Seremban and was organised by the Committee from the 'Ministry of Agriculture Incorporated Malaysia' and the Agricultural Department Negeri Sembilan with the cooperation of other government departments and agencies. It was held in conjunction with the 47th Independence day celebration at the state level. The Minister of Agriculture and Basic Farming, Malaysia officiated this Expo. UPM's involvement in this Expo was to demonstrate its studies and research carried out in agriculture.

3) Kongres Pertanian (Agriculture Congress)

Universiti Putra Malaysia telah menganjurkan Kongres Pertanian (Agriculture Congress) dengan jayanya pada 4-7 Oktober 2004 di Mines International Exhibition and Convention Center (MIECC) Seri Kembangan Selangor Darul Ehsan. Kongres ini telah mendapat sambutan hangat terutamanya di kalangan peserta antarabangsa dengan kehadiran peserta yang datang dari 36 buah negara menghampiri 50% dari 477 jumlah keseluruhan peserta kongres tersebut.

Kongres Pertanian ini dengan tema "Innovation Towards Modernized Agriculture" telah merangkumi 4 skop iaitu Pengeluaran Pertanian (Agriculture Production), Polisi Pertanian dan Perniagaantani (Agricultural Policy and Agribusiness), Makanan Selamat, Makanan untuk Kesihatan dan Bioteknologi (Safe Food, Health Product and Biotechnology) dan Pemindahan Teknologi dan Inovasi Sosial (Agrotechnology Transfer and Social Innovation). Seramai 4 orang pembentang kertas utama (keynote) dan 8 plenari (plenary) yang terdiri saintis dan penyelidik-penyelidik terkenal di peringkat antarabangsa telah membentangkan kertas kerja di kongres ini. Hasil daripada kongres ini, abstrak kertas utama dan plenari bersama dengan 52 abstrak oral dan 114 abstrak poster telah diterbitkan dalam bentuk buku prosiding.

3) Agriculture Congress

Universiti Putra Malaysia organised the Agriculture Congress with great success from the 4-7 October 2004 at the Mines International Exhibition and Convention Center (MIECC) Seri Kembangan Selangor Darul Ehsan. This congress was received extremely well by its international participants who came from 36 foreign countries and formed 50% of the total number of participants at the congress.

This Agricultural Congress, with the theme "Innovation Towards Modernized Agriculture" covered 4 scopes that is Agriculture Production, Agricultural Policy and Agribusiness, Safe Food, Health Products and Biotechnology and Agrotechnology Transfer and Social Innovation. A total of 4 keynote addresses were given and 8 plenary sessions conducted by famous international scientists and researchers. As a byproduct of this Congress the abstracts of the key papers presented together with 52 oral abstracts and 114 poster abstracts were published in the form of a book of proceedings.

UPM

UNIVERSITI PUTRA MALAYSIA

Pengurusan Berkualiti

Quality Management

PENGURUSAN BERKUALITI

Universiti Putra Malaysia (UPM) sangat komited dalam usaha untuk memantapkan pengurusan berkualiti dalam setiap aktiviti utamanya iaitu pengajaran dan pembelajaran, penyelidikan dan perkhidmatan. Ini adalah selaras dengan Matlamat Keempat Pelan Strategi UPM 2001-2010 iaitu 'Memantapkan Sistem Pengurusan Berkualiti Yang Cekap dan Berkesan, Telus dan Mesra Pelanggan Berteraskan Nilai-Nilai Murni'. Usaha-usaha pemantapan ini dapat dilihat dalam aktiviti berikut:

Penjaminan Kualiti Pengajaran

a. Penjaminan kualiti pengajaran bagi program akademik peringkat bacelor di UPM melalui pelaksanaan Kod Amalan Jaminan Kualiti IPTA bagi tujuan meningkat keyakinan pihak awam kepada kelestarian kualiti pendidikan tinggi awam.

   i. Persediaan bagi penilaian jaminan kualiti IPTA telah dimulakan sepanjang tahun 2004 bagi Fakulti Ekonomi dan Pengurusan, Fakulti Pengajian Pendidikan, Fakulti Sains Dan Pengajian Alam Sekitar dan Fakulti Sains Komputer dan Teknologi Maklumat. Walau bagaimanapun

QUALITY MANAGEMENT

University Putra Malaysia (UPM) highly committed in its efforts to implement quality management in all its main activities namely teaching and learning and in research and service. This is in line with its Fourth Goal in its Strategic Plan UPM 2001-2010, that is "To consolidate a quality management system that is effective, efficient, transparent and client-friendly, based on noble values". These consolidated efforts can be seen in the following activities:

Assured Quality Teaching

a. UPM ensures quality teaching for all academic programmes at Bachelor level, with its implementation of the IPTA Quality Assurance Programme, where its main purpose is to instill a high level of confidence among the general public, towards its quality of higher education which will always be permanent in nature.

   i. Preparations for assessing IPTA Quality Assurance began throughout the year 2004, for the Faculty of Economics and Management, Faculty of Science and Environmental Studies, and the Faculty of Computer Science and Information Technology. However, only the evaluation visit for

UPM sangat komited dalam usaha untuk memantapkan pengurusan berkualiti dalam setiap aktiviti utamanya iaitu pengajaran dan pembelajaran, penyelidikan dan perkhidmatan

hanya lawatan penilaian ke atas Fakulti Sains Komputer dan Teknologi Maklumat sahaja yang telah diselesaikan bagi tahun 2004. Lawatan ke atas fakulti lain telah dijadualkan untuk tahun 2005.

the Faculty of Computer Science and Information Technology was successfully completed in 2004.The visits for the above remaining faculties have been scheduled for 2005.

b. Membudayakan sistem pengurusan berkualiti melalui pensijilan MS ISO 9001:2000 bagi proses pengajaran dan pembelajaran di mana semua entiti akademik di UPM disasarkan untuk mendapat pensijilan MS ISO pada penghujung tahun 2005. Sehingga hujung tahun 2004, enam (6) entiti akademik di UPM berjaya memperolehi persijilan MS ISO 9001:2000.

b. To exhibit a quality management system culture, through MS ISO:9001-2000 certification for the process of learning and teaching whereby all academic entities are targeted to receive MS ISO by the end of 2005. Until the end of 2004, six (6) academic entities in UPM received MS ISO 9001:2000 certification.

STATUS PELAKSANAAN SISTEM PENGURUSAN KUALITI BAGI ENTITI AKADEMIK, UPM
IMPLEMENTATION STATUS OF QUALITY MANAGEMENT SYSTEM FOR ACADEMIC ENTITIES AT UPM

Pusat Tanggungjawab **Faculty/Division**	**Tahun Persijilan** **Year of Certification**
Fakulti Perubatan Veterinar Faculty of Veterinary Medicine	Semenjak 2000 Since 2000
Fakulti Kejuruteraan Faculty of Engineering	Semenjak 2001 Since 2001
Fakulti Sains dan Pengajian Alam Sekitar Faculty of Science and Evironmental Studies	Semenjak 2002 Since 2002
Fakulti Ekologi Manusia Faculty of Human Ecology	Semenjak 2003 Since 2003
Fakulti Pertanian Faculty of Agriculture	Semenjak 2003 Since 2003
Bahagian Keselamatan Safety/Security Division	Semenjak 2003 Since 2003
Fakulti Ekonomi dan Pengurusan Faculty of Economics and Management	2004 2004
Lain-lain fakulti Other Faculties	Dalam proses In process
Sekolah Pengurusan Siswazah Graduate School of Management	Dalam proses In process
Pusat Pendidikan Luar Centre for External Education	Dalam proses In process

c. Akreditasi Program Profesional

UPM sentiasa mengekalkan akreditasi bagi semua program akademik profesional. Semua staf akademik program profesional sentiasa digalakkan mendaftar dengan badan akreditasi seperti Lembaga Jurutera Malaysia, Lembaga Perubatan Malaysia, Lembaga Veterinar Malaysia, Institut Akauntan Malaysia, Lembaga Arkitek Malaysia dan Persatuan Kaunseling Malaysia.

d. Fellowship dan Biasiswa Antarabangsa serta program kerjasama (MoU) dalam bidang akademik antara universiti dan institusi luar negara.

Sepanjang tahun 2004, seramai 39 staf akademik UPM telah berjaya menerima anugerah Fellowship dan Biasiswa Antarabangsa.

C. Accreditation of Professional Programmes.

UPM always maintained accreditation, for all its professional academic programmes. All professional academic programme staff have always been encouraged to register with accreditation entities such as the Malaysian Engineering Board, The Malaysian Medical Board, the Malaysian Veterinary Board, the Malaysian Institute of Chartered Accountants, and the Malaysian Counselling Society.

d. Fellowship and International Scholarships as well as collaborations (MOU) in the academic field between the university and foreign institutions.

Throughout 2004, a total of 39 academic staff at UPM succeeded in receiving fellowship awards and International scholarships.

FELLOWSHIP BIASISWA / *SCHOLARSHIP*	PENGANJUR / *SPONSOR*
UNESCO Fellowship Programme in Support of Priority Programme Areas for 2004/05	United Nations Educational, Scientific & Cultural Organization (UNESCO)
Commonwealth Scholarship & Fellowship Plan	Association of Commonwealth Universities (ACU)
Bioindustries II	Japan Bioindustry Association (JBA)
Kalinga Prize for the Population of Science	United Nations Educational, Scientific & Cultural Organization (UNESCO)
JSPS' VCC General Exchange bagi tahun 2004	
British Chevening Scholarships Royal Society Malaysian Fellowship 2004/05	British Council Royal Society, UK
British Council Royal Society, UK Shiga Prefectural Government ñ Biwako Prize for Ecology 2004	Universiti of Otago, New Zealan Shiga Prefectural Government
Shiga Prefectual Government	Shiga Prefectual Government
Call for the 18th Khwarizmi International Award Ministry of Science, Research Technology, (IROST)	Ministry of Science, Research Technology, (IROST)
The JSPS Ronpaku (Dissertation PhD program for 2005)	Japanese Society for the Promotion of Science
Kokugakuin University ñ Visiting Programme for the year 2005	Research Kokugakuin University, Japan
Regional Center for Graduate Study and Research in Agriculture (SEARCA)	Regional Center for Graduate Study and Research in Agriculture (SEARCA)
New Zealand International Postgraduate Research Scholarships 2005	New Zealand Government
Canadian Commonwealth Scholarship 2005/06	Canadian Government
Visiting Research Scholar (Individual & Team Research Organizer 2007/2008)	The International Research Center for Japanese Studies
Japan Foundation Grants Progress Fiscal Year 2005/2006	Japan Foundation

Sepanjang tahun 2004 juga, sebanyak lapan (8) Memorandum Persefahaman (MoU) antara institusi peringkat antarabangsa telah ditandatangani. Dalam pada itu terdapat juga beberapa institusi yang berminat untuk memperbaharui perjanjian kerjasama yang termeterai sebelum ini.

Throughout 2004,a total of eight Memorandums of Understanding(MOU) were established and signed with International Institutions of higher learning.In addition to this, there are also a number of institutions who are interested to renew their previous agreements.

NO. *NO.*	INSTITUSI / NEGARA *INSTITUTIONS / COUNTRIES*	TARIKH TANDATANGAN / *DATE OF SIGNING*
1.	Tokyo University of Agriculture, Jepun	16 Mac 2004 / 16 March 2004
2.	Chungnam National University, Korea	6 April 2004
3.	Egerton University, Kenya	6 April 2004
4.	Institut Pertanian Bogor, Indonesia Bogor Institute of Agriculture, Indonesia	23 Julai 2004 / 23 July 2004
5.	The Forestry and Forest Products Research Institute, Jepun (FFPRI)	23 Julai 2004 / 23 July 2004
6.	Chiba University, Jepun	1 Disember 2004 / 1 December 2004
7.	Functional Food Creation Research Institute Pte. Ltd., Jepun	13 Disember 2004 / 13 December 2004
8.	Cantho University, Vietnam	21 Disember 2004 / 21 December 2004

Pengurusan proses berkualiti dilaksanakan melalui membudayakan Sistem Pengurusan Kualiti melalui pensijilan MS ISO 9001:2000;

Pengurusan Proses Berkualiti

Pengurusan proses berkualiti dilaksanakan melalui membudayakan Sistem Pengurusan Kualiti melalui pensijilan MS ISO 9001:2000;

a. bagi proses perkhidmatan/pentadbiran, semua entiti pentadbiran utama di UPM disasarkan untuk mendapat persijilan MS ISO pada penghujung tahun 2004.

Quality Management Process

The quality management process is implemented through the establishment of a Quality Management System Culture, via the MS ISO 9001:2000 certification.

a. For the administration/services process, all prioritized administration entities at UPM have been scheduled to receive the MS ISO certification by the end of 2004.

ENTITI PERKHIDMATAN / PENTADBIRAN YANG MENERIMA PENSIJILAN ISO 9001:2000

SERVICE/ADMINISTRATION ENTITIES THAT HAVE RECEIVED ISO 9001:2000 CERTIFICATION

Pusat Tanggungjawab **Centre of Responsibility**	**Tahun Persijilan** **Year of Certification**
Bahagian Keselamatan Security Division	Semenjak 2003 Since 2003
Pusat Kesihatan Mahasiswa Student Health Centre	2004 2004
Pejabat Pendaftar Registry	2004 2004
Perpustakaan Sultan Abdul Samad Sultan Abdul Samad Library	Dalam Proses In Process
Bendahari Bursary	Dalam Proses In process
Kolej Kediaman Residential Colleges	Dalam Proses In Process

ENTITI AKADEMIK YANG MENERIMA PENSIJILAN ISO 9001:2000

ACADEMIC ENTITIES THAT HAVE RECEIVED ISO 9001:2000 CERTIFICATION

Pusat Tanggungjawab **Centre of Responsibility**	**Tahun Persijilan** **Year of Certification**
Fakulti Perubatan Veterinar Faculty of Veterinary Medicine	Semenjak 2000 Since 2000
Fakulti Kejuruteraan Faculty of Engineering	Semanjak 2003 Since 2003
Fakulti Sains dan Pengajian Alam Sekitar Faculty of Science and Environmental Studies	Semenjak 2003 Since 2003
Fakulti Ekologi Manusia Faculty of Human Ecology	Semenjak 2003 Since 2003
Institut-institut Penyelidikan Research Institutes	Dalam Proses In Process
Pusat Pengurusan Penyelidikan Research Management Centre	Dalam Proses In Process

PERANCANGAN STRATEGIK DAN TADBIR URUS YANG TELUS

a. Pemantauan Prestasi Pelan Strategi Mengguna Pendekatan *Balanced Scorecard*

Komitmen Pihak Pengurusan Universiti dalam Pelan Strategi UPM menjelang tahun 2020 adalah untuk menjadi universiti bertaraf dunia dan dijangka akan mencapai kedudukan ke-20 teratas antara universiti terkemuka di Asia. Bagi maksud tersebut, UPM sentiasa memantau prestasi pencapaian pelan-pelan tindakan yang telah dirancang dalam Pelan Strategi 2001-2010 dengan menggunakan pendekatan *Balanced Scorecard.* Pada tahun 2004, penggunaan pendekatan *Balanced Scorecard* ini telah diperluaskan kepada semua fakulti dan ini dapat membantu fakulti dan seterusnya Pihak Pengurusan Universiti memantau secara lebih berkesan prestasi UPM secara keseluruhannya.

b. Jawatankuasa Pepandu/Penasihat

Selain daripada Pihak-pihak Berkuasa Universiti seperti Lembaga, Senat, Jawatankuasa Tetap Pemilih, Jawatankuasa Tetap Kewangan dll, UPM juga telah menubuhkan beberapa Jawatankuasa Pepandu/Penasihat bagi mempastikan sistem pengurusan yang cekap, berkesan dan telus seperti:

i Jawatankuasa Pepandu Jaminan Kualiti
ii Jawatankuasa Keutuhan Pengurusan
iii Jawatankuasa Pepandu Institut dan Pusat
iv Jawatankuasa Penasihat Akademik Fakulti
v Jawatankuasa Penyelidikan
vi Jawatankuasa Audit Dalam

c Kepuasan Pelanggan

i Pihak Pengurusan UPM sentiasa mengambil berat kepada aspek kepuasan pelanggan dalam usaha memantapkan sistem pengurusan berkualiti dalam pelaksanaan semua fungsi utama universiti iaitu pengajaran dan pembelajaran, penyelidikan, perkhidmatan profesional dan pentadbiran.

ii. Bagi mendapatkan maklum balas kepuasan pelanggan ini , beberapa kajian berikut telah dijalankan oleh PTJ seperti penilaian pengajaran pensyarah, penilaian perkhidmatan

STRATEGIC PLANNING AND TRANSPARENT ADMINISTRATION

a. Monitoring Perfomance of the Strategic Planning Using the Balanced Score Card approach.

The commitment of the University Management in the Strategic Plan towards the year 2020 is to make the University into a world class establishment.. It is projected that UPM will attain a "Top 20" position among the most distinguished universities in the Asian region. To achieve this goal, UPM always monitors its performance levels of achievement of the action plans in the Strategic Plan 2001-2010 by administering by administering Balance Scorecard approach. In the year 2004, the usage of the Balanced Scorecard approach was extended to all faculties and this helped all faculties and the University Management to monitor effectively its performance levels.

b. Steering and Advisory Committee

Apart from the University's Authorities like the Board, Senate, the Permanent Selection Committee, Permanent Finance Committee and the others, UPM has also created a number of other steering and advisory committees such as the following to ensure a management system that is efficient, effective and transparent:

i. Steering Committee for Quality Assurance
ii. Management Perfection Committee
iii. Steering Committee for Institutes and Centres
iv. Academic Faculty Advisory Committee
v. Research Committee
vi. Internal Audit Committee

c. Customer Satisfaction

i. UPM's Management takes great pains to see to customer satisfaction by consolidating and implementing an enhanced quality management system in all the main functions of the university namely, teaching and learning, research,professional services and administration.

ii. To obtain feedback regarding customer satisfaction,various forms of research were carried out by Centres of Responsibilities (PTJ) namely, the evaluation of teaching,

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makmal, penilaian perkhidmatan kaunter, penilaian perkhidmatan kesihatan, kajian ke atas pelajar yang akan bergraduat, kajian pengesanan graduan *(Tracer Study)*

iii. UPM juga mengadakan sistem aduan am dan sistem aduan kerosakan (pembangunan) bagi memberikan perkhidmatan yang dapat memuaskan hati pelanggan

d. Komunikasi Pelanggan yang Berkesan

i Komunikasi Luaran
UPM telah mengadakan sistem komunikasi bagi memudahkan perhubungan dengan pelanggannya melalui laman web yang responsif, sistem pesanan ringkas (SMS) keputusan peperiksaan, Hari Bersama Pelanggan, Piagam Pelanggan, sesi dialog/taklimat dan melalui edaran brosur/flyer, laporan penyelidikan serta laporan tahunan universiti.

ii. Komunikasi Dalaman
UPM juga sentiasa memastikan komunikasi dalaman yang berkesan dalam memantapkan sistem pengurusan berkualiti melalui Buletin Putra, E-mel, Majlis Bersama Jabatan dan Program Perhimpunan Pegawai.

e. Anugerah Kualiti

Bagi mengekalkan daya saing dan tahap pengurusan kualiti, UPM sentiasa menyertai pertandingan dari segi pengurusan kualiti anjuran kementerian, kerajaan negeri dan juga pihak swasta seperti AKPM, AIPB, AIPA dan lain-lain. Sepanjang tahun 2004, UPM telah berjaya menerima anugerah berikut:

i Prof Dato' Dr Abdul Salam Abdullah
ii Prof Dr. Mohd. Azmi Mohd. Lila
iii Prof Madya Dr. Maznah Ismail

teaching, laboratory services, counter services, health services and research on graduating students and tracing graduates (tracer study)

iii. UPM also has a general complaint system and a damage complaint system(development) to render satisfactory services to customers.

d. Effective Customer Communication

i. External Communication

UPM has an effective communication system, to simplify its communication with its customers,through its highly responsive website system of releasing examination results using SMS, Meet the Customer Day, Customer Charter, dialogue/ briefing sessions, brochures/flyers, research reports and finally the university's annual report.

ii. Internal Communication

UPM always ensures an effective internal communication system by consolidating its quality management system through its' Putra Bulletin,E-mails, departmental gatherings and officers' meetings.

e. Quality Awards

In order to maintain quality management and to further strengthen competitive levels, UPM always takes part in competitions, sponsored by the Ministry, State Government and private bodies such as AKPM, AIPB, AIPA and others. Throughout 2004,the following academics from UPM succeeded in receiving awards:

i. Prof.Dato' Dr. Abdul Salam
ii. Prof Dr.Mohd. Azmi Mohd.Lila
iii. Assoc.Prof Dr.Maznah Ismail

UPM

UNIVERSITI PUTRA MALAYSIA

Pengurusan Sumber Manusia

Human Resources Management

Pada tahun 2004, seramai 361 orang telah dilantik mengisi pelbagai kekosongan jawatan

PENGURUSAN SUMBER MANUSIA

Pejabat Pendaftar merupakan entiti utama di UPM yang bertanggungjawab dalam pengurusan sumber manusia iaitu melibatkan hal ehwal berkaitan perjawatan dan perkhidmatan kakitangan. Misi Pejabat Pendaftar adalah untuk memberikan perkhidmatan sumber manusia selaras dengan pelan strategi universiti iaitu :

a) Memantapkan sistem pengurusan berkualiti yang cekap dan berkesan, telus dan mesra pelanggan berteraskan nilai-nilai murni; dan

b) Membangunkan sumber manusia serta persekitaran kerja yang cemerlang.

Pada tahun 2004, Pejabat Pendaftar telah menggiatkan lagi usaha untuk:

- Memperolehi Pensijilan MS ISO 9001:2000
- Berusaha memastikan pelaksanaan semua urusan mengikut prosedur-prosedur ISO yang ditetapkan
- Memantapkan Unit Latihan untuk meningkatkan lagi kecemerlangan kerjaya staf

HUMAN RESOURCE MANAGEMENT

The Registry is the main entity in UPM that is responsible for human resource management involving issues related to staff appointments and service. The mission of the Registry is to provide human resource services in line with the strategic plan of the university, that is:

a) To enhance the quality of the management system which is efficient,effective, transparent and client-friendly based on noble values.

b) To develop human resources and an excellent work environment.

In 2004, the Registry stepped up efforts to:

- Obtain MS ISO 9001:2000 certification
- Strived to ensure the implementation of all affairs according to the given ISO procedures
- Consolidate the Training Unit to increase the career excellence of staff

- Memfokuskan pengambilan kakitangan berdasarkan ketetapan yang dibuat oleh Pihak Pengurusan Universiti seperti nisbah tenaga pengajar dan pelajar (bagi kakitangan akademik) dan pengisian mengikut kekosongan jawatan bagi kumpulan bukan akademik.

Selaras dengan itu, Pengurusan Pejabat Pendaftar telah mengorak langkah dalam merealisasikan dan mendapatkan Pensijilan MS ISO 9001:2000 pada tahun 2004. Tumpuan diberi kepada skop Sistem Pengurusan Kualiti (SPK) Pejabat Pendaftar di dalam perkhidmatan pelantikan staf dan perkhidmatan kenaikan pangkat staf tetap UPM. Setelah usaha gigih dan gerak kerja yang tersusun, akhirnya Pejabat Pendaftar mendapat Pensijilan MS ISO 9001: 2000 pada 15 Disember 2004. Pejabat Pendaftar juga akan memperluaskan skop dalam Sistem Pengurusan Kualiti untuk tahun 2005.

Pelantikan dan Kenaikan Pangkat

Pada tahun 2004, seramai 361 orang telah dilantik mengisi pelbagai kekosongan jawatan. Daripada jumlah tersebut, seramai 19 orang Pegawai dari Kumpulan Pengurusan Tertinggi, 175 orang Pegawai Kumpulan Pengurusan dan Profesional dan 16 orang Pegawai Kumpulan Sokongan.

- Focusing the intake of staff based on the criteria set by the University Management, such as the student staff ratio(for academic staff) and the filling of vacancies for non-academic staff.

In line with these requirements, the Registry Management Office took steps to realise the dream of MS ISO 9001:2000 certification in 2004. Attention was given to the scope of quality management system in the Registry and in the employment and promotion of staff. After much concerted effort, the Registry finally received its certification on 15 December 2004. The Registry also widened its scope in the area of Quality Management System in 2005.

Appointments and Promotions

In 2004, 361 people were recruited to fill various available positions. Out of this,19 were officers from Senior Management Group, 175 were from the Professional and Management Group and 16 were from the support staff group.

Throughout 2004, 243 UPM officers were promoted, comprising of 22 persons from top management, 151 from the professional and management category and 70 from the support group. The Public Services Department also agreed to give special consideration to Grade 41 officers from the

Sepanjang tahun 2004 juga seramai 243 orang pegawai UPM dinaikkan pangkat iaitu 22 orang Pegawai Kumpulan Pengurusan Tertinggi, 151 orang Pegawai Kumpulan Pengurusan dan Profesional dan 70 orang Pegawai Sokongan. Jabatan Perkhidmatan Awam juga telah bersetuju untuk memberikan pertimbangan khas Pegawai Kumpulan Pengurusan dan Profesional Gred 41 yang telah berkhidmat sekurang-kurangnya 20 tahun pada 31 Disember 2003 bagi kenaikan pangkat secara Khas Untuk Penyandang (KUP) ke Gred 48. Seramai 15 orang pegawai yang terdiri daripada Pegawai Tadbir, Pegawai Pertanian, Pustakawan dan Guru Bahasa telah menikmati pertimbangan khas ini.

Pada tahun 2004, Pejabat Pendaftar juga telah melancarkan Buku Garis Panduan dan Kriteria Kenaikan Pangkat/Lantikan ke Gred Yang Lebih Tinggi. Buku ini menekankan terhadap kriteria-kriteria lantikan dan kenaikan pangkat dalam menetapkan wajaran yang tinggi kepada aspek pengajaran dan penyeliaan pelajar, penyelidikan, perundingan dan penerbitan termasuk aspek kepimpinan akademik serta sumbangan kepada masyarakat dan negara iaitu mengikut tahap jawatan Pensyarah, Profesor Madya dan Profesor.

Jawatankuasa Pemilih merupakan jawatankuasa yang bertanggungjawab membantu Pejabat Pendaftar dalam urusan berkaitan pelantikan dan kenaikan pangkat staf UPM. Nama-nama calon yang berjaya bagi pelantikan dan kenaikan pangkat akan dibawa dan seterusnya mendapatkan kelulusan Mesyuarat Pengurusan Universiti.

Cuti Belajar

Pada tahun 2004, seramai 157 Pegawai UPM telah diluluskan cuti belajar. Daripada jumlah tersebut hanya dua orang yang diluluskan cuti belajar tanpa biasiswa. Mereka ini menerima tajaan biasiswa daripada pelbagai agensi iaitu seorang (1) menggunakan Canadian Scholarship, seorang (1) menggunakan Darwin Trust Scholarship, 56 orang menggunakan Biasiswa SLAB, 96 orang menggunakan Biasiswa UPM, seorang (1) menggunakan Yayasan Sarawak.

Anugerah Perkhidmatan Cemerlang

Seramai 343 orang staf UPM terdiri daripada Kumpulan Pengurusan Profesional dan Kumpulan Sokongan yang telah menerima anugerah Perkhidmatan Cemerlang tahun 2004.

Professional and Management Group who had served at least 20 years on 31 December 2003 to be promoted to Grade 48. A total of 15 people comprising of administrative and agricultural officers, librarians and language teachers benefitted from this special consideration.

In 2004, the Registry also launched a Book of Guidelines and Criteria for promotions and appointments to higher scales. This book stresses on the criteria used for appointments and promotions by giving due considerations to the aspects of teaching and student evaluation, research, consultation and publishing inclusive of academic leadership aspects as well as contributions towards the society and the country for the posts of Associate Professor and Professor.

The recruitment committee is responsible to the Registry in matters relating to appointments and promotions of UPM staff. Names of staff who qualify for appointments and promotions will be taken to the University Management for approval.

Study Leave

In 2004, a total of 157 UPM officers received approvals for study leave. From this total , only 2 of them were given leave without scholarships as they received sponsorship from two agencies. One received a Canadian Scholarship and another, the Darwin Trust Scholarship. 56 people used the SLAB scholarship while 96 received scholarships from UPM. The other person received a scholarship from the Sarawak Foundation.

Excellent Service Awards

A total of 343 staff from the Professional Management Group and the Support Group received the Excellent Service Award in year 2004.

Anugerah Jasa Putra dan Setia Putra

Selain itu, UPM juga memperuntukan anugerah Jasa Putra iaitu anugerah yang diberikan kepada staf yang telah dan akan bersara pada tahun 2004 sebagai menghargai jasa dan mengiktiraf perkhidmatannya di UPM. Manakala Anugerah Setia Putra pula diberikan kepada staf yang setia dan telah berkhidmat genap 20 tahun di UPM pada tahun 2004. Sejumlah 128 orang penerima bagi anugerah Jasa Putra dan 38 orang penerima anugerah Setia Putra bagi tahun 2004. Seramai 10 orang staf UPM yang telah meninggal dunia turut diberikan anugerah bagi mengenang jasa mereka setia berkhidmat hingga ke ahir hayat bersama UPM.

Anugerah Fellowship Naib Canselor

Selain itu, Anugerah Fellowship Naib Canselor iaitu anugerah yang diberikan kepada staf sebagai pengiktirafan terhadap kepakaran dan kemahiran dalam sesuatu bidang terutamanya dalam bidang penyelidikan dan pengajaran bukan hanya kepada Pegawai Akademik sahaja tetapi termasuk staf Pengurusan dan Profesional (Bukan Akademik) dan staf sokongan. Anugerah ini diberikan dalam bentuk geran bernilai RM 10,000.00 dan boleh digunakan oleh penerima bagi tujuan menghadiri kursus, seminar dan aktiviti lain yang boleh menyumbang kepada kecemerlangan diri dan organisasi.

Penerima Anugerah Fellowship Naib Canselor 2004

Profesor Madya Dr. Arfah binti Salleh
(Kategori Cemerlang Dalam Pengajaran)

Jasa Putra & Setia Putra Awards

UPM also made allocations for the Jasa Putra awards which are given to staff who have and will retire in 2004 as a form of appreciation and recognition of their services to the university. The Setia Putra award is given to staff who have served for a period of 20 years in 2004. A total of 128 people received the Jasa Putra award and 38 the Setia Putra award for 2004. 10 awards were also given to people who had died during their tenure at the university in recognition of their faithful service and lifelong commitment.

Vice-Chancellor's Fellowship Award

The Vice-Chancellor's Fellowship award is bestowed on staff members, not only academics but also staff belonging to the Management and Professional Group (non-academics) and support staff in recognition of their expertise and skill in selected areas especially in the areas of research and teaching.This award is given in the form of a grant worth RM 10,000.00 and can be used by the recipient to attend courses, seminars and other activities that can contribute towards improving oneself and the organisation.

Recipients of the Vice-Chancellor's Fellowship Awards 2004

Assoc. Professor Dr. Arfah binti Salleh
(Excellence in teaching category)

Assoc. Professor Dr. Sidek bin Abd. Aziz
(Excellence in teaching category)

Professor Dr. Yaakob bin Che Man
(Excellence in research category)

Assoc. Professor Dr. Azmi bin Dato' Yahya
(Excellence in research category)

Profesor Madya Dr. Sidek bin Abd. Aziz
(Kategori Cemerlang Dalam Pengajaran)

Profesor Dr. Yaakob bin Che Man
(Kategori Cemerlang Dalam Penyelidikan)

Profesor Madya Dr. Azmi bin Dato' Yahya
(Kategori Cemerlang Dalam Penyelidikan)

Dr. Jalaludin bin Harun
(Kategori Cemerlang Dalam Perkhidmatan Profesional)

Puan Hajjah Norlea binti Mat Taib
(Kategori Cemerlang Dalam Perkhidmatan Sokongan)

Tuan Haji Abdul Rashid bin Haron
(Kategori Cemerlang Dalam Perkhidmatan Sokongan)

Malam Anugerah Jasa Mu (MAJU 2004)

Malam Anugerah Jasa Mu (MAJU 2004) telah diadakan pada 17 Disember 2004 yang bertujuan untuk menghargai usaha dan pengorbanan staf termasuk juga meraikan penerima Anugerah Perkhidmatan Cemerlang, Jasa Putra, Setia Putra dan Fellowship Naib Canselor. Selain itu juga majlis ini juga turut meraikan Jawatankuasa Majlis Konvokesyen, Jawatankuasa Sambutan Bulan Kemerdekaan ke-47, Jawatankuasa Pilihan raya Majlis Perwakilan Pelajar Sesi 2004, Jawatankuasa Sukan Staf UPM dan Jawatankuasa Perarakan Berjalan Kaki yang gigih menjalankan program universiti dengan jayanya. Di samping itu, majlis ini akan dapat mengeratkan semangat ukhuwah di kalangan staf UPM selain daripada pemberian Sijil Penghargaan kepada Pusat Tanggungjawab yang tidak mempunyai rekod kehilangan aset dan inventori bagi tahun 2004. Majlis seumpama ini adalah yang julung kali diadakan. Ia akan diteruskan di masa-masa akan datang.

Dr. Jalaludin bin Harun
(Excellence in professional services category)

Puan Hajjah Norlea binti Mat Taib
(Excellence in Support services category)

Tuan Haji Abdul Rashid bin Haron
(Excellence in support services category)

Jasa Mu Awards Night (MAJU 2004)

The Jasa Mu Awards Night (MAJU 2004) was held on 17 December 2004 to give due recognition and appreciation to the efforts and sacrifices of the staff and also to celebrate the winners of the Jasa Putra, Setia Putra and Vice Chancellor Fellowship awards. The celebration also included the appreciation of various committees including the Convocation Committee, the 47th Merdeka Celebration Committee, the Student Council Selection Committee 2004, the Staff Sports Committee and the Committee for the Promotion of Walking, all of which carried out their tasks successfully. In addition, it was meant to help strengthen ties and create a spirit of brotherhood among the staff as well as to give away certificates of appreciation to Centres of Responsibility which had reported to show no loss in assets when the inventory for the year was done. This was the first time a function of this nature was held and it will continue to be held in the future.

Customer Service

In the National Integrity Plan, each government entity has to take Customer Service seriously. UPM answered this call by organising a variety of activities in its efforts to enhance customer service. Among the activities were the Customer Service Day which was held on the last Saturday of each month. The first Customer Service Day was held in October, and subsequently in November and December . Staff, students and the community at large took part in this event, to get information and explanation about the daily activities of the University.

Perkhidmatan Pelanggan

Di dalam Pelan Integriti Nasional maka setiap entiti kerajaan perlu mengambil berat terhadap Perkhidmatan Pelanggan. UPM telah menyahut seruan tersebut dengan mengadakan pelbagai aktiviti dalam usaha untuk meningkat perkhidmatan pelanggan di UPM. Antara aktiviti tersebut ialah Hari Khidmat Pelanggan yang telah diadakan pada setiap Sabtu terakhir setiap bulan. Hari Khidmat Pelanggan Pertama telah diadakan pada bulan Oktober, November dan Disember 2004 di mana para pelanggan yang terdiri daripada staf dan pelajar UPM dan tidak lupa juga masyarakat luar untuk turut serta dalam mendapatkan maklumat dan penjelasan berhubung aktiviti harian Universiti. Ini adalah suatu usaha UPM untuk mengurangkan kerenah birokrasi dan rungutan orang ramai terhadap pentadbiran jabatan kerajaan termasuk badan berkanun seperti universiti. Dalam sama yang sama terdapat kaunter luar seperti MAS, JPJ, KTMB, PTPTN dan sebagainya

This was part of the effort taken by UPM to reduce bureaucracy and public complaints against the Government departments including statutory bodies such as Universities and governmental agencies. In addition, counters were set up by other agencies such MAS, JPJ, KTMB, PTPTN and others.

Officers Assembly

The officers assemby was held every month in line with the National Integrity Plan for the purpose of strenthgthening ties among the UPM staff. Activities in the assemblies included the reading of oaths, health and exercise as well as educational lectures that were held throughout 2004.

Sepanjang tahun 2004, sejumlah 101 staf UPM telah bersara wajib, 18 orang staf telah bersara secara pilihan dan 9 orang staf Bersara Terbitan

Perhimpunan Pegawai
Perhimpunan Pegawai UPM diadakan setiap sebulan sekali selaras Pelan Integriti Nasional (PIN). Tujuan diadakan Perhimpunan Pegawai ialah untuk mengeratkan hubungan silaturahim di kalangan staf UPM dan aktiviti dalam perhimpunan tersebut ialah Bacaan Ikrar Integriti dan aktiviti gerak sihat termasuk program syarahan pendidikan yang telah diadakan sepanjang tahun 2004.

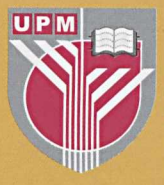
Majlis Bersama Jabatan (MBJ) Bersama Persatuan Pegawai Akademik, Persatuan Pentadbir dan Persatuan Pegawai Am (KEPERTAMA)
Majlis Bersama Jabatan bersama Persatuan Pegawai Akademik, Persatuan Pentadbir dan Persatuan Pegawai Am (KEPERTAMA) dengan Pihak Pengurusan Universiti merupakan platform utama untuk Persatuan Pekerja yang mewakili staf yang berkenaan membincangkan berkaitan dengan perkhidmatan dan kebajikan staf UPM. Forum ini juga merupakan antara usaha Persatuan Pekerja dalam membantu staf UPM di semua peringkat menyelesaikan isu-isu dan perkara-perkara yang berbangkit.

Persaraan
Sepanjang tahun 2004, sejumlah 101 staf UPM telah bersara wajib, 18 orang staf telah bersara secara pilihan dan 9 orang staf Bersara Terbitan.

Joint Departmental council together with the Academic Officers Society, Administrators Society and General Officers Society (KEPERTAMA)

The Joint Departmental council together with Academic Officers Society, Administrators Society and General Officers Society (KEPERTAMA) and the Universiti Management forms a platform for the staff organisations which represents the staff to discuss issues with regards to the service and welfare of UPM staff. This forum is also one of the efforts made by the Staff Organisations to help its members at all levels to resolve issues and other matters that arise.

Retirement
Throughout 2004, a total of 101 staff went on compulsory retirement, 18 on optional retirement and 9 received derivative pensions.



UPM
UNIVERSITI PUTRA MALAYSIA

Teknologi Maklumat & Komunikasi

Information & Communication Technology

Universiti Putra Malaysia (UPM) menggariskan Matlamat Ke-6 Pelan Strategi UPM 2001-2010 untuk membudayakan teknologi maklumat dan komunikasi (ICT) melalui e-Universiti. Untuk itu, UPM sentiasa melagang usaha untuk meningkatkan kecekapan penggunaan dan kemudahan ICT dalam kampus.

Infrastruktur dan Rangkaian

Bahagian Teknologi Maklumat (BTM) adalah entiti yang bertanggungjawab untuk menyediakan perkhidmatan sokongan ICT bagi membantu pengajaran dan penyelidikan dalam penggunaan teknologi maklumat. Ianya juga berperanan menyedia dan menguruskan rangkaian UPMNet kepada warga UPM Serdang dan UPM Kampus Bintulu. Dalam masa yang sama juga BTM, bertanggungjawab mengawal keselamatan dan penyelengaraan rangkaian komputer disamping meningkatkan keupayaan dan capaian Internet dari semasa ke semasa. Rangkaian komputer ini beroperasi selama 24 jam sehari. Lebih dari 10,000 buah komputer dan stesen kerja serta server di UPM dirangkai melalui fiber-optik dengan kelajuan 10-100 Mbs (mega bait per saat).

Setiap staf dan mahasiswa UPM dibekalkan dengan satu akaun e-mel iaitu e-mel Putra

Universiti Putra Malaysia's (UPM) 6th Goal as outlined in the UPM Stategic Plan 2001-2010 is to inclucate a culture of information technology and communication (ICT) through e-University. For that purpose, UPM always strives to enhance efficient usage of its campus ICT facilities.

Infrastructure and Network

The Information Technology Division (BTM) is the entity responsible for providing ICT support to help in the processes of teaching, research and usage of information technology. Its role is also to provide and manage the UPM Net for all the users of UPM Serdang and the UPM Bintulu Campus. At the same time BTM is responsible to provide security and maintenance of the computer network as well as increase the capacity and capability of Internet performance from time to time. This computer network operates 24 hours a day. More than 10,000 computers and work stations as well as the server at UPM are networked through fibre optics and has a speed of 10-100 Mbs (mega bytes per second).

Each staff and student is provided with one e-mail account that is the Putra e-mail and Mutiara e-mail. Both these accounts are

Lebih dari 10,000 buah komputer dan stesen kerja serta server di UPM dirangkai melalui fiber-optik dengan kelajuan 10-100 Mbs (mega bait per saat)

dan e-mel Mutiara. Kedua-dua akaun e-mel ini adalah berasaskan web (web-based), yang mana e-mel ini boleh diakses di mana saja jika terdapat sambungan internet. Kapasiti storan untuk kedua-dua e-mel ini telah ditingkatkan kepada 30 Mb dan 10 Mb untuk e-mel Putra dan e-mel Mutiara.

Disamping itu untuk memantapkan kemudahan yang disediakan ini, UPM telah dilengkapkan dengan lebih daripada 40 sistem dan e-sistem untuk memberi pelbagai kemudahan kepada staf dan mahasiswa. Antara sistem yang terdapat di UPM ialah :

- E-Undi
- E-Bika
- E-Klinik
- E-Sprint
- E-IRPA
- IHRAM
- SMP
- SAGA
- FAMS
- Putra Student Portal
- KM Portal
- iGIMS (Sistem Maklumat Pengurusan Siswazah)
- Sistem Automasi Pejabat – Putranet
- Sistem Cuti On Web
- Sistem Penilaian SSM

web-based and can be accessed any wherein the world where there are internet connections.The storage capacity for both these mails have been increased to 30 Mb for Putra e-mail and 10Mb for Mutiara e-mail.

In addition, to consolidate this facility, UPM has been equipped with more than 40 systems and e-systems to provide various amenities for both staff and students. Among them are :

- E-Vote
- E-Bika
- E-Clinic
- E-Sprint
- E-IRPA
- IHRAM
- SMP
- SAGA
- FAMS
- Putra Student Portal
- KM Portal
- iGIMS (Graduate Management Information System)
- Office Automation System – Putranet
- Leave system on the Web
- SSM Evaluation system

Pembelajaran yang berasaskan web iaitu Kelas Maya dan Sistem e-SPRINT (Sistem Pengurusan Rangkaian Integrasi Nota kuliah dalam Talian)

BTM telah berjaya menaik taraf UPMNet keseluruh kampus di mana terdapat 8 *core switch* dan beberapa *distributed switch* serta *access switch* telah diagihkan ke lokasi-lokasi Pusat Tanggung Jawab (PTJ) yang terpilih.

Aplikasi Cuti-On-Web

Pada tahun 2004, Bahagian Teknologi Maklumat (BTM) telah berjaya melaksanakan aplikasi cuti-on-web seluruh kampus UPM Serdang di mana 98% staf UPM boleh memohon cuti secara web. Staf UPM boleh memohon cuti dengan mengakses e-mel Putra iaitu satu akaun e-mel yang telah dikhaskan untuk semua staf. Mereka boleh memohon dan menyemak cuti masing-masing melalui aplikasi ini. Setiap cuti yang dimohon akan diajukan kepada Ketua Jabatan dan permohonan akan diproses menerusi e-mel tersebut.

Sistem e-Pembelajaran (e-Sprint)

UPM telah menyediakan sistem e-Pembelajaran yang berasaskan web iaitu Kelas Maya dan Sistem e-SPRINT (Sistem Pengurusan Rangkaian Integrasi Nota kuliah dalam Talian). E-Sprint merupakan satu produk teknologi maklumat yang mudah digunakan serta dilengkapi ciri-ciri keselamatan data yang tinggi. Bahan-bahan kuliah yang disediakan oleh pensyarah dapat diakses oleh pelajar dalam kampus dan pelajar Program Jarak Jauh (PJJ) menerusi teknologi internet. Perisian e-Sprint telah disenaraikan sebagai 10 produk inovasi pilihan bagi Anugerah Perdana Teknologi Maklumat 2004.

UPM KM Portal

UPM KM Portal bertujuan untuk menyediakan satu pangkalan ilmu korporat yang mampu menyokong penggunaan harta intelek universiti secara efektif. UPM KM Portal diletakkan di bawah tanggungjawab Pusat Pembangunan Akademik (CADe).

BTM also succeeded in increasing the standard of the UPMNet throughout the campus grounds. 8 core switches and some distributed switches including access switches have been distributed among selected Responsibility Centre locations.

Applying for leave on the net

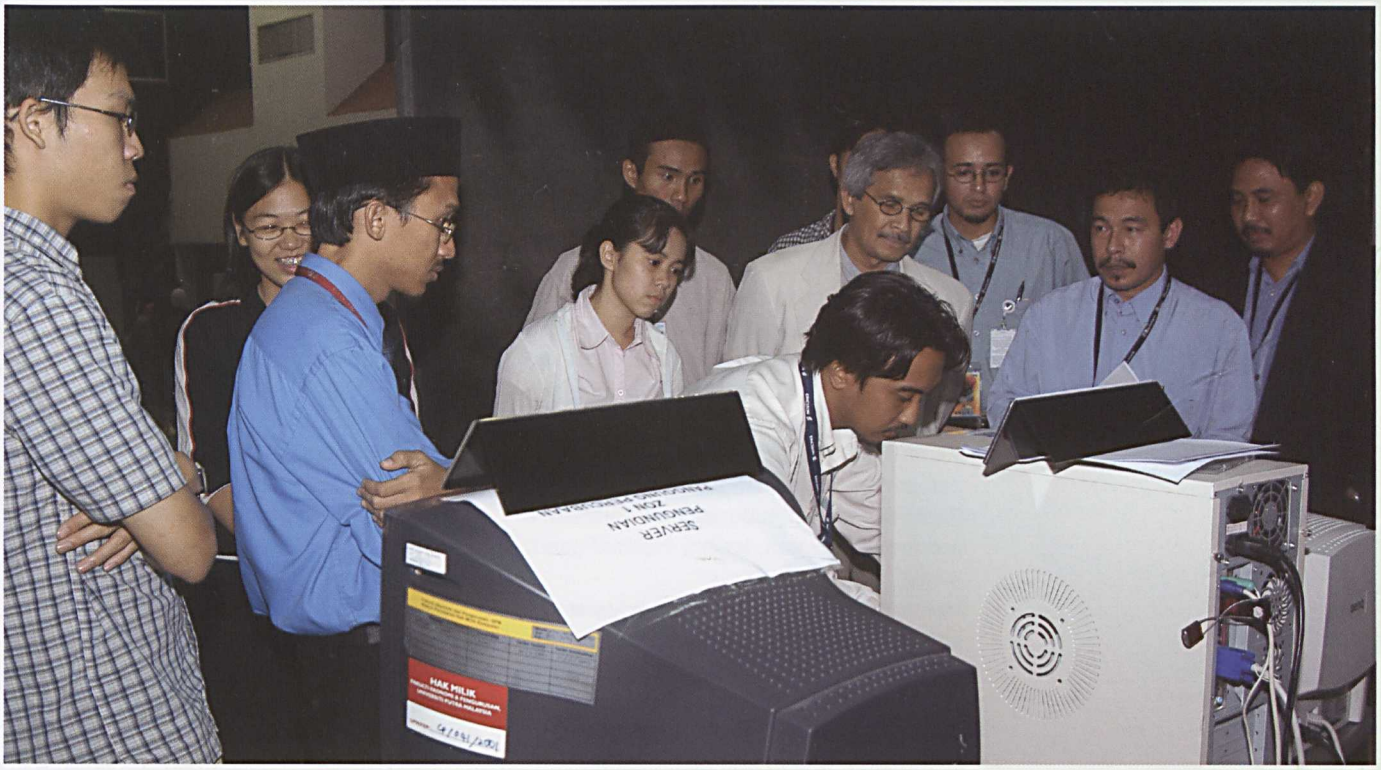
In 2004, the Division of Information Technology succeeded in creating the Leave on the Net application. 98% of the staff can apply for their leave through the net. They can do so by accessing the Putra e-mail which is a specialized e-mail for all staff. They can apply for their leave and monitor their leave through this application. All leave applications will be forwarded to the respective Heads off Departments through this account.

E-Learning System (e-Sprint)

UPM has provided the e-learning system which is based on the net, that is Virtual classes and the e-SPRINT (System of management for the integration of lecture notes online). E-Sprint is an information technology product that can be easily used and is equipped with data safety of high quality. Lecture materials that are prepared by the lecturers are easily accessed by in-campus and off-campus students through internet technology. The e-Sprint software has been listed in the 10 most innovative products chosen for the Premier Information Technology Award.

UPM KM Portal

UPM KM Portal's purpose is to provide a base for corporate knowledge that is capable of supporting effective university usage of intellectual property. The UPM KM Portal is placed under the care and responsibility of the Centre for Academic Development (CADe).



Secara amnya, UPM KM Portal mampu :

- Menyediakan infrastruktur untuk meningkatkan pendepositan, perkongsian dan penjanaan ilmu, sama ada dalam bentuk eksplisit atau tacit
- Menyusun atur ilmu dengan menggunakan sistem taksonomi untuk memudahkan proses pencarian dan pengenalpastian ilmu
- Menyediakan platform untuk menggalakkan kolaborasi antara individu atau kumpulan
- Menyediakan aplikasi workflow
- Membantu menyediakan penyediaan laporan mengenai ilmu, kepakaran dan lain-lain

Sistem e-Pengundian

Pada 15 September 2004, dengan terlaksana sistem Pengundian yang telah di bina oleh Bahagian Teknologi Maklumat (BTM), pelajar-pelajar UPM seluruh kampus Serdang dan Bintulu, Sarawak dapat mengundi calon Majlis Perwakilan Pelajar (MPP) pilihan mereka melalui web. Selain itu, dengan adanya system e-undi ini keputusan pilihan raya kampus dapat diketahui dengan lebih cepat.

E-Klinik

Sistem e-Klinik telah dibangunkan oleh pihak XYBASE Sdn Bhd dengan kerjasama Bahagian Teknologi Maklumat (BTM) dan

In general, the UPM KM Portal is capable of :

- providing the infrastructure to enhance the storage,sharing and generation of knowledge, in both explicit and tacit forms.
- Arranging knowledge by using the taxonomy system to simplify the process of searching for and identifying information
- Providing a platform to encourage collaboration among individuals and/or groups
- Providing workflow applications
- Helping to prepare reports pertaining to knowledge, expertise and others.

e-Voting system

On 15 September 2004, with the usage of the e-Voting system that was created by the Information Technology Division, all students of UPM both at the main and branch campus were able to vote on the web for the candidate of their choice to select the Student Representative Council . With the existence of this system, the results were announced much faster than when traditional means were used.

E-Clinic

The e-clinic system was created by XYBASE Sdn Bhd with the cooperation of the Information Technology Division and the Student Health Centre.This system uses the web platform and is used to systematically provide treatment to patients and clinic users.

Pusat Kesihatan Mahasiswa (PKM). Sistem ini menggunakan platform web dan digunakan secara menyeluruh untuk perkhidmatan rawatan kepada pesakit dan pengguna klinik. Kini sistem ini telah diambil alih sepenuhnya oleh UPM. Bermula Januari 2004, Pusat Kesihatan Mahasiswa telah menggunakan aplikasi sistem ini secara keseluruhannya.

Antara objektif e-klinik ialah :

- Memudah cara pesakit menerima rawatan
- Memudah doktor dan paramedik memberi rawatan
- Memudah cara kemasukan, penyimpanan dan penggunaan data pesakit
- Memudah cara pembacaan dan arahan preskripsi, rawatan, kajian, makmal dan X-ray
- Memudah doktor mencapai maklumat rawatan dan mendapat nasihat pakar
- Memudah dan mempercepatkan perolehan statistik rawatan dan pesakit mengikut harian, bulanan dan tahunan
- Memudah kawalan dan pemantauan kesihatan pelajar
- Memudah proses perolehan dan inventori
- Memudah proses bayaran dan tuntutan

UPM has now taken over this system completely. Beginning January 2004, the Student Health Centre is using the entire application system.

Among the objectives of the e-clinic are to simplify :

- the way patients receive treatment
- the way doctors and paramedics give treatment
- the entry, storage and usage of patient data
- the way prescriptions are read and ordered, treatment, laboratory tests and x-rays are carried out
- the way doctors obtain information and advice from experts and quicken the obtaining of treatment statistics and patient numbers according to day, month and year
- the control and monitoring of student health
- the process of acquisition and inventory
- the process of payment and claims

FAMS

Sistem Pengurusan Aset Tetap (FAMS) telah dilancarkan penggunaannya pada 1 Mac 2004 di UPM Serdang dan 1 Mei 2004 di UPM Kampus Bintulu menggunakan sistem *Hardcat Fixed Assets Management Systems.* Pada dasarnya sistem ini bertujuan untuk mengesan dan memantau sesuatu kitar hayat penggunaan dan penempatan lokasi sesuatu aset di UPM. Sistem FAMS turut dihubungkan dengan sistem SAGA melalui *interface*. Di sini, integrasi data antara FAMS dan USER berlaku secara *batch* dan harian melalui Information *Broker* (IB). Untuk memastikan integriti sistem SAGA tidak terjejas, penghantaran data adalah hanya daripada SAGA ke FAMS sahaja. Selain daripada SAGA, FAMS juga menerima tambahan/perubahan maklumat staf daripada sistem IHRAMS.

Kini, FAMS menggunakan *platform client-based* dan digunakan secara menyeluruh di semua Pusat Tanggungjawab. Perancangan fasa 2 pada tahun ini akan menjurus kepada pengalihan platform sistem kepada web-based menjelang penghujung tahun 2004.

Fixed Assets Management System(FAMS)

This system was launched on 1 March 2004 at UPM Serdang and 1 May 2004 at UPM Bintulu Campus using the *Hardcat Fixed Assets Management Systems*. Basically, the purpose of the system is to trace and monitor the life cycle of the usage and location of any one asset in UPM. FAMS is connected to the SAGA system through interface. Here, the integration of data between FAMS and the USER occurs in batches daily through the Information Broker (IB).To ensure that the integrity of the SAGA system is not affected, the transmission of data occurs only from SAGA to FAMS. Besides SAGA, FAMS also receives additional/ change of staff information from the IHRAMS system.

Currently, FAMS uses a client-based platform which is used at all PTJs. The phase 2 planning for 2004 saw the move from a platform based to a web-based system by the end of the year.

Sistem Pengurusan Aset Tetap (FAMS) telah dilancarkan penggunaannya pada 1 Mac 2004 di UPM Serdang dan 1 Mei 2004 di UPM Kampus Bintulu

Sistem e–Pengundian membolehkan keputusan pilihanraya kampus diketahui dengan lebih cepat

UPM
UNIVERSITI PUTRA MALAYSIA

Pengurusan Kewangan

Financial Management

Prestasi Kewangan Universiti Putra Malaysia Tahun 2004

Pendapatan Universiti

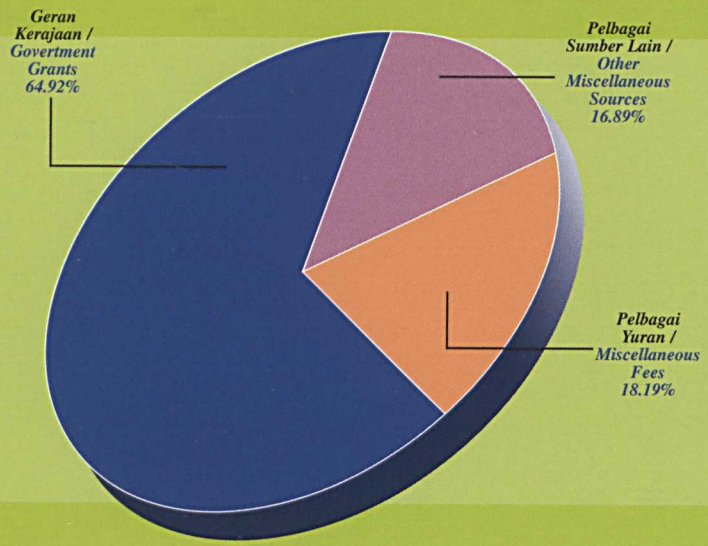
Universiti Putra Malaysia secara keseluruhannya telah menjana pendapatan sebanyak RM507.56 juta di dalam tahun 2004 berbanding RM591.12 juta di dalam tahun 2003, menurun sebanyak RM83.56 juta (14.14%). Daripada jumlah tersebut, sebanyak RM329.46 juta atau 64.92% adalah daripada Geran Kerajaan, RM92.30 juta atau 18.19% adalah daripada pelbagai yuran dan RM85.80 juta atau 16.89% daripada pelbagai sumber lain.

University Putra Malaysia 2004 Financial Performance

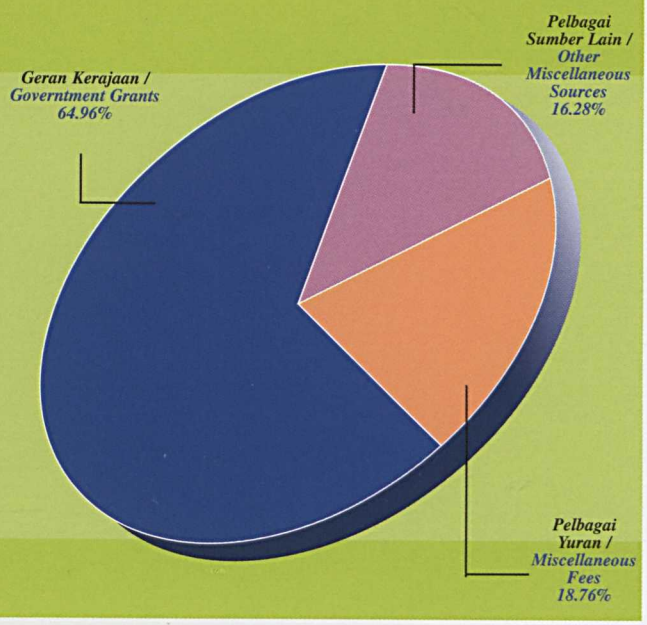
University's Income

University Putra Malaysia generated an income of RM507.56 for 2004 compared to RM591.12 million in 2003, which recorded a drop of RM83.56 million (14.14%). From the above figure,a total of RM329.46 million or 64.92%, were from Government Grants, RM92.30 million or 18.19% from miscellaneous fees and RM85.80 million or 16.89% from other miscellaneous sources.

SUMBER PENDAPATAN
TAHUN 2004
SOURCES OF INCOME FOR YEAR 2004



SUMBER PENDAPATAN
TAHUN 2003
SOURCES OF INCOME FOR YEAR 2003



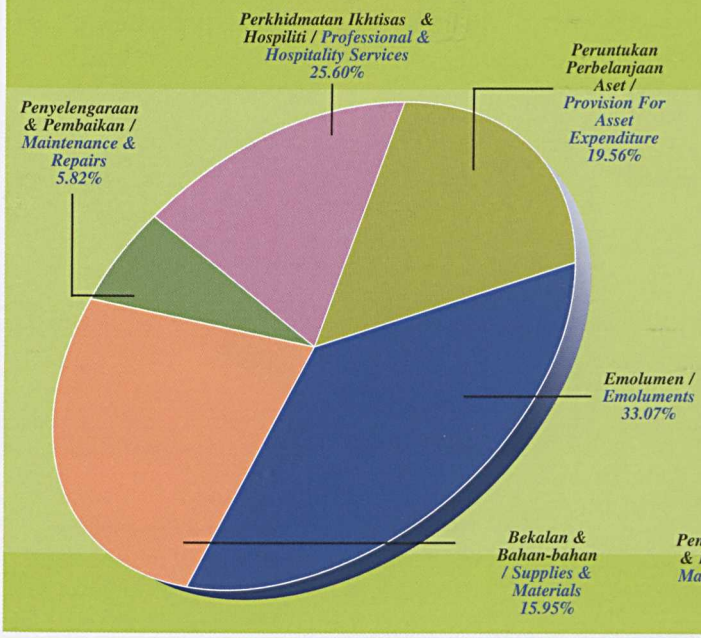
Perbelanjaan Universiti

Perbelanjaan tahun 2004 adalah sebanyak RM594.54 juta berbanding RM535.85 juta dalam tahun 2003, meningkat RM58.69 juta atau 10.95%. Daripada jumlah perbelanjaan ini, sebanyak RM196.62 juta (33.07%) telah dibelanjakan untuk emolumen, RM94.84 juta (15.95%) untuk bekalan dan bahan-bahan, RM34.58 juta (5.82%) untuk penyelenggaraan dan pembaikan, RM152.19 juta (25.60%) untuk perkhidmatan iktisas dan hospitaliti dan RM 116.31 juta (19.56%) untuk peruntukan perbelanjaan Aset. Defisit perbelanjaan berbanding pendapatan berjumlah RM86.98 juta dalam tahun 2004 dibiayai oleh Kumpulan wang yang berkaitan.

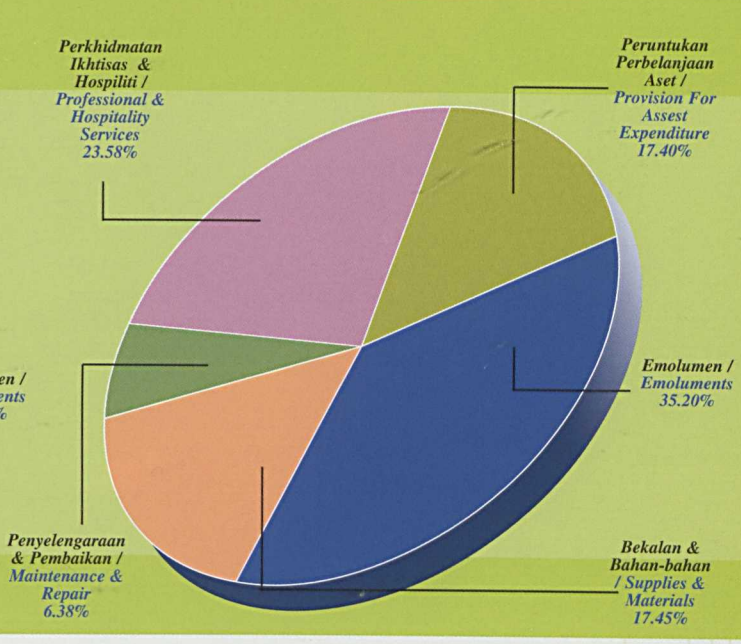
University's Expenditure

Expenditure for 2004 amounted RM594.54 million compared to RM535.85 million in 2003, recording a rise of RM58.69 million or 10.95%. From this expenditure, a total of RM196.62 million (33.07%), was spent on emoluments, RM94.84 million (15.95%) on supplies and materials, RM34.58 million (5.82%) on maintenance and repairs, RM152.19 million (25.60%) on professional and hospitality services and RM116.31 million (19.56%) on asset expenditure. The deficit in expenditure compared to income, amounting RM86.98 million in 2004,was provided for by relevant funds.

PECAHAN PERBELANJAAN
TAHUN 2004
BREAKDOWN OF EXPENDITURE FOR YEAR 2004



PECAHAN PERBELANJAAN
TAHUN 2003
BREAKDOWN OF EXPENDITURE FOR YEAR 2003



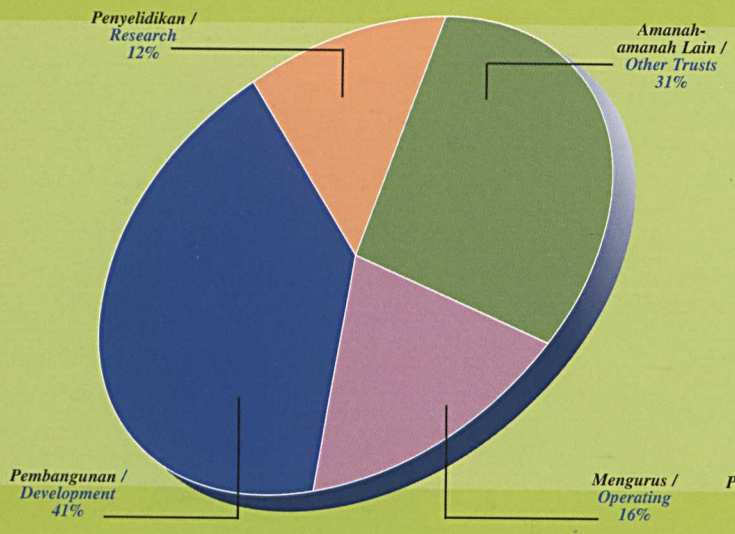
Keseluruhan program dan aktiviti UPM dibiayai oleh Kumpulanwang Disatukan berjumlah RM1,020.43 juta dalam tahun 2004 berbanding RM1,123.50 juta dalam tahun 2003, menurun sebanyak RM103.07 juta atau 9.17%. Penurunan adalah disebabkan oleh pengurangan terimaan Geran Kerajaan untuk Belanja Mengurus serta pembiayaan Projek Fakulti Perubatan dan Sains Kesihatan yang sedang giat dalam proses pelaksanaan.

Kumpulanwang Disatukan terdiri daripada Kumpulanwang Mengurus, Kumpulanwang Pembangunan, Kumpulanwang Penyelidikan dan beberapa Kumpulanwang Amanah Lain bagi tujuan pembiayaan program dan aktiviti universiti. Dalam tahun 2004, Kumpulanwang Mengurus berjumlah RM159.00 juta (15.58%), Kumpulanwang Pembangunan berjumlah RM427.44 juta (41.89%), Kumpulanwang Penyelidikan berjumlah RM120.48 juta (11.81%) dan Kumpulanwang Amanah Lain berjumlah RM313.51 juta (30.72%).

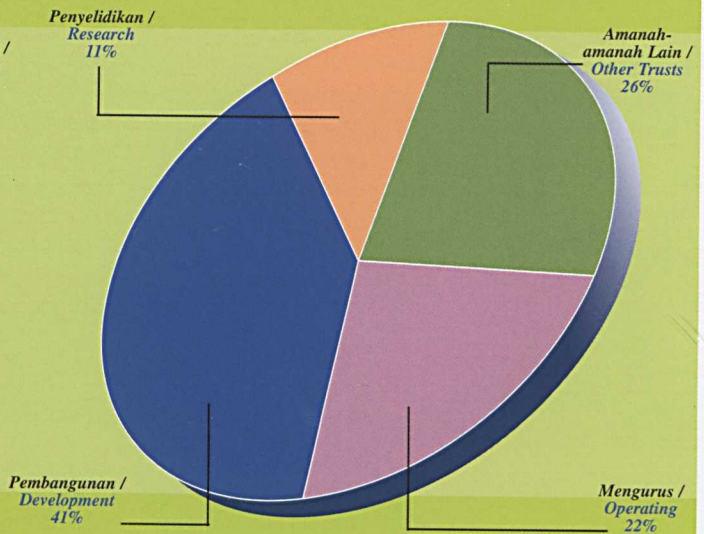
The entire programmes and activities of UPM was financed by the Consolidated Fund amounting RM1,020.43 million in 2004, compared to RM1,123.50 million in 2003,a decrease of RM103.07 million or 9.17%. The reasons for the decrease was a reduction in Government Grants for Operating Expenditure and for financing the Faculty of Medicine and Health Science Project which is in the process of being implemented vigorously.

The Consolidated Fund comprised of the Operating, Development, Research Funds and several other Trust Funds for financing the programmes and activities of the University. In 2004, the Operating Fund amounted RM159.00 million (15.58%), Development Fund was RM427.44 million (41.89%), the Research Fund was RM20.48 million (18.81%) and Other Trust Funds amounted RM313.51 million (30.72%).

PERBELANJAAN MENGURUS TAHUN 2004
OPERATING EXPENDITURE FOR YEAR 2004



PERBELANJAAN MENGURUS TAHUN 2003
OPERATING EXPENDITURE FOR YEAR 2003



Perbelanjaan Mengurus

Peruntukan Belanja Mengurus yang diluluskan untuk UPM telah menunjukkan peningkatan sebanyak (5.49%) meningkat daripada RM411.58 juta tahun 2003 kepada RM434.17 juta pada tahun 2004. Daripada jumlah ini, sebanyak RM374.53 juta (86.26%) adalah peruntukan Geran Kerajaan dan bakinya RM59.60 juta (13.74%) adalah daripada pendapatan lain. Walaubagaimanapun, Geran Kerjaan diterima dalam tahun 2004 hanyalah RM287.89 juta atau 76.87% sahaja. Terdapat perbezaan sebanyak RM86.69 juta atau 23.13% berbanding dengan jumlah peruntukan yang diluluskan. Perbezaan terimaan Geran Kerajaan tahun 2004 dan 2003 pula adalah sebanyak RM38.23 juta (11.72%), menurun daripada RM326.12 juta yang diterima pada tahun 2003 kepada RM287.89 juta pada tahun 2004. Keadaan ini memberi kesan ke atas geran per pelajar sebanyak RM1,175 dari RM10,925 seorang dalam tahun 2003 kepada RM9,750 seorang dalam tahun 2004.

Operating expenditure

The allocation for Operating Expenditure which was approved for UPM increased by (5.49%) from RM411.58 million in 2003, to RM434.17 million in 2004. From this amount, a sum of RM374.53 million (86.26%) were Government Grant allocations and the balance RM59.60 million (13.74%)was from other sources of income. Nevertheless, Government Grants received in 2004 amounted RM287.89 million or 76.87% only. There was a difference of RM86.69 million or 23.13% when compared to the allocation which had been approved. The difference in the receipt of Government Grants in 2004 and 2003, totalled RM38.23 million (11.72%), a decrease from RM326.12 million that was received in 2003, to RM287.89 million in 2004. This affected the grant per student by RM1,175 from RM10,925 a person in 2003 to RM9,750 a person in 2004.

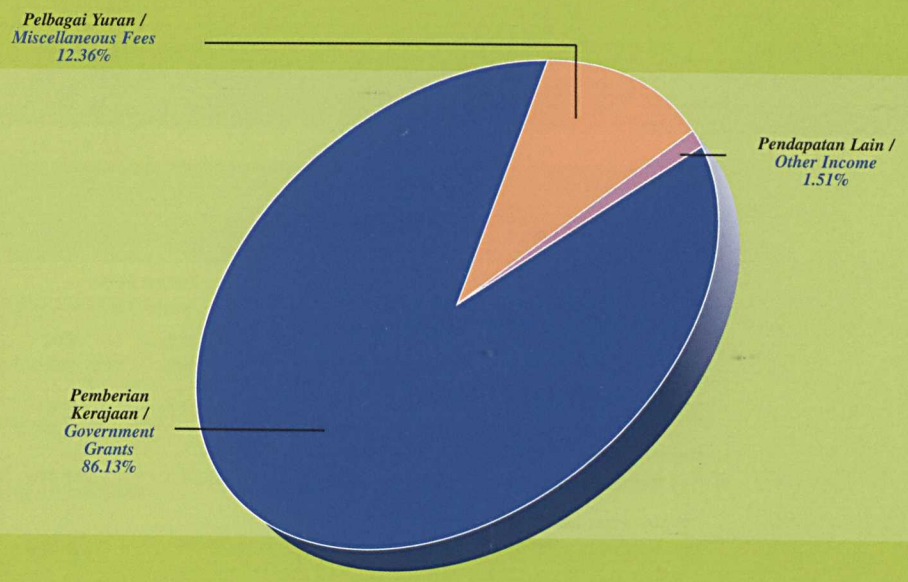
PENDAPATAN MENGURUS
OPERATING INCOME

	Tahun 2004 Year 2004 (RM Juta) (RM Mil)	(%) (%)	Tahun 2003 Year 2003 (RM Juta) (RM Mil)	(%) (%)
Geran Kerajaan / Govt Grants	287.89	86.13	326.12	84.70
Pelbagai Yuran / Misc. Fees	41.33	12.36	50.52	13.12
Pendapatan Lain / Other Income	5.03	1.51	8.37	2.18
Jumlah / Total	334.2		385.01	

Daripada jumlah pendapatan ini, sebanyak RM287.89 juta atau 86.13 % adalah Geran Kerajaan dan RM41.33 juta atau 12.36 % adalah pendapatan pelbagai yuran dan bakinya RM5.03 juta atau 1.51% adalah daripada sumber sewa, pendapatan hasil ladang dan pelbagai pendapatan lain.

From this income, of RM287.89 million or 86.13%, was from Government Grants and RM41.33 million or 12.36% was from miscellaneous fees and the balance RM5.03 million or 1.51% was from rentals, agricultural produce revenue and other miscellaneous incomes.

PECAHAN PENDAPATAN MENGURUS
BREAKDOWN OF OPERATING INCOME



PERBELANJAAN MENGURUS
OPERATING EXPENDITURE

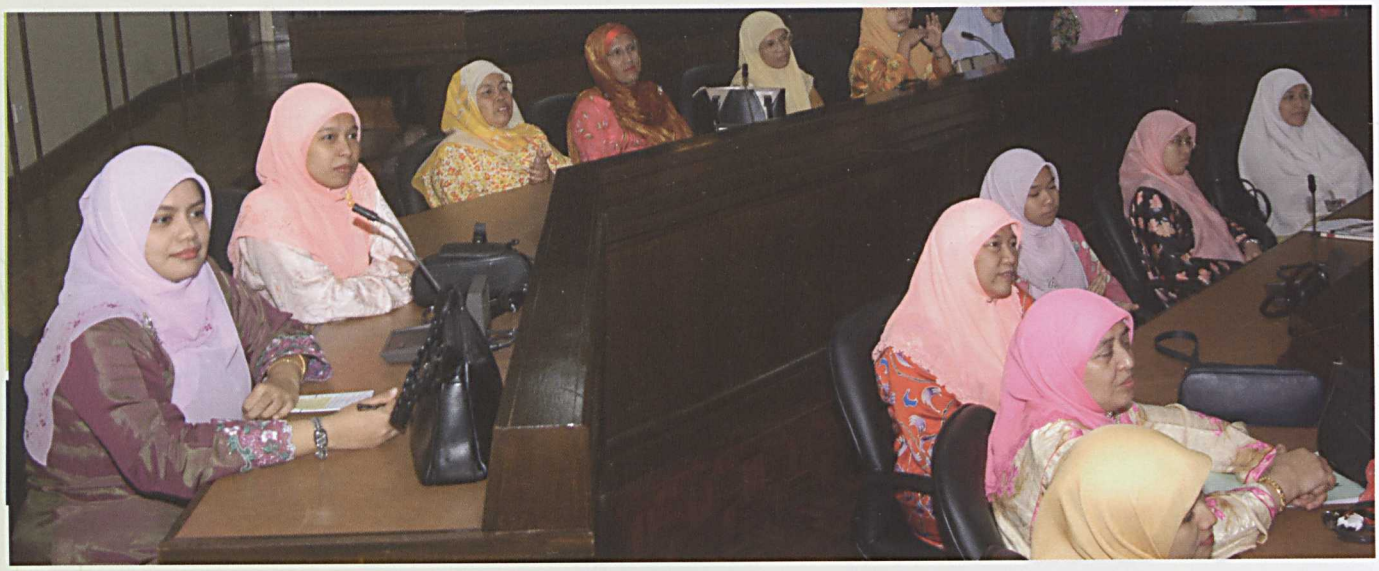
	Tahun 2004 Year 2004 (RM Juta) (RM Mil)	(%) (%)	Tahun 2003 Year 2003 (RM Juta) (RM Mil)	(%) (%)
Emolumen Emoluments	196.62	47.01	188.60	51.45
Perbelanjaan Lain Other expenditures	221.59	52.99	177.92	48.55
Jumlah / Total	**418.21**		**366.52**	

Perbelanjaan Mengurus

Perbelanjaan mengurus Universiti meningkat sebanyak 14.10 % daripada RM366.52 juta pada tahun 2003, kepada RM418.21 juta pada tahun 2004. Pembayaran emolumen merupakan perbelanjaan yang paling tinggi iaitu diatas kadar 47.01 % dari keseluruhan perbelanjaan untuk tahun 2004. Perbelanjaan emolumen hanya meningkat sebanyak 4.25 % berbanding tahun 2003 dan bagi perbelanjaan lain telah meningkat pada kadar 24.54 %.

Operating Expenditure

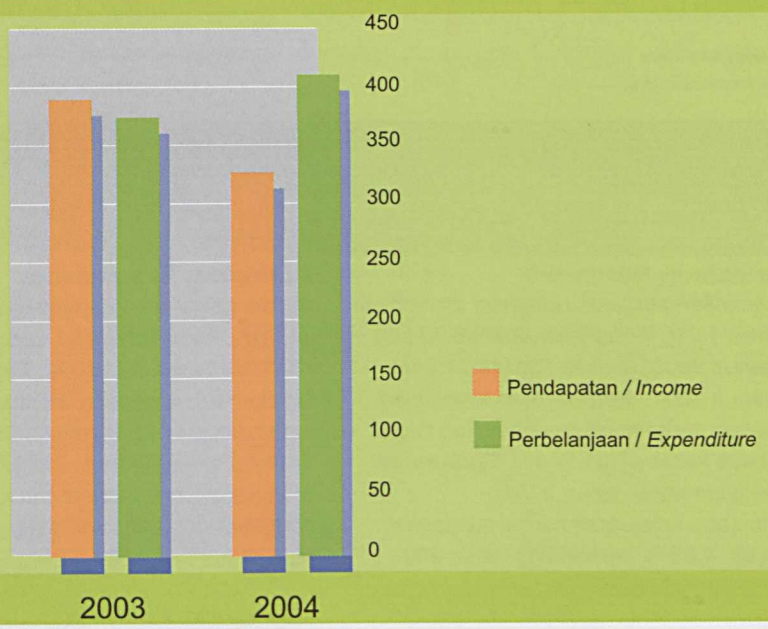
UPM's operating expenditure increased by 14.10%, from RM366.52 million in 2003,to RM418.21 million in 2004. Payment of Emolument comprised the largest expenditure in 2004 which formed 47.01% of the total expenditure in 2004. Emolument expenditure only rose at the rate of 4.25% compared to 2003, and other expenditures rose at the rate of 24.54%.



PECAHAN PERBELANJAAN MENGURUS
BREAKDOWN OF OPERATING ON EXPENDITURE

	Tahun 2004 Year 2004 (RM Juta) (RM Mill)	(%) (%)	Tahun 2003 Year 2003 (RM Juta) (RM Mill)	(%) (%)
Emolumen / Emoluments	196.62	47.01	188.60	51.45
Bekalan dan Bahan-Bahan / Supplies and Materials	65.14	15.58	64.83	17.69
Penyelenggaraan & Pembaikan / Maintenance and repairs	23.36	5.58	22.75	6.21
Perkhidmatan Ikhtisas dan Lain-Lain / Professional services and others	69.02	16.50	47.62	12.99
Peruntukan Perbelanjaan Aset / Provision for asset expenditure	64.07	15.33	42.72	11.66
Jumlah / Total	418.21		366.52	

PERBANDINGAN PENDAPATAN DAN PERBELANJAAN AKAUN MENGURUS
COMPARISION OF OPERATING ACCOUNT INCOME AND EXPENDITURE



Perbelanjaan Pembanggunan

Jumlah peruntukan Geran Kerajaan yang diterima dalam tahun 2004 bagi baki RMK-8 ialah sebanyak RM10.00 juta untuk membiayai projek-projek yang dalam pelaksanaan. Geran Kerajaan Tertunda Direalisasi bagi tahun 2004 pula adalah sebanyak RM34.86 juta, meningkat sebanyak RM3.54 juta (11.30%) berbanding RM31.32 juta dalam tahun 2003.

Perbelanjaan Pembangunan bagi tahun 2004 adalah sebanyak RM160.92 juta yang mana sebanyak RM152.26 juta (94.62%) merupakan perbelanjaan Pembinaan Dalam Kemajuan bagi projek-projek pembinaan dan antaranya adalah seperti bangunan berikut:-

(i) Bangunan Fakulti Perubatan dan Sains Kesihatan
(ii) Bangunan Pusat Penyelidikan dan Pembangunan (R & D)
(iii) Kompleks Kejuruteraan dan Teknologi Fasa 2B
(iv) Bangunan Tambahan Fakulti Bahasa Moden dan Komunikasi
(v) Naik taraf Saliran ke Putrajaya

Perbelanjaan Penyelidikan IRPA (Intensification of Research In Priority Areas)

Jumlah keseluruhan Geran Kerajaan bagi perbelanjaan IRPA pada tahun 2004 adalah sebanyak RM29.14 juta. Sebahagian besar peruntukan ini adalah untuk membiayai projek-projek yang diluluskan di bawah RMK-8, manakala sebanyak RM7.55 juta (20.58%) adalah pendapatan bagi projek 'Top Down' yang disalurkan melalui agensi kerajaan dan juga dari pendapatan-pendapatan lain.

Jumlah perbelanjaan Penyelidikan IRPA untuk tahun 2004 telah meningkat sebanyak RM17.87 juta (49.85%), iaitu RM35.85 juta dalam tahun 2003 kepada RM53.72 juta dalam tahun 2004.

Development Expenditure

The Total Government Grant allocation received in 2004 for the balance of the EMP period was RM10.00 million for funding projects being implemented. Government Grants carried foward in 2004 totalled RM34.86 million, a rise of as much as RM3.54 million(11.30%), compared to RM31.32 million in 2003.

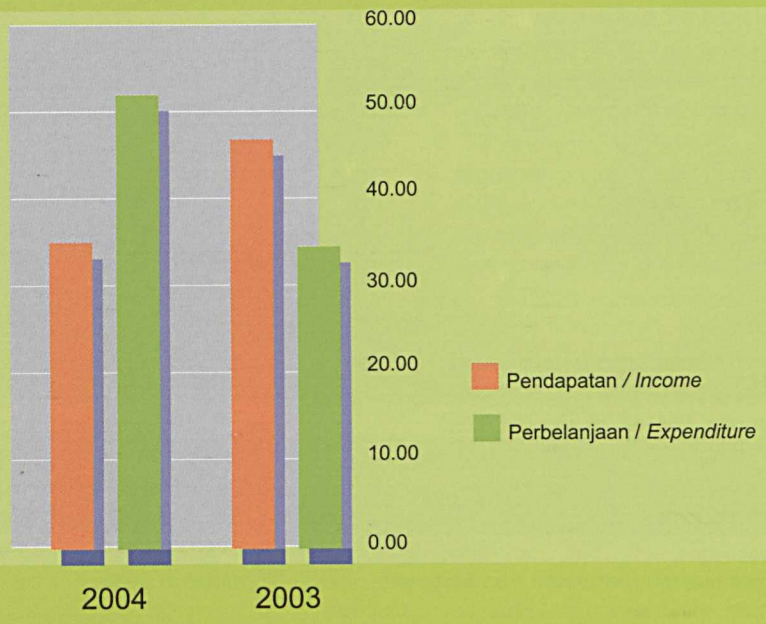
The Development expenditure for 2004 was RM160.92 million, from which the sum of RM52.26 million (94.62%) was for financing works in progress building projects, among them are as follows:

(i) Building of the Faculty of Medicine and Health Sciences
(ii) Building for Research and Development Centre (R&D)
(iii) The Engineering and Technology Complex Phase 2B
(iv) Additional building for Faculty of Modern Languages and Communication
(v) Upgrading of Drainage Systems to Putrajaya

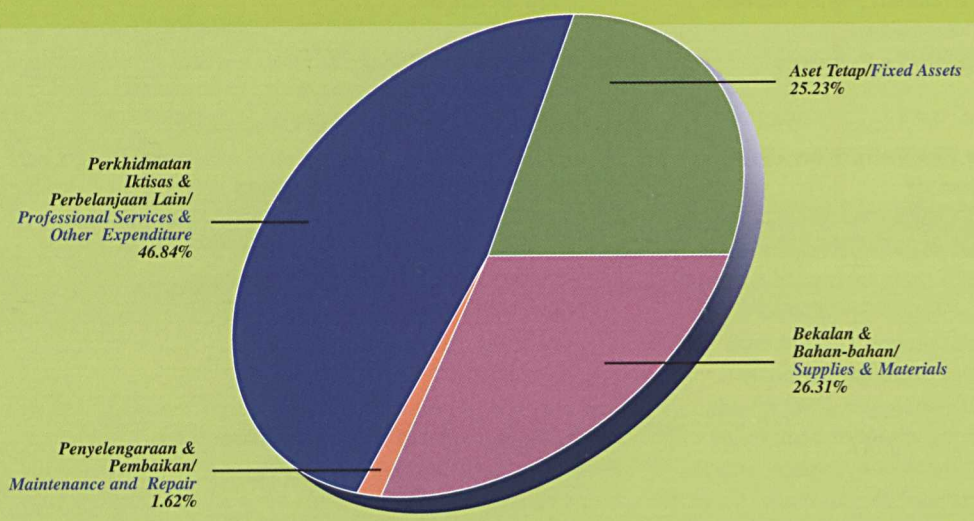
IRPA (Intensification of Research In Priority Areas) Development Expenditure

Total Government Grants for IRPA expenditure in 2004 amounted RM29.14 million. A large section of this provision was to fund projects that were approved under the EMP, whereas a sum of RM7.55 million (20.58%) was income for the 'Top Down' projects that were channelled through government agencies and also from other sources of income. Total IRPA research expenditure for 2004 has risen as much as RM17.87 million(49.85%), that is RM35.85 million in 2003 to RM53.72 million in 2004.

PERBANDINGAN PENDAPATAN DAN PERBELANJAAN IRPA
COMPARISION OF IRPA INCOME AND EXPENDITURE



PECAHAN PERBELANJAAN IRPA 2004
BREAKDOWN OF IRPA EXPENDITURE 2004



Strategi Perbelanjaan

UPM telah memberi penekanan di dalam usaha membantu menjayakan dasar dan polisi kerajaan di dalam sektor pertanian di mana kerajaan memberi tumpuan untuk mengenalpasti sumber pertumbuhan baru, terutamanya dalam bidang agro-teknologi dan bioteknologi yang diramalkan sebagai revolusi teknologi yang akan datang. Sebanyak 35% daripada peruntukan Belanja Mengurus telah diperuntukkan kepada bidang pertanian dan ianya merupakan peruntukan belanja mengurus 2004 yang tertinggi berbanding bidang-bidang lain di UPM.

Expenditure Strategy

UPM has given emphasis in its efforts to help achieve Government policies especially in the agricultural sector,where the government is focusing attention on identifying new sources of cultivation,especially in the fields of agro-technology and biotechnology which has been predicted to be the revolutionary technology of the future.Thirty five per cent of the Operating Expenditure has been allocated to the field of agriculture, and is the biggest allocation in operating expenditure in 2004 compared to other fields of study in UPM.

Sebanyak 35% daripada peruntukan Belanja Mengurus telah diperuntukkan kepada bidang pertanian dan ianya merupakan peruntukan belanja mengurus 2004 yang tertinggi berbanding bidang-bidang lain di UPM

Memantapkan Sistem Penyampaian Perkhidmatan Awam (Public Delivery System)

Bagi meneruskan usaha mencapai matlamat ke tujuh iaitu menjana dan mengurus sumber kewangan Universiti secara cekap dan berkesan, usaha mempertingkatkan keberkesanan pengurusan kewangan di peringkat operasi dan implementasi telah dipergiatkan lagi. Ketelusan pengurusan kewangan dimantapkan lagi bagi memastikan sumber kewangan Universiti digunakan secara efisien.

Bagi mengukuhkan lagi pengurusan kewangan beberapa langkah telah diambil dan di antaranya ialah:-

- **Penstrukturan Semula Pejabat Bendahari**

  Mengemas kini struktur pengurusan kewangan di Pejabat Bendahari dengan mewujudkan 3 Bahagian Utama yang terdiri dari Bahagian Operasi, Bahagian

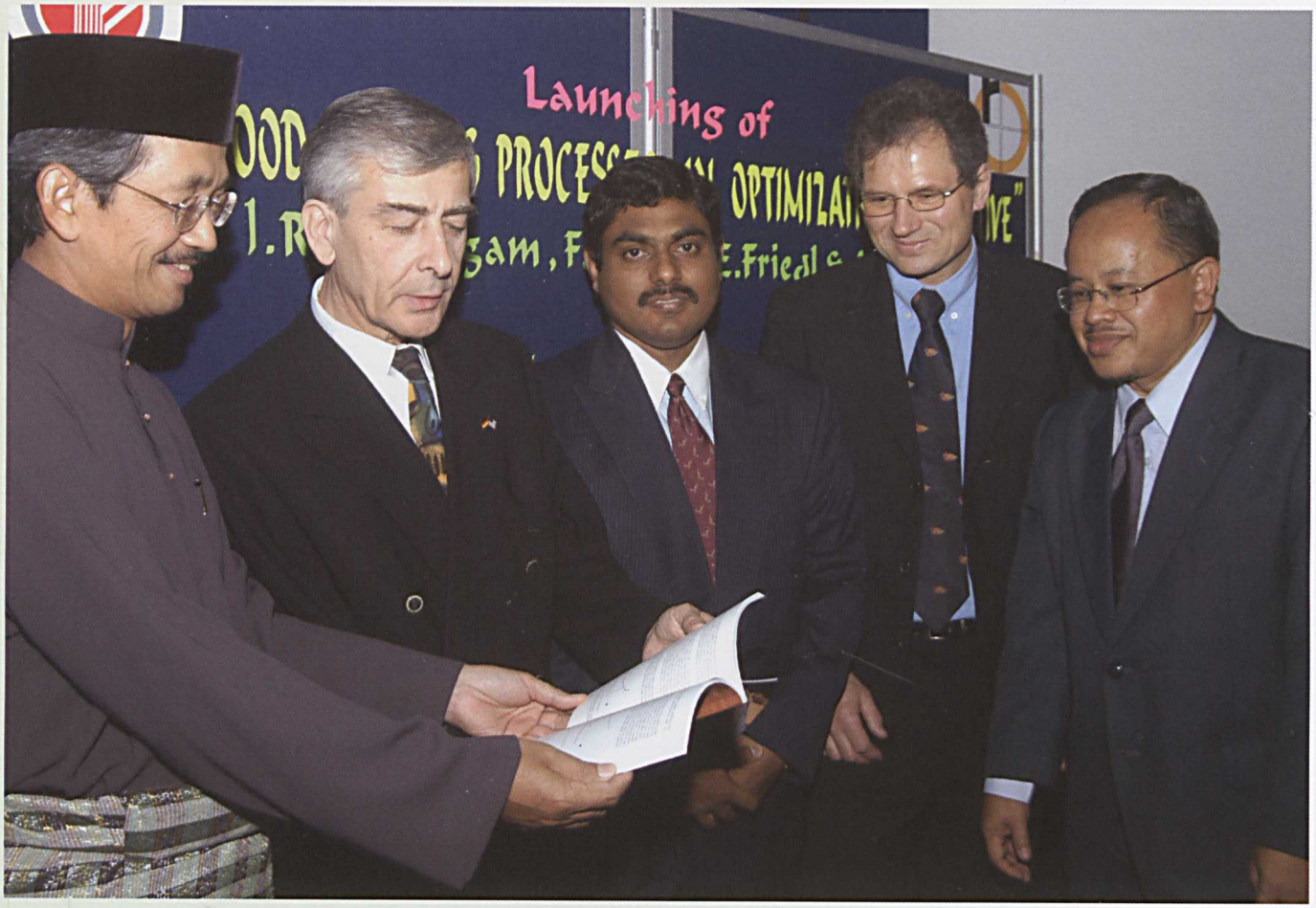
Enhancement of the Public Delivery System

In continuing to achieve its seventh objective,that is to generate and operate the University's Finances,efficiently and effectively,efforts to raise the level of effective financial management at the operational level and its implementation has been strengthened.The financial management transperancy has been highly enhanced to ensure that the University's financial resources are managed and used efficiently.

Certain steps have been taken to further strengthen financial management and among them are:

- **Restructuring of the Bursary**

  The financial management structure at the Bursar has been organised into three main divisions,namely the Operations Department, the Financial Department and the Financial Accounts



Kewangan dan Bahagian Perakaunan Kewangan bagi menjelaskan lagi agihan bidang tugas dan tanggungjawab di samping memastikan perlaksanaan tugas dan tanggungjawab dilaksanakan dengan lebih cekap dan berkesan.

Penubuhan unit kewangan di Pusat Tanggungjawab dan penambahan bilangan Pegawai Kumpulan Pengurusan dan Profesional serta kakitangan sokongan juga telah dapat mempertingkatkan akauntabiliti dalam pengurusan kewangan.

- **Pembangunan Sistem Pengurusan Aset Dan Inventori (Fixed Assets Management System- FAMS)**

Pengurusan aset universiti telah dipertingkatkan lagi melalui pembangunan sistem FAMS. Sistem ini didapati bersesuaian untuk menyelenggara rekod dan aset fizikal universiti, di mana dengan penggunaan sistem *Barcode* aset-aset boleh diselenggara dan dikesan dengan cara yang lebih baik dan teratur.

Department, in order to demarcate the duties and responsiblities in the distribution of work while ensuring that implementation of tasks and responsibilties are carried out efficiently and effectively.

Formation of the financial unit at the Responsibilty Centres and increasing the number of additional officers from the management and professional group,together with support staff,has also raised the level of accountability in Financial Management.

- **Development of the Fixed Assets Management System (Fixed Assets Management System - FAMS)**

The management of University assets has been further enhanced through the FAMS system.This system has been found to be suitable in mantaining the University's records and physical assets, and with the usage of the Barcode System, assets can be maintained and identified in an effectiveand organised manner.

- **Peningkatan Perkhidmatan Kepada Pelanggan**

  Perkhidmatan kepada pelanggan terutamanya pelajar dipertingkatkan dengan pembukaan kaunter perkhidmatan yang lebih strategik dan selesa. Perlaksanaan sistem bayaran yuran pelajar diperluaskan dengan perkhidmatan perbankan elektronik, sistem *Financial Process Exchange* (FPX) dan bayaran melalui Kad Kredit/ Visa /Mastercard /American Express Card merupakan alternatif yang disediakan bertujuan untuk memudahkan urusan pelanggan.

- **Sistem Pengurusan Kualiti (SPK)**

  Sebagai komitmen untuk memberi perkhidmatan yang berkualiti kepada pelanggan usaha kearah pencapaian persijilan ISO 9001:2000 sedang giat dilaksanakan.

Sijil Ketua Audit Negara

Universiti Putra Malaysia telah mendapat Sijil Bersih dari Ketua Audit Negara bagi akaun Universiti untuk tahun 2004.

- **Raising the Level of service To customers**

  Service to customers,primarily to senior students, have been enhanced with the opening of service counters that are more strategic and comfortable. Implementing the students fees payment system, has been widened through the use of the Electronic Banking System.. the Financial Process Exchange System (FPX), and through credit cards/Visa/ Mastercards, and the American Express Card as alternatives in order to simplify customer transactions.

- **Quality Management System (QMS)**

  Being committed to give quality services to customers,efforts towards achieving ISO 9001:2000 certification are being vigourously implemented.

National Chief Auditor's Certificate

University Putra Malaysia has received a clean certificate from the Auditor General for the University's accounts for the year 2004.

Universiti Putra Malaysia telah mendapat Sijil Bersih dari Ketua Audit Negara bagi akaun Universiti untuk tahun 2004

UPM

UNIVERSITI PUTRA MALAYSIA

Perkhidmatan Profesional

Professional Services

Kursus-kursus ini dipakej menggunakan kepakaran UPM dan ditambah dengan kepakaran luar

Universiti Putra Malaysia (UPM) telah menggariskan matlamat kelapan dalam Pelan Strategi 2001-2010 ialah 'menjadikan UPM sebagai pusat perkhidmatan dan pendidikan lanjutan yang cemerlang'. Untuk itu, UPM telah merangka usaha berterusan sepanjang tahun 2004 ke arah pencapaian matlamat tersebut. Melalui aktiviti Pusat Pemajuan Profesional (PACE) dan Unit Latihan, Pejabat Pendaftar, usaha meningkatkan kepakaran dan profesionalisme di kalangan warga kerja UPM dilakukan secara lebih tersusun. Selain itu, PACE juga menyediakan peluang peningkatan ilmu serta kemahiran yang berterusan kepada masyarakat luar kampus yang terdiri daripada individu serta agensi yang berminat.

Kursus dan Latihan

Sepanjang tahun 2004, PACE telah menjalankan pelbagai aktiviti yang melibatkan staff UPM, kerajaan dan swasta. Kursus-kursus ini dipakej menggunakan kepakaran UPM dan ditambah dengan kepakaran luar. Aktiviti dan kursus pada tahun 2004 adalah seperti berikut:

Universiti Putra Malaysia (UPM) has outlined its Eighth Goal in the Strategic Plan 2001-2010 'to make UPM a Centre of Excellence for continuing Education and services'. For that purpose, UPM has structured various continuous efforts throughout the year 2004 to achieve this objective. Through the activities carried out by the Professional Advancement Centre (PACE) and the Training Unit in the Registry, efforts to upgrade expertise and professionalism among the UPM workforce are carried out in a systematic way. Besides that, PACE also provides opportunities to people outside the campus who consist of interested individuals and agencies to increase their knowledge and skills continuously.

Courses and Training

Throughout 2004, PACE carried out a variety of activities that involved the UPM staff, the Government and the private sector. The courses were packaged using UPM expertise in addition to external expertise. Activities and courses for the year 2004 are as follows:

KURSUS DAN LATIHAN

Tarikh	Nama Kursus	Kerjasama
18 – 20 Februari 2004	Qualitative Data Management Software – NUD*IST 6.0 and Nvivo A Hands On Workshop	Institut Pengajian Komuniti dan Keamanan (PEKKA)
6 April 2004	Seminar Projek ICT dan Pembentukan K-Masyarakat	Institut Pengajian Komuniti dan Keamanan (PEKKA)
21 – 22 April 2004	Post Graduate Teaching and Supervision	Sekolah Pengajian Siswazah
10 – 15 Mei 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Moral	Lembaga Akreditasi Negara (LAN)
15 – 16 Julai 2004	Post Graduate Teaching and Supervision	Sekolah Pengajian Siswazah
28 Jun – 3 Julai 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Islam	Lembaga Akreditasi Negara (LAN)
28 Jun – 3 Julai 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Malaysia	Lembaga Akreditasi Negara (LAN)
29 Jun – 1 Julai 2004	Assuring Quality Higher Education Management & Teaching Learning Process	Prished Consultants International
7 – 8 September 2004	A Course Towards Successful Research	Pusat Pengurusan Penyelidikan (RMC)
21 – 22 September 2004	Meningkatkan dan Menjayakan Komunikasi Dalam Organisasi	Pusat Pemajuan Profesional (PACE)
4 – 8 Oktober 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pendidikan Moral	Lembaga Akreditasi Negara (LAN)
4 – 8 Oktober 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Malaysia	Lembaga Akreditasi Negara (LAN)
27 – 30 Disember 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Malaysia	Lembaga Akreditasi Negara (LAN)
27 – 30 Disember 2004	Kursus Kompetensi Pengajaran Mata Pelajaran Pengajian Islam	Lembaga Akreditasi Negara (LAN)

COURSES AND TRAINING

Date	Name of Course	Agency
18 – 20 February 2004	Qualitative Data Management Software – NUD*IST 6.0 and Nvivo: A Hands On Workshop	Institute of Community and Peace Studies (PEKKA)
6 April 2004	Seminar on ICT Project and the development of the K-Society	Institute of Community and Peace Studies (PEKKA)
21 – 22 April 2004	Post Graduate Teaching and Supervision	School of Graduate Studies
10 – 15 May 2004	Course on Competence in Teaching Moral Studies.	National Accreditation Board (LAN)
15 – 16 June 2004	Post Graduate Teaching and Supervision	School of Graduate Studies
28 June – 3 July 2004	Course on Competence in Teaching Islamic Studies.	National Accreditation Board (LAN)
28 June – 3 July 2004	Course Competence in Teaching Malaysian Studies	National Accreditation Board (LAN)
29 June – 1 July 2004	Assuring Quality Higher Education Management & Teaching Learning Process	Prished Consultants International
7 – 8 September 2004	A Course Towards Successful Research	Research Management Centre (RMC)
21 – 22 September 2004	Upgrading Successful Communication in an Organisation.	Professional Advancement Centre (PACE)
4 – 8 October 2004	Course on Competence in teaching Moral Studies	National Accreditation Board (LAN)
4 – 8 October 2004	Course on Competence in teaching Malaysian Studies	National Accreditation Board(LAN)
27 – 30 December 2004	Course on Competence in Teaching Malaysian Studies	National Accreditation Board(LAN)
27 – 30 December 2004	Course on Competence in Teaching Islamic Studies	National Accreditation Board(LAN)

Sementara itu, Seksyen Latihan dan Penilaian, Pejabat Pendaftar turut berperanan dalam meningkatkan pengetahuan dan tahap profesionalisme di kalangan tenaga kerja UPM. Pada 2004, seksyen tersebut telah merancang sebanyak 15 Kursus untuk kakitangan UPM, dan telah berjaya menjalankan sebanyak 9 kursus daripada 15 kursus tersebut.

Kursus Yang Telah Dirancang

1. Kursus Tatacara Penyediaan Kertas Kerja, Laporan Dan Mesyuarat (KP&P)
2. Kursus Pemandu Berwibawa (KS)
3. Kursus Perkhidmatan Pelanggan Dan Kaunter Cemerlang (KS)
4. Kursus Kepimpinan Dan Pengurusan Organisasi (KP&P)
5. Kursus Pengurusan Pencen Dan Faedah Persaraan (KP&P Dan KS)
6. Kursus Pengenalan Undang-Undang (KP&P)
7. Kursus Pengurusan Rekod Dan Fail (KS)
8. Kursus Pembantu Makmal (KS)
9. Kursus Pembangunan Sahsiah (KS)
10. Kursus Peningkatan Motivasi PTR / PAR (KS)
11. Kursus Kecemerlangan Dalam Kesetiausahaan (KS)
12. Kursus OSHA (KP&P)
13. Kursus Pra Persaraan (KP&P Dan KS)
14. Kursus Asas Pengurusan Kewangan (KS)
15. Kursus Berkomunikasi Interpersonal (KP&P)

The Training and Evaluation section in the Registry also played a role in upgrading knowledge and professional levels among the members of the UPM workforce. In 2004, this section planned as much as 15 courses and successfully carried out 9 of them.

Planned Courses

1. The system of preparing for working papers, Reports and Meetings.
2. Confident Drivers(KS)
3. Customer and Counter Service excellence (KS)
4. Leadership and Management of Organisations (KP&P)
5. Pension Management and Retirement Benefits (P&P and KS)
6. Getting to know the law (KP&P)
7. File and Record Management (KS)
8. Laboratory attendants course(KS)
9. Personality Development (KS)
10. Improving Motivation PTR / PAR (KS)
11. Excellence in Secretaryship (KS)
12. OSHA (KP&P)
13. Pre-retirement Course(KP&P Dan KS)
14. Basic Financial Management(KS))
15. Interpersonal Communication (KP&P)

UPM juga giat menjalankan aktiviti perundingan bersama sektor awam dan swasta

Kursus Yang Telah Dijalankan

1. Kursus Tatacara Penyediaan Kertas Kerja, Laporan Dan Mesyuarat (KP&P)
2. Kursus Pemandu Berwibawa (KS)
3. Kursus Perkhidmatan Pelanggan Dan Kaunter Cemerlang (KS)
4. Kursus Kepimpinan Dan Pengurusan Organisasi (KP&P)
5. Kursus Pengurusan Pencen Dan Faedah Persaraan (KP&P Dan KS)
6. Kursus Pengenalan Undang-Undang (KP&P)
7. Kursus Pengurusan Rekod Dan Fail (KS)
8. Kursus Pembantu Makmal (KS)
9. Kursus Asas Pengurusan Kewangan (KS)

Kursus-kursus yang belum dijalankan, kecuali Kursus OSHA tidak dapat dijalankan kerana Seksyen Latihan dan Penilaian akan memberikan tumpuan yang lebih kepada aktiviti Penilaian Tahap Kecekapan (PTK).

Khidmat Perundingan

UPM juga giat menjalankan aktiviti perundingan bersama sektor awam dan swasta sama ada di peringkat nasional atau antarabangsa. Perkhidmatan ini amat penting bagi mempromosi segala kepakaran yang dimiliki oleh universiti ini untuk kebaikan dan manfaat kepada seluruh masyarakat. UPM melalui Unit Perundingan, Pusat Pembangunan Perniagaan (UBC) telah menyelaraskan sebanyak 35 projek perundingan sepanjang tahun 2004. Khidmat perundingan yang dijalankan ini melibatkan nilai projek berjumlah RM 8, 477,301.03. Kebanyakan daripada projek perundingan tersebut masih dijalankan untuk tahun 2005. Senarai projek seperti berikut:

Courses that were carried out

1. The system of preparing working papers, Reports and Meetings (KP&P)
2. Confident Drivers (KS)
3. Customer and Counter Service Excellence (KS)
4. Leadership and Management of Organisations KP&P)
5. Pension Management and Retirement Benefits (KP&P Dan KS)
6. Getting to know the Law (KP &P)
7. Record and Fail management (KS)
8. Course for Laboratory Attendants
9. Basic Financial Management Course(KS)

Some courses except OSHA were not carried out because the Training and Evaluation Section were paying more attention to evaluation of Competency levels (PTK), activities.

Consultation Services

UPM also carried out consultation activities with the public and private sectors at both national and international levels. This service is of utmost importance to promote the total expertise possessed by the University, for the good and benefit of the society. Through its Consultation Unit at the University Business Centre, UPM coordinated 35 consultation projects throughout the year. The consultation services that were carried out involved a project sum of RM8, 477,301.03. Many of these consultations are still in the process of being carried out in 2005.

KHIDMAT PERUNDINGAN

Nama Projek	Ketua Projek
R & D Works on Imhoff Tank With Pump Station	Prof. Dr Azni Idris
(ITPS) PJA 172 Upgrading Using Cosmo Balls Section 22 Petaling Jaya	
Performance Study of Upgrading Biological Process for	Prof. Madya Dr Fakhrul Razi Ahmadun
Sewage Treatment Under IWK's MTP Programme	
Sewage Sludge Application on Land at rubber Platation	Dr. Mohamad Azani Alias
Biological Dewaterig of Sewage Sludge	Prof. Madya Dr Fakhrul Razi Ahmadun
by Liquid State Bio-Conversion Process (LSB Pilot Trial)	
Application of Sewage Sludge In Forest Rehabilitation and Regenaration	Prof. Dr Azni Idris
Sludge Thickening and Dewatering Using natural Local Polymer	Prof. Ir Dr Megat Johari Mohd Noor
Risk Assessment of Vibrio Parahaemolyticus	Prof. Dr Son Radu
Remote Monitoring Street Lighting Intelligent Distribution System	Prof. Madya Ir Dr Norman Mariun
Consultancy Services on National Integrated Coastal Zone Management	Prof. Dr. Mohamad Ibrahim
Implementation of Biowaste to Bioproduct System Prototype Plant	Prof. Dr Mohd Ali Hasan
Evaluation of In Vitro AntiCancer Potential of a	
Few Local Plant Extracts and In Vivo Antihepatotoxic	Dr. Johnson Stanslas
Potential a Polyherbal Formulation	
Utilization of Biogas & Biomass for new Bioproducts	Prof. Dr Mohd Ali Hasan
The Upscaling of Mixed lactobacillus Culture Used as a Probiotic for Chicken	Prof Dr Ho Yin Wan
Weight gain Efficacy Study	Dr. Amin Ismail
Underwater Unmanned Vehicle Maritime Intelligent	Dr. Abdul Rahman Ramli
/Surveillance/Reconnaissance – Remote Evironmenmental (PARIZ)	
Kajian Pembangunan Sumber Manusia Kolej Kemahiran Tinggi Mara	Dr. Shamsuddin Ahmad
(KTKM) dan Institut Kemahiran Mara (IKM)	
Geographical Information System Services and License	Dr. Law Teik Hua
Conservation and Sustainable Use	
of Tropical Peat Swamp Forests and Associated Wetland Ecosystems	Prof. Dr Shahwahid Othman
Kajian Penubuhan Majlis Kecergasan Kebangsaan	Prof. Dr Shamsher Mohamad
dan Latihan Pengurusan Sukan Malaysia	
Strategis Information System Plan	Dr Azhar Nasir
Modul Latihan Gerak Daya Wawasan	Prof Madya Dr Jariah Masud
Airbone Hyperspectral Remote Sensing	Prof. Dr Kamarulzaman Jusoh
Bina Insan Kerajaan Negeri Selangor	Prof. Dr Azimi Hamzah
*Projek Pembinaan Jet Eksekutif	Ir. Dr. Prasetyo Edi
*Study on Tropical Kiwi Fruit for Dole (Sarawak highland)	Dr. Ahmad Husni Mohd Hanif
*Fibreboard	Dr. Jalaluddin Harun
*R & D on Enzyme	Prof Madya Dr Nazamid Shaari
Strategik Kesihatan Ikan Kebangsaan	Prof. Datuk Dr Mohamad Shariff Mohamed Din
Pengurusan Haiwan Rekreasi bagi guru-guru Majlis Pelajaran Malaysia	Dr. Azhar Kassim
High Flyers Women Academician in Malaysian Public Universities	Prof. Dr Maimunah Ismail
: Factors Contributing to Success	
Projek Precision Farming – Data GIS	Dr. Abdul Rashid
Remote Monitoring Street Lighting Intelligent Distribution System – Part 2	Prof. Madya Dr.Ir Norman Mariun
Modul Latihan Gerak Daya Wawasan – II	Prof Madya Dr Jariah Masud
Kajian Kos Zoo Negara Baru	Prof Madya Dr Ahmad Shuib
Evaluation of IRPA RM-7 for MOSTE	Prof Dr Shahwahid Othman
Development of local volume tables for inland forest in Terengganu	Prof Madya Dr Awang Nor Abdul Ghani

Name of Project	Head of Project
R & D Works on Imhoff Tank With Pump Station	
(ITPS) PJA 172 Upgrading Using Cosmo Balls Section 22 Petaling Jaya	Prof. Dr Azni Idris
Performance Study of Upgrading Biological Processes	
for Sewage Treatment Under IWK's MTP Programme	Assoc. Prof. Dr Fakhrul Razi Ahmadun
Sewage Sludge Application on Land at rubber Plantations	Dr. Mohamad Azani Alias
Biological Dewatering of Sewage Sludge	
by Liquid State Bio-Conversion Process (LSB Pilot Trial)	Assoc. Prof. Madya Dr Fakhrul Razi Ahmadun
Application of Sewage Sludge In Forest Rehabilitation and Regeneration	Prof. Dr Azni Idris
Sludge Thickening and Dewatering Using natural Local Polymer	Prof. Ir Dr Megat Johari Mohd Noor
Risk Assessment of Vibrio Parahaemolyticus	Prof. Dr Son Radu
Remote Monitoring Street Lighting Intelligent Distribution System	Prof. Madya Ir Dr Norman Mariun
Consultancy Services on National Integrated Coastal Zone Management	Prof. Dr. Mohamad Ibrahim
Implementation of Biowaste to Bioproduct System Prototype Plant	Prof. Dr Mohd Ali Hasan
Evaluation of In Vitro AntiCancer Potential of a Few Local Plant Extracts	
and In Vivo Antihepatotoxic Potential, a Polyherbal Formulation	Dr. Johnson Stanslas
Utilization of Biogas & Biomass for new Bioproducts	Prof. Dr Mohd Ali Hasan
The Upscaling of Mixed lactobacillus Culture Used as a Probiotic for Chicken	Prof Dr Ho Yin Wan
Weight gain Efficacy Study	Dr. Amin Ismail
Underwater Unmanned Vehicle Maritime Intelligent	
/Surveillance/Reconnaissance – Remote Evironmenmental (PARIZ)	Dr. Abdul Rahman Ramli
Study on the development of Human Resources	
for the Higher Skills MARA College and Institute of Skills,MARA	Dr. Shamsuddin Ahmad
Geographical Information System Services and License	Dr. Law Teik Hua
Conservation and Sustainable Use of Tropical Peat Swamp Forests	
and Associated Wetland Ecosystems	Prof. Dr Shahwahid Othman
Study on the formation of the National Activeness Council	
and Sports Training Management System	Prof. Dr Shamsher Mohamad
Strategic Information System Plan	Dr Azhar Nasir
Training Module for Visionary power movements	Assoc. Prof Dr Jariah Masud
Airborne Hyper spectral Remote Sensing	Prof. Dr Kamarulzaman Jusoh
People Building for the State Government of Selangor	Prof. Dr Azimi Hamzah
*Project for the building of executive jets	Ir. Dr. Prasetyo Edi
*Study on Tropical Kiwi Fruit for Dole (Sarawak highland)	Dr. Ahmad Husni Mohd Hanif
Fiberboard	Dr. Jalaluddin Harun
*R & D on Enzyme	Assoc. Prof. Dr Nazamid Shaari
Health strategies for National Fish Health Kebangsaan	Prof. Datuk Dr Mohamad Shariff Mohamed Din
Management of recreational animals	Dr. Azhar Kassim
for teachers in the Educational Council of Malaysia	
High Flyer Women Academicians	
in Malaysian Public Universities: Factors Contributing to Success	Prof. Dr Maimunah Ismail
Precision Farming project – Data GIS	Dr. Abdul Rashid
Remote Monitoring Street Lighting Intelligent Distribution System – Part 2	Assoc. Prof Dr.Ir Norman Mariun
Training module for visionary power movements II	Prof Madya Dr Jariah Masud
Cost study for the new National Zoo	Assoc. Prof Dr Ahmad Shuib
Evaluation of IRPA RM-7 for MOSTE	Prof Dr Shahwahid Othman
Development of local volume tables for inland forest in Terengganu	Assoc. Prof. Dr Awang Nor Abdul Ghani

UPM
UNIVERSITI PUTRA MALAYSIA

Perhubungan Awam dan Antarabangsa

International Public Relation

sebanyak sembilan (9) memorandum persefahaman (MoU) dengan agensi antarabangsa telah ditandatangani sepanjang tahun 2004

PERHUBUNGAN AWAM DAN ANTARABANGSA

Sepanjang tahun 2004, UPM berusaha meningkatkan jalinan erat dan kerjasama dengan pihak luar melalui aktiviti perhubungan awam dan antarabangsa yang lebih tersusun. Adalah menjadi hasrat UPM supaya segala aktiviti yang diadakan akan dapat menyalurkan maklumat yang tepat kepada pihak luar berkenaan kekuatan UPM sebagai institusi pengajian tinggi dalam bidang pertanian, sains dan teknologi yang dapat memberi sumbangan kepada masyarakat dan negara. Aktiviti yang telah dijalankan adalah seperti berikut:

1. Hubungan Kerjasama

Beberapa jalinan dan hubungan kerjasama dengan institusi luar negara terutamanya melibatkan industri dan institusi yang lebih terkedepan telah berjaya dimeterai. Kerjasama ini meliputi bidang pengajaran, pembelajaran, penyelidikan dan pembangunan teknologi. Selain daripada tujuan pengajaran, pembelajaran dan penyelidikan kerjasama ini juga untuk memperkukuhkan citra universiti di peringkat global. Untuk tujuan itu sebanyak sembilan (9) memorandum persefahaman (MoU) dengan agensi antarabangsa telah ditandatangani sepanjang tahun 2004. Antara institusi dan agensi luar negara yang terlibat ialah Tokyo University of Agriculture, Jepun, Chungnam National University, Korea. Egerton University, Kenya, Institut Pertanian Bogor,Indonesia., Chiba University Jepun, Cantho University,Vietnam dan banyak lagi.

PUBLIC AND INTERNATIONAL RELATIONSHIPS

Throughout 2004, UPM took great efforts to enhance its close ties and cooperation with external and international agencies in a more organised manner. It is UPM's desire that all its activities become a channel of accurate information to external bodies to prove that UPM is an institution of higher learning that provides major contributions to the society and country in the fields of agriculture, science and technology.

1. Cooperative Relationships

There were many networks and cooperative efforts with foreign institutions that were established firmly. These cooperative efforts were seen in the areas of teaching, learning, research and technological development. Besides teaching, learning and research purposes, these concerted efforts also enhanced the image of the university on a global level. Nine (9) memorandums of understanding (MoUs) with international agencies were signed throughout 2004. Among these institutions were Tokyo University of Agriculture, Japan, Chungnam National University, Korea. Egerton University, Kenya, Institute of Agriculture Bogor, Indonesia., Chiba University Japan, Cantho University,Vietnam and others.

Jadual: Memorandum Persefahaman Dengan Agensi Luar Negara

MEMORANDUM PERSEFAHAMAN DENGAN AGENSI LUAR NEGARA	
Institution / Country	Date of signing
Tokyo University of Agriculture, Japan	16 March 2004
Chungnam National University, Korea	6 April 2004
Egerton University, Kenya	6 April 2004
University of Manheim, Germany	Mei 2004
Institute Pertanian Bogor, Indonesia	23 July 2004
The Forestry and Forest Products Research Institute (FFPRI), Japan	27 July 2004
Chiba University, Japan	1 December 2004
Functional Food Creation Research Institute Pte. Ltd., Japan	13 December 2004
Cantho University, Vietnam	21 December 2004

Schedule: Memorandums of Understanding with International Agencies

MEMORANDUMS OF UNDERSTANDINGWITH INTERNATIONAL AGENCIES	
Institution / Country	Date of signing
Tokyo University of Agriculture, Japan	16 March 2004
Chungnam National University, Korea	6 April 2004
Egerton University, Kenya	6 April 2004
University of Manheim, Germany	May 2004
Institute Pertanian Bogor, Indonesia	23 July 2004
The Forestry and Forest Products Research Institute (FFPRI), Japan	27 July 2004
Chiba University, Japan	December 2004
Functional Food Creation Research Institute Pte. Ltd., Japan	13 December 2004
Cantho University, Vietnam	21 December 2004

Dalam pada itu, sebanyak 22 Memorandum Persefahaman dan perjanjian telah ditandatangani melibatkan agensi tempatan. MoU dan MoA ini melibatkan pelbagai bentuk kerjasama termasuk pengkomersialan produk, penyelidikan dan pembangunan, pengajaran dan pembelajaran, serta khidmat profesional.

As many as 22 Memorandums of Understanding and Agreement involving various types of cooperative efforts including commercialization of products, research and development, teaching and learning as well as professional services, were signed with local agencies.

INSTITUSI / AGENSI	TARIKH
Kolej Teknologi Timur (MOA)	11 Feb 2004
Kolej Sal Kuala Lumpur (MOA)	11 Feb 2004
Kolej Negeri (MOA)	11 Feb 2004
Institut Teknologi Sara (MOA)	11 Feb 2004
Kolej Teknologi Bestari (MOA)	11 Feb 2004
Institut Teknologi A.N.S (MOA)	11 Feb 2004
Kolej Teknologi Cybernetics (MOA)	11 Feb 2004
Pusat Pembangunan Kemahiran Pahang (MOA)	11 Feb 2004
Institut Teknologi Nuklear Malaysia (MINT)	1 Mac 2004
Profesional Services Development Corporation Sdn. Bhd. (PSDC)	1 Apr 2004
Majlis Paralimpik Malaysia	5 Apr 2004
Mines Exhibition Management Sdn Bhd	
Kolej Yayasan Islam YPJ Sdn Bhd, Kolej Islam Johor, Johor Bharu (MOA)	7 Mei 2004
Kolej Poly-Tech MARA Kuala Lumpur (MOA)	7 Mei 2004
Kolej Chermai Jaya, Kuching, Sarawak (MOA)	7 Mei 2004
Kerajaan Negeri Selangor	17 Mei 2004
Kementerian Belia dan Sukan	28 Mei 2004
Jentayu Manifacturing Sdn. Bhd.	19 Jun 2004
Mines Exhibition Management Sdn. Bhd.	28 Jun 2004
FELDA dan KIT	27 Jul 2004
Bernas Sdn. Bhd.	30 Sept 2004
Biovate Research Sdn. Bhd.	20 Dec 2004

INSTITUTIONS / AGENCIES	*DATE*
Eastern Technology College (MOA)	11 Feb 2004
Sal CollegeKuala Lumpur (MOA)	11 Feb 2004
State College (MOA)	11 Feb 2004
Sara Technological Institute (MOA)	11 Feb 2004
Bestari Technological Institute (MOA)	11 Feb 2004
IA.N.S Technological Institute (MOA)	11 Feb 2004
Cybernetics Technological Institute (MOA)	11 Feb 2004
Pahang Skills Development Centre (MOA)	11 Feb 2004
Malaysian Nuclear Technological Institute (MINT)	1 March 2004
Professional Services Development Corporation Sdn. Bhd. (PSDC)	1 Apr 2004
Paralympic Council Malaysia	5 Apr 2004
Mines Exhibition Management Sdn Bhd	
Islamic Foundation College YPJ Sdn Bhd, Islamic College, Johor Bharu (MOA)	7 May 2004
MARA Polytechnic College, Kuala Lumpur (MOA)	7 May 2004
Chermai Jaya College, Kuching, Sarawak (MOA)	7 May 2004
Selangor State Government	17 May 2004
Ministry of Youth and Sports	28 May 2004
Jentayu Manufacturing Sdn. Bhd.	19 June 2004
Mines Exhibition Management Sdn. Bhd.	28 June 2004
FELDA and KIT	27 July 2004
Bernas Sdn. Bhd.	30 Sept 2004
Biovate Research Sdn. Bhd.	20 Dec 2004

2. Aktiviti Promosi
Usaha untuk mempromosikan program pengajian peringkat prasiswazah dan siswazah telah dijalankan dengan lebih agresif sepanjang tahun 2004. UPM telah menyertai promosi program siswazah peringkat antarabangsa ke Jordan, China, India dan Afrika Selatan bagi tujuan meningkatkan bilangan pelajar siswazah.

2. Promotional Activities
Efforts to promote programmes and increase the student intake were carried out more aggressively at undergraduate and graduate levels in 2004. UPM took part in international graduate recruitment programmes in Jordan, China, India and South Africa.

Jadual: Aktiviti Promosi Luar Negara

TARIKH	AKTIVITI PROMOSI / TEMPAT
Tarikh	**Aktiviti Promosi/Tempat**
1 – 5 Disember 2004	8th Jordan Education and Training Exhibition, JETE, Jordan
22 – 31 Oktober 2004	China Education Expo 2004 Beijing and Shanghai, China
11 – 14 Jun 2004	EDUTEX INDIA 2004 – India International Education Exhibition for Students Recruitment, Taj Palace Hotel, New Delhi
26 Mac – 1 April 2004	Malaysian Education Road Show Cape Town and Durban In South Africa

Schedule: International Promotional Activities

DATE	*PROMOTIONAL ACTIVITIES / PLACE*
Date	**Promotional Activity/Place**
1 – 5 December 2004	8th Jordan Education and Training Exhibition, JETE, Jordan
22 – 31 October 2004	China Education Expo 2004 Beijing and Shanghai, China
11 – 14 June 2004	EDUTEX INDIA 2004 – India International Education Exhibition for Students Recruitment, Taj Palace Hotel, New Delhi
26 March – 1 April 2004	Malaysian Education Road Show Cape Town and Durban in South Africa

Promosi ke sekolah dan Pusat Matrikulasi juga diadakan bagi mendapatkan calon terbaik untuk pengajian peringkat prasiswazah. Selain di sekolah dan Pusat Matrikulasi, UPM juga mengikuti aktiviti promosi di tempat tumpuan awam melalui penyertaan dalam karnival pendidikan yang dianjurkan oleh badan-badan tertentu.

Promotions visits to schools and Matriculation Centres to recruit excellent students for undergraduate studies were held. UPM also participated in promotional activities during educational carnivals in public places organized by various bodies.

UPM telah menyertai promosi program siswazah peringkat antarabangsa ke Jordan, China, India dan Afrika Selatan

Jadual: Aktiviti Promosi Pendidikan Dalam Negari /
Schedule: Educational Promotion Activities held in the country

Tarikh / *Date*	Tajuk / *Title*	Tempat / *Place*
21 – 22 April 2004	Pameran Pendidikan Dan Kerjaya	Dewan Gimnasium Rakyat, Kompleks Sukan Pandamaran. Pelabuhan Klang Selangoir Darul Ehsan
	Education and Career exhibition	The People's Gymnasium Hall, Pandamaran Sports Complex, Port Klang Selangor Darul Ehsan
27 April 2004	Pameran Pendidikan Dan Kerjaya 2004	Sekolah Menengah Kebangsaan Seri Serdang Serdang. Selangor Darul Ehsan.
	Education and Career Exhibition 2004	Seri Serdang Secondary School, Serdang, Selangor Darul Ehsan.
24 – 27 Jun 2004	Pameran Hari Terbuka Kusza	Kolej Ugama Sultan Zainal Abidin (KUSZA) Kuala Terengganu. Terengganu Darul Iman
24 – 27 June 2004	Kusza Open day Exhibition	Sultan Zainal Abidin Religious College (KUSZA) Kuala Terengganu, Terengganu Darul Iman
1 - 4 Julai 2004	Hari Terbuka Upm Kampus Bintulu	UPM Kampus Bintulu Sarawak.
1 - 4 July 2004	Open Day UPM Bintulu Campus	UPM Bintulu Campus, Bintulu, Sarawak.
16 – 18 Julai 2004	Pameran Hari Konvokesyen Ke-28 UPM	Bukit Ekspo, UPM
16 – 18 July 2004	28th UPM Convocation Day exhibition	Bukit Ekspo, UPM
2 Ogos 2004	Pameran Hari Kerjaya Dan Usahawan 2004	Maktab Rendah Sains Mara Balik Pulau, Pulau Pinang.
2 August 2004	Career and Entrepreneur Day exhibition 2004	MARA Junior College, Pulau Pinang.
12 Ogos 2004	Pendidikan Kerjaya SMK Wangsa Melawati	Dewan Wangsa Bestari, SMK Wangsa Melawati
12 August 2004	Career Education, Wangsa Melawati Secondary School	Wangsa Bestari Hall, Wangsa Melawati Secondary School
20 – 21 Ogos 2004	Program Sayangi Belia	South City Plaza, Serdang Perdana Seksyen 1 Seri Kembangan. Selangor Darull Ehsan
20 – 21 August 2004	Love Youth Program	South City Plaza, Section 1 Seri Kembangan, Selangor Darul Ehsan
23 – 25 Ogos 2004	Karnival Sains & Pendidikan Kebangsaan	Dewan Sek. Men. Keb. Teknik, Segamat. Johor
23 – 25 August 2004	National Science and Education Carnival	Techincal Secondary School Hall, Segamat. Johor Bahru Takzim
26 Ogos 2004	Karnival Pendikan Tinggi & Pameran Kerjaya	Dewan Sri Ledang, Kolej Matrikulasi Johor
26 August 2004	Higher Education and Career Carnival	Sri Ledang Hall, Johor Matriculation College.
7 – 8 September 2004	Seminar & Ekspo Pendidikan IPT	Stadium Tertutup Kuala Selangor, Jalan Stadium, Kuala Selangor. Selangor Darul Ehsan
7 – 8 September 2004	IPT Educational Ekspo & Seminar	Indoor Stadium, Kuala Selangor, Stadium Road, Kuala Selangor, Selangor Darul Ehsan
23-25 September 2004	Pameran Pendidikan Dan Kerjaya	Dewan Serbaguna, Kolej Matrikulasi Perlis
	Education and Career Exhibition	Multi Purpose Hall, Perlis Matriculation College
3 – 4 Disember	Pameran Dan Ceramah Kerjaya	Dewan Razak, Kolej Mara Seremban
3 – 4 December	Career exhibition	Razak Hall, MARA College, Seremban
11 – 12 Disember 2004	The 15th Malaysian Education Fair	Mid Valley Exibition Centre Centre Court, Level 3, Kuala Lumpur.
11 – 12 December 2004	The 15th Malaysian Education Fair	Mid Valley Exhibition Centre, Centre Court, Level 3, Kuala Lumpur.

Dalam bencana ombak besar tsunami yang melanda negara pada Disember 2004, UPM merupakan antara IPTA yang terawal memberi bantuan kepada mangsa bencana tersebut.

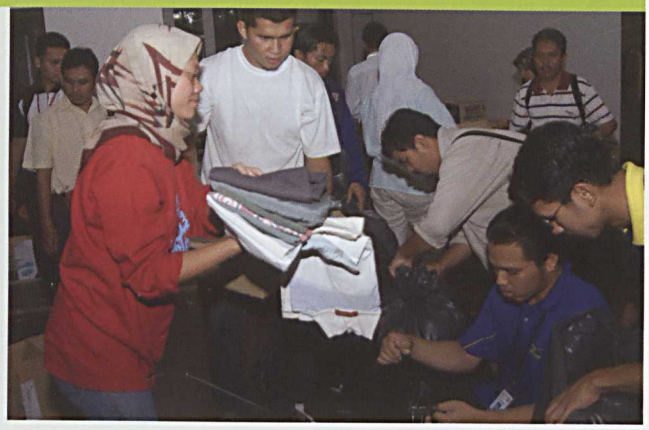
3. Siri Syarahan Intelek

UPM sentiasa menganjurkan siri syarahan intelek dalam kampus bagi menggalakkan interaksi di kalangan komuniti intelektual. Aktiviti ini juga merupakan usaha untuk memperkenalkan kekuatan UPM kepada warga kampus dan pihak luar. Selain itu tokoh luar sama ada peringkat tempatan dan antarabangsa juga dijemput untuk berkongsi pegalaman dengan warga kampus. Beberapa siri syarahan tetap dalam kampus terdiri daripada Syarahan Inaugural, Wacana Intelek (anjuran CADE) dan Syarahan Awam Yayasan Pak Rashid. Pada 2004 juga, UPM telah berjaya membawa pemenang anugerah Nobel Laureatte (Kimia), Profesor Dr. Richard Ernst menyampaikan syarahan awam bertempat di Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah.

3. Intellectual Seminar Series

UPM always organises a series of Intellectual Seminars on Campus to encourage intraction among the community of intellectuals. These activities also form part of the efforts to introduce UPM's strengths to the campus as well as the outside community. Both national and international experts are invited to share their experiences with the campus community. The permanent lecture series consist of Inaugural lectures, Intellectual discourses (sponsored by CADE) and Public lectures by the Pak Rashid Foundation.In 2004 UPM also succeeded in bringing over the winner of the Nobel Laureatte (Chemistry), Professor Dr. Richard Ernst, to present a public lecture at the Sultan Salahuddin Abdul Aziz Shah Cultural and Arts Centre.

Profesor Dr. Richard Ernst menyampaikan syarahan awam bertempat di Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah.



Jadual: Senarai Syarahan Antarabangsa /
Schedule: List of International Lectures

Tarikh / *Date*	Syarahan / *Lecture*
18 Mac 2004 18 March 2004	"Problem Based Learning" oleh Prof. Dr. David J. Johnston, Pengarah Pusat Pembangunan Pengajaran University Hong Kong. (Centre for the Advancement of University Teaching, Hong Kong University) "Problem Based Learning" by Prof. Dr. David J. Johnston, Director of the Centre for the Advancement of University Teaching, Hong Kong University)
24 Jun 2004 24 June 2004	En. Khalfan Mohammed Al-Osayree
20 Julai 2004 20 July 2004	Pemenang *Nobel Laureate* Prof. Dr. Richard E. Ernst, United Kingdom Winner of the *Nobel Laureate* Prof. Dr. Richard E. Ernst, United Kingdom
17 Ogos 2004 17 August 2004	"Hybrid Rice Research and Development" Oleh: Prof. Yuan Longping (Father of Hybrid Rice) Director General of China National Hybrid Rice Research and Development Center, China. "Hybrid Rice Research and Development" by: Prof. Yuan Longping (Father of Hybrid Rice), Director General of China National Hybrid Rice Research and Development Center, China.
7 Oktober 2004 7 October 2004	"WHO Perspective on Population Ageing" Oleh : Dr. John Cai (Coordinator, Health and Ageing Programmer WHO Centre for Health Development, Kobe, Japan).
8 Oktober 2004 8 October 2004	"Recent Trends in Scientific & Technological Development" Oleh : Prof. T.T. Tsong (Institute of Physics, Academia Sinica, Taipei, Taiwan, Republic of China "Recent Trends in Scientific & Technological Development" by : Prof. T.T. Tsong (Institute of Physics, Academia Sinica, Taipei, Taiwan, Republic of China)

Jadual: Senarai Syarahan Inaugural Tahun 2004 /
Schedule: List of Inaugural Lectures 2004

Tarikh / *Date*	NAMA Profesor / *Name of Professor*	Tajuk Syarahan / *Title of Lecture*
14 Februari 14 February	Prof. Dr. Jinap Selamat Fakulti Sains Makanan dan Bioteknologi Faculty of Food Science and Biotechnology	Cocoa-Wonders for Chocolate Lovers
13 Mac 13 March	Prof. Dr. Abdul Halim Shaari Fakulti Sains dan Pengajian Alam Sekitar Faculty of Science and Environmental Studies	High Temperature Superconductivity: Puzzle & Promises
27 Mac 27 March	Prof. Dr. Yaakob Che Man Fakulti Sains Makanan dan Bioteknologi Faculty of Food Science and Biotechnology	Oil and Fats Analysis – Recent Advances and Future Prospects
24 April	Prof. Dr. Kaida Khalid Fakulti Sains dan Pengajian Alam Sekitar Faculty of Science and Environmental Studies	Microwave Aquametry: A Growing Technology.
11 Mei 11 May	Prof. Dr. Hasanah Mohd. Ghazali Fakulti Sains Makanan dan Bioteknologi Faculy of Food Science and Biotechnology	Tapping the Power of Enzymes – Greening the Food Industry
22 Mei 22 May	Prof. Dr. Yusof Ibrahim Fakulti Pertanian Faculty of Agriculture	The Spider Mite Saga: Quest for Biorational Management Strategies
26 Jun 26 June	Prof. Datin Dr. Sharifah Md. Nor Fakulti Pengajian Pendidikan Faculty of Educational Studies	The Education of At-Rick Chiidren: The Challenges Ahead
14 Ogos 14 August	Prof. Dr. Ir. Wan Ishak Wan Ismail Fakulti Kejuruteraan Faculty of Engineering	Agricultural Robot: A New Technology Development for Agro-Based Industry
28 Ogos 28 August	Prof. Dr. Ahmad Said Sajap, Fakulti Perhutanan Faculty of Forestry	Insect Diseases: Resources for Biopesticide Development

Jadual: Senarai wacana Intelek CADe dan Syarahan Awam yayasan Pak Rashid /
Schedule: List of intellectual discourses CADe and Pak Rashid Foundation public lectures

Tarikh / *Date*	Syarahan / *Lectures*
10 April 2004	Syarahan Awam Yayasan Pak Rashid oleh YB Tan Sri Dato' Muhyiddin Mohd Yassin, Menteri Pertanian dan Industri Asas Tani.
10 April 2004	Pak Rashid Foundation Public Lecture by YB Tan Sri Dato' Muhyiddin Mohd Yassin, Minister of Agriculture and Basic Agricultural Industries.
24 Mei 2004	Syarahan Awam "Higher Education Revolution" oleh Prof. Dato' Dr. Ibrahim b. Ahmad Barjunid, Universiti Tun Abdul Razak (UNITAR)
24 May 2004	Public Lecture on "Higher Education Revolution" by Prof. Dato' Dr. Ibrahim b. Ahmad Barjunid, Tun Abdul Razak University (UNITAR)
11 Ogos 2004	Syarahan Awam " Pengkorporatan Institusi Pengajian Tinggi Awam: Masih Dalam Agenda? oleh Tan Sri Dato' Anwar Ali, Universiti Terbuka Malaysia. (Open University)
11 August 2004	Public Lecture "The Corporatisation of Institutions of Higher Learning: Still on the Agenda? Pengajian Tinggi Awam: by Tan Sri Dato' Anwar Ali, Open University Malaysia
8 Disember 2004	Wacana Intelek "Forum Strategi Pengajaran dan Pembelajaran di IPTA" oleh Prof. Dato' Dr. Zalizan Mohd Jelas, Prof. Dr. Khadijah Rohani Mohd Yunus dan Prof. Madya Dr. Zakaria Kasa
8 December 2004	Intellectual Discourse Forum on Teaching and Learning Strategies at Institutions of Higher Learning by Prof. Dato' Dr. Zalizan Mohd Jelas, Prof. Dr. Khadijah Rohani Mohd Yunus and Prof. Madya Dr. Zakaria Kasa

4. Penerbitan Korporat Dan Hubungan Media

Usaha untuk menjalinkan hubungan baik UPM dan pihak luar juga dijalankan melalui penyaluran maklumat penerbitan bahan-bahan bercetak secara berkala seperti Akhbar Tribun Putra, Buletin Fakulti dan Institut, Buletin Antarabangsa dan brosur program pengajian. Selain daripada itu UPM juga mengeluarkan kenyataan akhbar, mengaturkan sesi temuramah dalam media elektronik, mengeluarkan iklan korporat dalam akhbar tempatan, mengeluarkan iklan dalam direktori terkemuka tempatan dan antarabangsa bagi tujuan penyampaian maklumat yang lebih tepat dan berkesan.

4. Corporate Publications and Media Relationships

Efforts to establish good relationships between UPM and the outside world were also carried out by disseminating to the external world periodicals such as the Tribune Putra newspaper, Faculty and Institute Bulletins, International Bulletins and study programme brochures. In addition, UPM also made press releases, arranged for electronic media interviews and published corporate advertisements in local papers.

To establish good, close and continuing relationships with the media, , UPM organised a dinner function with the

Bagi mengwujudkan hubungan kerjasama yang baik, rapat dan berterusan dengan pihak media, UPM telah mengadakan Majlis Makan Malam Bersama Media sebagai menghargai sumbangan media dalam membuat liputan aktiviti pengajaran, penyelidikan dan menghebahkan kejayaan-kejayaan UPM kepada seluruh masyarakat di negara ini.

5. Lawatan

Dalam tahun 2004 UPM telah menerima sebanyak 155 kunjungan dan lawatan daripada pelbagai agensi luar termasuk sekolah, institusi pendidikan tinggi, wakil kerajaan, badan korporat, NGO, dan lain-lain. Daripada jumlah tersebut sebanyak 92 lawatan adalah dari agensi dan institusi luar negara.

6. Kebajikan Dan Khidmat Masyarakat Perumahan Pelajar Siswazah

Salah satu usaha gigih UPM bagi memberi kemudahan penginapan kepada pelajar-pelajar luar negara, UPM telah membina kompleks perumahan siswazah sebanyak 160 unit apartment untuk pelajar siswazah kelamin namun pelajar yang belum berumahtangga juga boleh memohon. Setiap unit apartment dilengkapi perabot, talian internet dan kemudahan memasak yang lengkap. Kadar sewa yang dikenakan termasuk bil air, elektrik dan talian internet.

media to show its appreciation for the contributions made by the media in covering teaching and research activities and for promoting the achievements of UPM to the Malaysian society .

5. Visits

In 2004 UPM received 155 delegations and visits from various external agencies including schools, institutions of higher learning, government representatives, corporate bodies, NGOs and others. From this total number, 92 visits were from international institutions and agencies.

6. Social Welfare and Service Housing for Graduates Students

One of the most determined efforts made by UPM was to provide housing facilities for international students. UPM built as many as 160 graduate housing units in complexes for married students. Unmarried students were also allowed to apply for this facility. Each unit was equipped with furniture, internet line and complete cooking facilities. The rent included water, electricity and internet bills.

Dalam bencana ombak besar tsunami yang melanda negara pada Disember 2004, UPM merupakan antara IPTA yang terawal memberi bantuan kepada mangsa bencana tersebut.

Pelajar-pelajar luar Negara yang bujang atau tidak keluarga juga boleh memohon menginap di kolej kediaman (seorang sebilik) seperti kediaman 12 dan 14 dengan kadar yang amat berpatutan iaitu RM 5/hari. Walau bagaimanapun kemudahan ini hanya diberikan sekiranya ada kekosongan bilik.

Khidmat Masyarakat

Dalam bencana ombak besar tsunami yang melanda negara pada Disember 2004, UPM merupakan antara IPTA yang terawal memberi bantuan kepada mangsa bencana tersebut. Antara bantuan yang diberi ialah perkhidmatan kesihatan untuk menolong mangsa Tsunami di bawah payung Persatuan Bulan Sabit Merah, sumbangan wang tunai melebihi RM20 ribu daripada warga kampus untuk Tabung Bencana Tsunami IPTA. Selain bantuan bencana Tsunami, pelbagai kutipan derma dan Program Bakti Siswa juga diteruskan sebagai komitmen UPM kepada pembangunan sosial dan khidmat masyarakat.

UPM telah berusaha untuk memperindahkan suasana kampus supaya warga UPM berasa seronok untuk bekerja, berfikir, belajar, menjana inspirasi dan sebagainya agar menjadi lebih produktif. Pembinaan trek jogging diharapkan dapat memupuk gaya hidup sihat di kalangan warga kampus dan komuniti sekitar.

International students who were single or without families could also apply to stay at residential colleges (one person per room) at a reasonable rate of RM 5/ day. This amenity was only made available if there were empty rooms.

Social Services

In the biggest tsunami wave tragedy that hit the country in December 2004, UPM was among the earliest institutions of higher learning that provided help to the victims. Among the services provided were health services under the umbrella of the Red Crescent Society and a donation of more than RM20 thousand from the campus community for the Tsunami tragedy fund. In addition to these efforts, various donations were collected and the Bakti Siswa programme continued as a form of commitment undertaken by UPM towards social development and service.

UPM took effort to beautify the campus environment so that the campus community would feel more comfortable to work, think, study and be inspired to live productive lives. Through the building of the jogging track it is also is hoped that the campus community and the community at large will be encouraged to emulate healthy lifestyles.

UPM

UNIVERSITI PUTRA MALAYSIA

Diari Peristiwa

Diary of Events

Lawatan

Sekolah

5 Mei 2004
Sekolah Menengah Teknik Kuala Kangsar
Padang Rengas, Perak Darul Ridzuan

6 Mei 2004
Sekolah Menengah Kebangsaan Bandar Tasik Selatan
Kuala Lumpur.

12 Mei 2004
Tadika Anugerah Cemerlang
Taman Putra Perdana, Puchong.
Selangor Darul Ehsan

18 Mei 2004
Persatuan Tingkatan Enam (Pertina)
D/A Sekolah Menengah Kebangsaan Tun Ismail, Parit Raja, Batu Pahat. Johor Darul Takzim

18 Mei 2004
Unit Bimbingan Dan Kaunseling
Sekolah Kebangsaan Parit Setongkat
Muar. Johor Darul Takzim

23 Mac 2004
Kolej Professional Ict Academy (Pritec)
Bandar Hilir, Melaka.

27 Mac 2004
Sekolah Menengah Kebangsaan Agama Segamat, Segamat Baru, Segamat. Johor Darul Takzim

30 Mac 2004
Sekolah Menenghah Sains Pasir Puteh Pasir Puteh, Kelantan Darul Naim.

31 Mac 2004
Sekolah Menengah Kebangsaan Raja Muda Musa
Kuala Kangsar, Perak Darul Ridzuan.

10 April 2004
Sekolah Menengah Kebangsaan Raja Perempuan Kelsom, Kuala Kangsar, Perak Darul Ridzuan

10 April 2004
Persatuan Bahasa Melayu
Sekolah Menengah Kebangsaan Serting (F), Bandar Seri Jempol, Negeri Sembilan Darul Khusus

21 April 2004
Panitia Ekonomi, Sekolah Menengah Kebangsaan Lktp Tersang
Raub, Pahang Darul Makmur

24 April 2004
Children Islamic Centre
Presint 9, Putrajaya.

30 April 2004
Sekolah Menengah Kebangsaan Nasiruddin Shah
Besut, Terengganu Darul Iman

28 Mei 2004
Sekolah Menengah Kebangsaan
Seri Mahawangsa
Jitra. Kedah Darul Aman

28 Mei 2004
Projek Stpm
Sekolah Menengah Kebangsaan
Sultan Ismail, Kemaman.
Terengganu Darul Iman

28 Mei 2004
Sekolah Menengah Kebangsaan
Syed Ibrahim
Pendang. Kedah Darul Aman

28 Mei 2004
Sekolah Menengah Kebangsaan
Tanjung Gemok
Kuala Rompin. Pahang Darul
Makmur

29 Mei 2004
Sekolah Menengah Kebangsaan
Tun Abdul Razak
Selekoh. Perak Darul Ridzuan

31 Mei 2004
Sekolah Menengah Kebangsaan
Sultan Idris Shah Ii
Gerik. Perak Darul Ridzuan

31 Mei 2004
Sekolah Menengah Kebangsaan
Sungai Bayor, Rantau Panjang.
Perak Darul Ridzuan

1 Jun 2004
Sekolah Menengah Kebangsaan
Dato' Abdul Rahman Yaakub
Bota Kanan. Perak Darul Ridzuan

1 Jun 2004
Sekolah Menengah Kebangsaan
Seri Medan
Batu Pahat. Johor Darul Takzim

2 Jun 2004
Sekolah Menengah Kebangsaan
Tengku Afzan
Kuantan. Pahang Darul Makmur

10 Jun 2004
Sekolah Kebangsaan Sultanah
Asma
Alor Setar. Kedah Darul Aman

10 Jun 2004
Panitia Perdagangan & Kelab
Kewangan Pelajar
Sekolah Menengah Kebangsaan
Temin
Jerantut. Pahang Darul Makmur.

11 Jun 2004
Sekolah Menengah Kebangsaan
Ketengah Jaya
Dungun. Terengganu Darul Iman

11 – 12 Jun 2004
Sekolah Menengah Kebangsaan
Pahi
Kuala Krai. Kelantan Darul Naim

17 Jun 2004
Sekolah Menengah Kebangsaan
Taman Bunga Raya (1)
Rawang. Selangor Darul Ehsan

23 Jun 2004
Sekolah Menengah Kebangsaan Dato Hamzah
Jalan Pendamaran, Pelabuhan Klang.

25 Jun 2004
Pusat Sumber Ibnu Sina
Changkat Jering. Perak Darul Ridzuan

28 Jun 2004
Jawatankuasa Dan Pengusaha Projek Value Engineering (Ve)
Bahagian Pembangunan Perniagaan
Jalan Raja Laut. Kuala Lumpur.

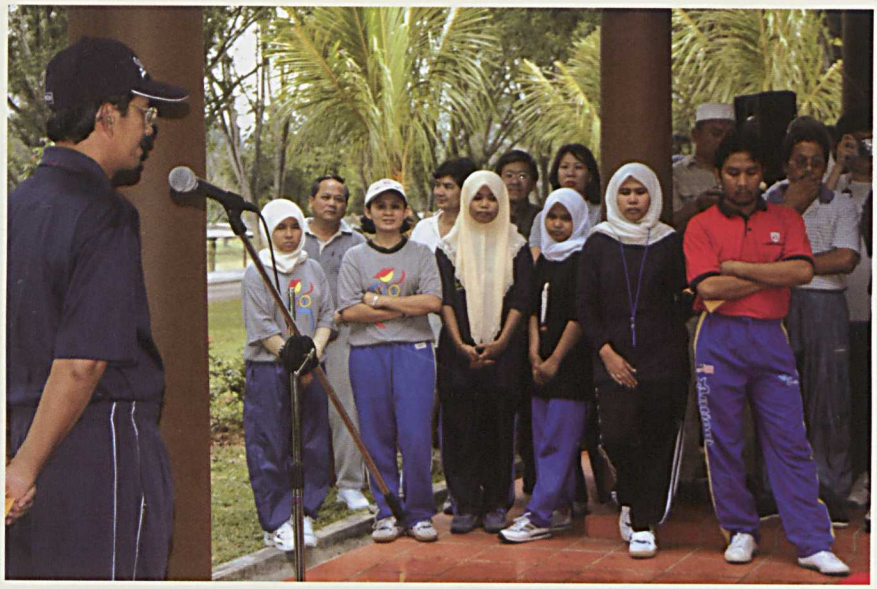
29 Jun 2004
Sekolah Menengah Kebangsaan Hang Kasturi
Masjid Tanah. Melaka

7 Julai 2004
Pejabat Pendidikan Daerah Kuala Terengganu
Kuala Terengganu, Terenggtanu Darul Iman

10 Julai 2004
Sekolah Menengah Islam Hidayah
Johor Bahru. Johor Darul Takzim

19 Julai 2004
Nilai Careserve Centre
Nilai. Negeri Sembilan Darul Khusus

20 Julai 2004
Sekolah Menengah Kebangsaan Sultan Abd. Aziz
Teluk Intan, Perak Darul Ridzuan.



21 Julai 2004
Sekolah Menengah Kebangsaan Seri Mahkota
Kuantan, Pahang Darul Makmur.

21 Julai 2004
Sekolah Menengah Kebangsaan Pengkalan Berangan
Kuala Terengganu. Terengganu Darul Iman

24 Julai 2004
Sekolah Islam Adni
Ampang, Selangor Darul Ehsan.

26 Julai 2004
Persatuan Sains Pertanian Sekolah Menengah Kebangsaan Telok Datok
Banting, Selangor Darul Ehsan

27 Julai 2004
Sekolah Menengah Kebangsaan Tinggi Segamat
Segamat, Johor Darul Takzim.

28 Julai 2004
Sekolah Menengah Kebangsaan Jengka 18
Bandar Jengka, Pahang Darul Makmur.

29 Julai 2004
Kolej Agama Sultan Abidin (Kusza)
Kuala Terengganu, Terengganu Darul Iman

30 Julai 2004
Sekolah Menengah Teknik Pontian
Mukim Rimba Terjun, Pontian.
Johor Darul Takzim.

19 Ogos 2004
Sekolah Menengah Kebangsaan Setapak Indah
Taman Setapak Indah, Kuala Lumpur.

20 Ogos 2004
Sekolah Menengah Kebangsaan Chukai
Kemaman, Terengganu Darul Iman.

21 Ogos 2004
Sekolah Menengah Kebangsaan Syed Abu Bakar
Baling, Kedah Darul Aman.

23 Ogos 2004
Sekolah Menengah Kebangsaan Kampong Jawa
Klang, Selangor Darul Ehsan.

8 September 2004
Kolej Komuniti Pasir Salak
D/A Sekolah Menengah Teknik Sri Iskandar
Bota, Perak Darul Ridzuan.

10 September 2004
Kolej Matrikulasi Kedah
Changlun, Kedah Darul Aman.

11 September 2004
Maktab Rendah Sains Mara
Pengkalan Chepa, Kota Bharu.
Kelantan Darul Naim

17 September 2004
Pejabat Pelajaran Daerah Baling/Sik
Baling, Kedah Darul Aman

28 September 2004
Jabatan Pendidikan Perlis
Kangar, Perlis

30 September 2004
Sekolah Menengah Kebangsaan Rantau Panjang
Rantau Panjang, Klang. Selangor Darul Ehsan

1 Oktober 2004
Maktab Rendah Sains Mara Lenggong
Lenggong, Perak Darul Ridzuan.

7 Oktober 2004
Sekolah Kebangsaan Bukit Changgang
Banting, Kuala Langat. Selangor Darul Ehsan.

9 Oktober 2004
Kelab Usahawan Mara Kelantan
Kota Bharu. Kelantan Darul Naim

11 Oktober 2004
Sekolah Menengah Kebangsaan Chukai
Kemaman, Terengganu Darul Iman

13 Oktober 2004
Sekolah Menengah Sains Hulu Selangor
Batang Kali, Selangor Darul Ehsan

4 November 2004
Sekolah Menengah Kebangsaan Paduka Tuan
Jalan Genuang, Segamat. Johor Darul Takzim

1 Disember 2004
Persatuan Tingkatan Enam Sekolah Menengah Jenis Kebangsaan Jit Sin
Seberang Prai Tengah, Pulau Pinang.

6 Disember 2004
Yayasan Nelayan Malaysia
Jalan Ipoh, Kuala Lumpur.

Syarahan Awan

Dalam Negeri

10 April 2004
Syarahan Awam Yayasan Pak Rashid oleh YB Tan Sri Dato' Muhyiddin Mohd Yassin, Menteri Pertanian dan Industri Asas Tani.

24 Mei 2004
Syarahan Awam: Intellectual Discourse "Higher Education Revolution" oleh Prof. Dato' Dr. Ibrahim b. Ahmad Barjunid, Universiti Tun Abdul Razak (UNITAR)

11 Ogos 2004
Syarahan Awam " Pengkorporatan Institusi Pengajian Tinggi Awam: Masih Dalam Agenda? oleh Y. Bhg Tan Sri Dato' Anwar Ali, Universiti Terbuka Malaysia. (Open University)

8 Disember 2004
Wacana Intelek "Forum Strategi Pengajaran dan Pembelajaran di IPTA" oleh Prof. Dato' Dr. Zalizan Mohd Jelas, Prof. Dr. Khadijah Rohani Mohd Yunus dan Prof. Madya Dr. Zakaria Kasa

Memorandum Persefahaman

Luar Negara

16 Mac 2004
Tokyo University of Agriculture, Jepun

6 April 2004
Chungam National University, Korea

6 April 2004
Egerton University, Kenya

Mei 2004
University of Manheim, Germany

23 Julai 2004
Institut Pertanian Bogor, Indonesia

23 Julai 2004
The Forestry and Forest Products Research Institute, Jepun (FFPRI)

1 Disember 2004
Chiba University, Jepun

13 Disember 2004
Functional Food Creation Research Institute Pte. Ltd, Jepun

21 Disember 2004
Cantho University, Vietnam

Pameran

Luar Negeri

24-31 Mac 2004
Malaysia Education Road Show in Cape Town and Durban UAE

11-13 Jun 2004
EDUTAX India 2004, New Delhi India

7-10 Oktober 2004
The 9th Annual International Postgraduate Education Expo 2004

22-31 Oktober 2004
China International Education Fair Beijing and Shanghai, China

24-28 November 2004
Malaysian Education Promotion, Cairo, Egypt

1-3 Disember 2004
8th Jordan Education and Training Exhibition JETE 2004, Jordan

Syarahan Awam

Luar Negara

18 Mac 2004
Wacana Intelek "Problem Based Learning" oleh Prof. Dr. David J. Johnston, Pengarah Pusat Pembangunan Pengajaran University Hong Kong. (Centre for the Advancement of University Teaching, Hong Kong University)

24 Jun 2004
Syarahan oleh Mr. Khalfan Mohammed Al-Osayree

20 Julai 2004
Syarahan Awam oleh Pemenang Nobel Laureate Prof. Dr. Richard E. Ernst, United Kingdom

17 Ogos 2004
Syarahan Awam "Hybrid Rice Research and Development" Oleh: Prof. Yuan Longping (Father of Hybrid Rice) Director General of China National Hybrid Rice Research and Development Center, China.

7 Oktober 2004
Syarahan Awam "WHO Perspective on Population Ageing" Oleh : Dr. John Cai (Coordinator, Health and Ageing Programmer WHO Centre for Health Development, Kobe, Japan).

8 Oktober 2004
Syarahan Awam "Recent Trends in Scientific & Technological Development" Oleh : Prof. T.T. Tsong (Institute of Physics, Academia Sinica, Taipei, Taiwan, Republic of China)

Lawatan

Luar Negara

6 Jan 2004
Delegasi daripada Faculty of Humanities, University of Thai Chamber of Commerce, Bangkok Thailand

7 Jan 2004
French Ministries of Foreign Affairs And National Education

7 Jan 2004
Sek. Men. Umum Negeri 4 & Negeri 8, Medan, Indonesia

10-14 Jan 2004
Cantho University, Vietnam

15 Jan 2004
Guru-guru daripada Bengkalis, Riau, Indonesia

18-27 Jan 2004
Prof. E.K Lee
Director of Hanyang University Micro Biochip Center, Ansan, Korea

19 Januari 2004
Dr. Kwang Jin Rhee (President of CNU)
Dr. Byung Su Kang (Dean of International Program), Chungnam National Universiti, Vietnam

19 Jan 2004
Delegasi daripada Chungnam National University (CNU), Korea

25 Januari 2004
Elsoyed A. Elsayed, Rutgers University, USA

27 Jan 2004
H.E Dr. Abdul Nasser Mubari , Duta Yemen

13 Februari 2004
Edward Francis, SIA Abrasives, Switzerland

13 Februari 2004
H.E. Jirgen A. R. Stars, Ambassador of Germany

18 Feb 2004
Mr. John Buchanan Harris, University of Newcastle, UK

24 Februari 2004
H.E. Dr. Peter A Schweizer, Ambassador of Switzerland

25 Feb 2004
Sir Brian Smith, Vice Chancellor , Sir Westlake Cardiff University, Wales, U.K.

2 Mac 2004
University Padjajaran & CMS Education Group, Indonesia

10 Mac 2004
M.W. Griffitus, University of Guelph, Canada

11 Mac 2004
Rainez Stegraw & Ina Korner, Technical University of Hamburg, Harburg, Germany

11 Mac 2004
C. Visvanathan & Josef Tranecer, Asian Institute of Technology, Thailand

11 Mac 2004
Roberto Raga & Raffaello Cossu, University of Padova, Italy

18 Mac 2004
Assoc. Prof. Dr. David John Johnston ,University of Hong Kong, Hong Kong

23 Mac 2004
Prof. Dr. Akihiko Kondo, Kobe University
Prof. Dr. Suteaki Shioya, Osaka University

25 Mac 2004
Prof. Robert Boucher, Vice Chancellor
Prof. Peter Fleming, Pro Vice Chancellor for External Affairs
Ms. Tina Yeung, Assoc. Director, South East Asia Region
University of Sheffield, U.K.

29 Mac 2004
Nobuo Sasaki, University of Tokyo, Japan

29-31 Mac 2004
Assoc. Prof. Dr. Hossein, Dean, College of Agriculture, Isfahan University of Technology
Dr. Alireza Talaii, Dean, College of Agriculture, University of Tehran
Dr. Babai Ahary, Dean, College of Agriculture, University of Tabriz, Iran

2 April 2004
Pierre Steinmetz, Universite Henri Poincare Nancy 1, France

2 April 2004
Jean Francon Stoltz , President, Scientific Council Medical Faculty

5 April 2004
Guizol Philille & Levania Santoso, CIRAD CIFOR, Jakarta

18-21 April 2004
Delegasi daripada National University of Laos, Laos

20 April 2004
Rick Filonzi, Branch Office Manager of Biacore International Limited, Melbourne, Australia

26 April 2004
Delegasi daripada Cantho University, Vietnam

27 April 2004
Akimi Fujimoto, Tokyo University of Agriculture, Japan

12 Mei 2004
Ledivina Carinei, University of The Philippines Diliman

13 Mei 2004
Delegation from Functional Food Creations Research Institute Pte. Ltd Japan

14 Mei 2004
Prof. Isam Abdelrahman Elboushi, Wad Medani Ahlia College, Sudan

19 Mei 2004
Scorr Kennedy, Boston University, USA

19 Mei 2004
Dr. Ed Brown, Department of Geography Loughborough University, UK

24 Mei 2004
H.E. Mr. Eugeniuszn Sawicki, Ambassador of Poland

25 Mei 2004
Delegasi daripada University of Brawijaya, Indonesia

31 Mei 2004
V. Casanova & S. Bayanand, Summit Communications, New York

4 Jun 2004
University of Mulawarman, Indonesia

8 Jun 2004
Delegasi daripada Ministry of Community Development and Sports Republic of Singapore

13-14 Jun 2004
Prof. Dr. Ahmad Abdo Salih, Vice Rector for Postgraduate Studies & Scientific Research, Thamar University, Republic of Yemen

17 Jun 2004
Alan Maley, Fordwich Kent, UK

22 Jun 2004
Delegasi daripada Dongshin University, Korea

29 Jun - 23 2004
Mr. Jairos Makunde, Registrar of Chinhoyi University of Technology, Zimbabwe

8 Julai 2004
Pusat Perhubungan Antarabangsa, Universiti Pendidikan Sultan Idris

9 Julai 2004
The Committee of Academic Degree Recognition, Ministry of Higher Education of Saudi Arabia

19 Julai 2004
Prof. Dr. Michael D. Hamming, Clemson University, South Carolina, USA

23 Julai 2004
Ahmed Ansori Mattjik, Rector of Institute Pertanian Bogor, Indonesia

26 Julai 2004
Prof. F. Maritina & Prof. P. J. Heggs, Department of Chemical Engineering, University of Manchester Institute of Science & Technology, UK

26 Julai 2004
Tomo Shimomolas & Kerichi Kitsuba, Kyushu Institute Technology, Japan

6 Ogos 2004
Delegasi daripada Vietnam Media & Ho Chi Minh City Open University

7 Ogos 2004
Prof. Dr. Quah Soon Cheang, Monash University

9 Ogos 2004
H.E. Leott Randal, Duta New Zealand

9 Ogos 2004
Geroff Randal, New Zealand High Commissioner

14 Ogos 2004
Prince of Songkla University, Pattani Campus, Thailand

16 Ogos 2004
Dr. Nguyen Anh Tuan, Vice Rector of Cantho University, Vietnam

16 Ogos 2004
Nguyen Anh Tuan, Cantho University, Vietnam

18 Ogos 2004
Mr. Joseph W. Flaherty, Senior Executive BOEING AEROSPACE (M) Sdn. Bhd
Dr. Karel R. Schubert, Vice President of Technology Management & Science Administration Donald Danforth

18-20 Ogos 2004
Prof. Dr. Marek Kozlowski, Wroclaw University of Technology (WUT), Poland

23 Ogos 2004
Rodolfo Jacobson, Emeritus, The University of Texas, San Antonio

26 Ogos 2004
Toshiarki Umezawan, Kyoto University, Japan

26 Ogos 2004
Yoosuke Matsumoto, The Forestry & Forest Products Research Institute, Japan

26 Ogos 2004
Prof. Dr. Abdul Awal, University of Dhaka, Bangladesh

30 Ogos 2004
Kozlouski, Wroclaw University of Technology, Poland

2 September 2004
Nong Lam University, Ho Chi Minh City, Vietnam

11 September 2004
Dr. Ralph Elliot, Vice Provost of Clemson University

16 September 2004
John Summerscales, University of Plymouth, United Kingdom

17 September 2004
Mr. Darryl Earl, Manager International Programs, Bond University, Australia

17 September 2004
Prof. Dr. Bruce Chassy, University of Illinois, USA

27 September 2004
Hiromichi Endo & Kayo Matsuzaki, Japanese Society for the Promotion of Sciences

27 September 2004
Hiromichi Endo, Head, Asian Program Division, International Program Department Japan Society For The Promotion of Science

4-7 Oktober 2004
Dr. John Cai, WHO Centre For Health Development, Kobe, Japan

4-9 Oktober 2004
Delegasi dari Negara ASEAN untuk 42nd SEAMEO BIOTROP Governing Board Meeting di Kuala Lumpur

6 Oktober 2004
Prof. Tien T. Song, Institute of Physics, Academia Sinica, Taipei, Taiwan, Republic of China

7 Oktober 2004
Donald M. Broon , University of Cambridge, UK

8 Oktober 2004
Phillip Jones, Welsh School of Architecture, Cardiff University, UK

22 Oktober 2004
Prof. Bui Cach Tuyen, Nong Lam University, Ho Chi Minh City, Vietnam

26 Oktober 2004
Delegasi daripada Feng Chia University, Taiwan

3 November 2004
Delegasi daripada Fujian Agricultural & Forestry University, China

4 November 2004
Prof. Pierre Steinmetz, Deputy Vice Chancellor for Technology Transfer, Universite Henri Poincare, Nancy 1, France

7-9 November 2004
Dr. Djoko Suprapto, Deputy Director for Program SEAMEO SEARCA Regional Center for Graduate Study & Research in Agriculture

8 November 2004
Djoko Suprapto, Deputy Director for Program SEAMEO SEARCA Regional Center for Graduate Study & Research in Agriculture

25 November 2004
Mr. Jean Marc Roda
Mr. Jean Guy Bertault
CIRAD (International Center in Agronomy Research for Development)

1 Disember 2004
Delegasi daripada Vietnam National Committee for Science & Technology Policy

8 Disember 2004
Delegasi daripada Shibaura Institute of Technology, Japan

22 Disember 2004
Delegasi daripada University of The Thai Chamber of Commerce, Thailand

Memorandum

Persefahaman

Dan Perjanjian Antara UPM Dengan Agensi Tempatan (MoU dan MoA)

Kolej Teknologi Timur (MOA)	11 Feb 04
Kolej Sal Kuala Lumpur (MOA)	11 Feb 04
Kolej Negeri (MOA)	11 Feb 04
Institut Teknologi Sara (MOA)	11 Feb 04
Kolej Teknologi Bestari (MOA)	11 Feb 04
Institut Teknologi A.N.S (MOA)	11 Feb 04
Kolej Teknologi Cybernetics (MOA)	11 Feb 04
Pusat Pembangunan Kemahiran Pahang (MOA)	11 Feb 04
Institut Teknologi Nuklear Malaysia (MINT)	1 Mac 04
Profesional Services Development Corporation Sdn. Bhd. (PSDC)	1 Apr 04
Majlis Paralimpik Malaysia	5 Apr 04
Mines Exhibition Management Sdn Bhd	
Kolej Yayasan Islam YPJ Sdn Bhd, Kolej Islam Johor, Johor Bharu (MOA)	7 Mei 04
Kolej Poly-Tech MARA Kuala Lumpur (MOA)	7 Mei 04
Kolej Chermai Jaya, Kuching, Sarawak (MOA)	7 Mei 04
Kerajaan Negeri Selangor	17 Mei 04
Kementerian Belia dan Sukan	28 Mei 04
Jentayu Manifacturing Sdn. Bhd.	19 Jun 04
Mines Exhibition Management Sdn. Bhd.	28 Jun 04
FELDA dan KIT	27 Jul 04
Bernas Sdn. Bhd.	30 Sept 04
Biovate Research Sdn. Bhd.	20 Dis 04

UPM

UNIVERSITI PUTRA MALAYSIA

Laporan Kewangan

Financial Report

SIJIL KETUA AUDIT NEGARA MENGENAI PENYATA KEWANGAN UNIVERSITI PUTRA MALAYSIA
Bagi Tahun Berakhir 31 Disember 2004

Penyata kewangan Universiti Putra Malaysia bagi tahun berakhir 31 Disember 2004 telah diaudit oleh wakil saya. Pihak pengurusan bertanggungjawab terhadap penyata kewangan ini. Tanggungjawab saya adalah mengaudit dan memberi pendapat terhadap penyata kewangan tersebut.

2. Pengauditan telah dilaksanakan mengikut Akta Audit 1957 dan berpandukan piawaian pengauditan yang diluluskan. Piawaian tersebut menghendaki pengauditan dirancang dan dilaksanakan untuk mendapat kepastian yang munasabah sama ada penyata kewangan adalah bebas daripada kesilapan atau ketinggalan yang ketara. Pengauditan itu termasuk memeriksa rekod secara semak uji, menyemak bukti yang menyokong angka dan memastikan pendedahan yang mencukupi dalam penyata kewangan. Penilaian juga dibuat terhadap prinsip perakaunan yang digunakan dan penyampaian penyata kewangan secara keseluruhan.

3. Pada pendapat saya, penyata kewangan ini memberi gambaran yang benar dan saksama terhadap kedudukan kewangan Universiti Putra Malaysia pada 31 Disember 2004, hasil operasi dan aliran tunainya untuk tahun tersebut berdasarkan piawaian perakaunan yang diluluskan.

(DATO' AZIZAH BT. HJ. ARSHAD)
b.p. KETUA AUDIT NEGARA
MALAYSIA

PUTRAJAYA
18 OGOS 2005

PENYATA LEMBAGA PENGARAH
Board Of Directors Statement

Kami, TAN SRI DATO' SERI DR. HJ. ZAINUL ARIFF BIN HAJI HUSSAIN dan PROFESOR DATO' DR. IR. MUHAMAD ZOHADIE BIN BARDAIE yang merupakan Ahli Lembaga Pengarah UNIVERSITI PUTRA MALAYSIA, dengan ini menyatakan bahawa Penyata Kewangan dari mukasurat 161 hingga 190 adalah disediakan untuk menunjukkan pandangan yang benar dan saksama berkenaan kedudukan kewangan UNIVERSITI PUTRA MALAYSIA pada 31 Disember 2004 dan hasil kendaliannya serta aliran tunai bagi tahun berakhir pada tarikh tersebut.

We, TAN SRI DATO' SERI DR. HJ. ZAINUL ARIFF BIN HAJI HUSSAIN and PROFESOR DATO' DR. IR. MUHAMAD ZOHADIE BIN BARDAIE as members of the Board of Directors of UNIVERSITI PUTRA MALAYSIA do hereby state that the Financial Statement set out on pages 161 to 190 have been drawn up to give a true and fair view of the financial position of UNIVERSITI PUTRA MALAYSIA as at 31 December 2004 and its results including changes in cash flows for the year ending on the date stated.

Bagi pihak Lembaga Pengarah,
On behalf of the Board of Directors,

(TAN SRI DATO' SERI DR. HJ. ZAINUL ARIFF BIN HAJI HUSSAIN)
Pengerusi / Chairman

(PROF. DATO' MUHAMAD ZOHADIE BIN BARDAIE, Ph.D., P.Eng.)
Ahli / Naib Canselor
Member / Vice-Chancellor

UPM Serdang
Tarikh / Date: 30 Mei 2005

AKUAN BERKANUN
Statutory Declaration

Saya, ZULKIFLEE BIN OTHMAN, pegawai utama yang bertanggungjawab ke atas pengurusan kewangan UNIVERSITI PUTRA MALAYSIA, dengan ikhlasnya mengakui bahawa Penyata Kewangan ini dari mukasurat 161 hingga 190, mengikut sebaik-baik pengetahuan dan kepercayaan saya, adalah betul dan saya membuat ikrar ini dengan sebenarnya mempercayai bahawa ianya itu adalah benar dan atas kehendak-kehendak Akta Akuan Berkanun, 1960.

I, ZULKIFLEE BIN OTHMAN, the principal officer responsible for the financial management of UNIVERSITI PUTRA MALAYSIA, sincerely declare that the Financial Statement set out on pages 161 to 190 to the best of my knowledge and belief, are accurate and I make this solemn declaration in the belief that it is true and in accordance with the requirements of the Statutory Declarations Act 1960.

Sebenar dan sesungguhnya)
diakui oleh penama di atas)
di Bangi pada 30 Mei 2005)

ZULKIFLEE BIN OTHMAN
Pemangku Bendahari/Acting Bursar

Truly and solemnly)
declared by the abovenamed)
at Bangi on 30 May 2005)

Dihadapan saya:
Before me:

PESURUHJAYA SUMPAH
A.B 041
PN. HJH. RABAIYAH
BT. SULAIMAN
MALAYSIA

Pesuruhjaya Sumpah
(Commissioner For Oath)
Mahkamah Sesyen & Majistret
Bandar Baru Bangi

30 MAY 2005

LEMBARAN IMBANGAN PADA 31 DISEMBER 2004
Balance Sheet as at 31 December 2004

	NOTA / NOTE	2004 RM	2003 RM
ASET TETAP / FIXED ASSETS	5	655,111,370	517,877,084
PEMBINAAN DALAM KEMAJUAN / WORK IN PROGRESS	6	119,531,071	135,027,827
PELABURAN / INVESTMENT	7	20,769,976	12,708,226
ASET SEMASA / CURRENT ASSETS			
Penghutang pelbagai / Sundry Debtors	8	64,511,695	97,888,088
Simpanan tetap / Fixed Deposits	9	133,535,910	350,000,000
Wang di tangan dan di bank / Cash in hand and bank	10	81,675,859	50,779,381
		279,723,464	498,667,469
LIABILITI SEMASA / CURRENT LIABILITIES			
Pemiutang pelbagai / Sundry Creditors	11	51,791,487	40,776,327
Manfaat Pekerja Jangka Pendek / Short-term employee benefits	4(a)	2,916,622	0
		54,708,109	40,776,327
ASET SEMASA BERSIH / NET CURRENT ASSETS		225,015,355	457,891,142
		1,020,427,772	1,123,504,279
Dibiayai oleh: / Financed by:			
KUMPULANWANG DISATUKAN / CONSOLIDATED FUND			
Kumpulanwang Mengurus / Operating Fund	12	158,999,400	248,468,249
Kumpulanwang Kolej Kediaman / Residential College Fund	13	10,001,241	11,521,000
Kumpulanwang Pembangunan / Development Fund	14	427,438,764	456,685,515
Kumpulanwang Penyelidikan / Research Fund	15	120,484,007	124,330,923
Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	16	115,550,271	115,816,766
Kumpulanwang Penginapan dan Rekreasi / Accommodation & Recreation Fund	17	5,432,597	5,224,360
Kumpulanwang Pelaburan / Investment Fund	18	55,784,323	51,352,967
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit Fund	19	87,390,383	85,104,499
Kumpulanwang Pinjaman Kenderaan dan Komputer / Vehicle & Computer Loan Fund	20	25,000,000	25,000,000
		1,006,080,986	1,123,504,279
LIABILITI JANGKA PANJANG DAN TERTUNDA / LONG-TERM AND DEFERRED LIABILITIES			
Manfaat Pekerja Jangka Panjang / Long-term Employee benefits	4(c)	14,346,786	0
		14,346,786	0
		1,020,427,772	1,123,504,279

Sila lihat nota-nota yang mengiringi penyata kewangan ini. /
Please refer to the notes accompanying this Financial Statement.

PENYATA PENDAPATAN
BAGI TAHUN BERAKHIR 31 DISEMBER 2004
Income Statement for the year ended 31 December 2004

	NOTA / NOTE	2004 RM	2003 RM
PENDAPATAN / INCOME			
Geran kerajaan / Government grants	22	329,457,606	383,987,769
Pelbagai yuran / Miscellaneous fees	23	92,303,296	110,877,437
Sumbangan luar / External contributions		13,316,019	9,758,485
Geran kerajaan tertunda direalisasi / Realisation of deferred Government grants	21	34,285,403	31,944,689
Faedah dan dividen / Interest and dividend		10,258,932	13,958,025
Untung/(Rugi) atas jualan saham / Profit/(Loss) on sales of shares		79,180	552,245
Jualan aset tetap / Sale of fixed assets		111,729	127,568
Hasil ladang / Plantation revenue		297,180	433,331
Pengurangan peruntukan rosotnilai saham / Less provision for diminution in shares	7.1	0	288,763
Pelbagai sewa / Sundry rentals		630,474	934,774
Pendapatan lain / Other income	24	26,817,177	38,255,610
		507,556,996	591,118,696
Tolak: PERBELANJAAN / Less: EXPENDITURE			
Emolumen / Emoluments		196,618,230	188,597,477
Perbelanjaan manfaat pekerja / Expenditure on employee benefit	4(c)	17,263,409	0
Bekalan dan bahan-bahan / Supplies and materials		94,842,363	93,479,776
Penyelenggaraan dan pembaikan / Maintenance and repairs		34,580,555	34,178,959
Perkhidmatan iktisas dan hospitaliti / Professional and hospitality services		134,927,941	126,336,455
Susutnilai / Depreciation	5	87,415,697	76,214,018
Pelunasan tanah / Amortisation of land	5	74,401	74,401
Rosotnilai saham / Diminution of shares	7.1	51,997	0
Pelupusan / Disposal		5,816,003	20,997
Hutang ragu / Doubtful debts	8.3	21,410,212	16,944,539
		593,000,808	535,846,622
		(85,443,812)	55,272,074
Tolak: Perbelanjaan luar biasa / Less: Extraordinary expenditure	28	1,537,743	0
LEBIHAN / (KURANGAN) PENDAPATAN / SURPLUS / (DEFICIT) INCOME		(86,981,555)	55,272,074

Sila lihat nota-nota yang mengiringi penyata kewangan ini. /
Please refer to the notes accompanying this Financial Statement.

PENYATA PERUBAHAN EKUITI BAGI TAHUN BERAKHIR 31 DISEMBER 2004
Statement of Changes in Equity for the year ended 31 December 2004

2004	KUMPULANWANG-KUMPULANWANG MENGURUS OPERATING RM	KOLEJ KEDIAMAN RESIDENTIAL COLLEGE RM	PEMBANGUNAN DEVELOPMENT RM	PENYELIDIKAN RESEARCH RM	TABUNG PUSINGAN DAN AMANAH LAIN REVOLVING & OTHER TRUST FUND RM	PENGINAPAN DAN REKREASI ACCOMMODATION & RECREATION RM	PELABURAN INVESTMENT RM	KURSUS,SEMINAR KONFERENSI DAN LAWATAN SAMBIL BELAJAR COURSE, SEMINAR CONFERENCE & STUDY VISIT RM	PINJAMAN KENDERAAN DAN KOMPUTER VEHICLE & COMPUTER LOAN RM	JUMLAH TOTAL RM
Pada 1 Januari / As at 1 January	248,468,249	11,521,000	173,644,173	124,330,923	115,816,766	5,224,360	51,352,967	85,104,499	25,000,000	840,462,937
Pelarasan tahun lalu / Prior year adjustment	(1,830,383)	485,872	6,085,614	1,132,380	(617,567)	71,236	0	102,321	0	5,429,473
- Seperti yang dinyatakan semula / - As restated	246,637,866	12,006,872	179,729,787	125,463,303	115,199,199	5,295,596	51,352,967	85,206,820	25,000,000	845,892,410
Lebihan/(kurangan) pendapatan / Surplus/(Deficit) income	(83,980,516)	294,369	(6,723,411)	(10,053,807)	319,131	137,001	9,431,356	5,132,065	0	(85,443,812)
Perbelanjaan luar biasa / Exceptional Expenditure	0	0	(1,537,743)	0	0	0	0	0	0	(1,537,743)
	162,657,350	12,301,241	171,468,633	115,409,496	115,518,330	5,432,597	60,784,323	90,338,885	25,000,000	758,910,855
Pindahan (dari): / Transfer (from):										
Mengurus ke Pembangunan / Operating to Development	(3,500,000)	0	3,500,000	0	0	0	0	0	0	0
Mengurus ke Tabung Pusingan dan Amanah Lain / Operating to Revolving & Other Trust Fund	(38,250)	0	0	0	38,250	0	0	0	0	0
Mengurus ke Penyelidikan / Operating to Research	(94,500)	0	0	94,500	0	0	0	0	0	0
Mengurus ke Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Operating to Course, Seminar, Conference & Study Visit	(25,200)	0	0	0	0	0	0	25,200	0	0
Penyelidikan ke Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Research to Course,Seminar, Conference & Study Visit	0	0	0	(19,989)	0	0	0	19,989	0	0
Tabung Pusingan dan Amanah Lain ke Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Revolving & Other Trust Fund to Course, Seminar, Conference & Study Visit	0	0	0	0	(6,309)	0	0	6,309	0	0
Pelaburan ke Penyelidikan / Investment to Research	0	0	0	5,000,000	0	0	(5,000,000)	0	0	0
Kolej Kediaman ke Pembangunan / Residential College to Development	0	(2,300,000)	2,300,000	0	0	0	0	0	0	0
Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar ke Pembangunan / Course, Seminar, Conference & Study Visit to Development	0	0	3,000,000	0	0	0	0	(3,000,000)	0	0
	158,999,400	10,001,241	180,268,633	120,484,007	115,550,271	5,432,597	55,784,323	87,390,383	25,000,000	758,910,855
Geran Kerajaan Tertunda / Deferred Government Grants										
Pada 1 Januari / As at 1 January	0	0	283,041,342	0	0	0	0	0	0	283,041,342
Perubahan dalam tahun semasa / Changes in current year	0	0	(35,871,211)	0	0	0	0	0	0	(35,871,211)
	0	0	247,170,131	0	0	0	0	0	0	247,170,131
	158,999,400	10,001,241	427,438,764	120,484,007	115,550,271	5,432,597	55,784,323	87,390,383	25,000,000	1,006,080,986

PENYATA PERUBAHAN EKUITI BAGI TAHUN BERAKHIR 31 DISEMBER 2003

Statement of Changes in Equity for the year ended 31 December 2003

	KUMPULANWANG-KUMPULANWANG									
	MENGURUS OPERATING	KOLEJ KEDIAMAN RESIDENTIAL COLLEGE	PEMBANGUNAN DEVELOPMENT	PENYELIDIKAN RESEARCH	TABUNG PUSINGAN DAN AMANAH LAIN REVOLVING & OTHER TRUST FUND	PENGINAPAN DAN REKREASI ACCOMMODATION & RECREATION	PELABURAN INVESTMENT	KURSUS,SEMINAR KONFERENSI DAN LAWATAN SAMBIL BELAJAR COURSE,SEMINAR CONFERENCE & STUDY VISIT	PINJAMAN KENDERAAN DAN KOMPUTER VEHICLE & COMPUTER LOAN	JUMLAH TOTAL
2003	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
Pada 1 Januari / As At 1 January	229,974,684	18,747,899	160,392,850	115,757,300	82,392,210	5,161,572	67,102,347	79,730,982	25,000,000	784,259,844
Pelarasan tahun lalu / Prior Year Adjustment	0	0	735,058	0	195,961	0	0	0	0	931,019
Pengkelasan semula kumpulan wang / Reclassification Of Funds	0	(3,052,691)	0	0	0	0	0	3,052,691	0	0
- Seperti yang dinyatakan semula / - As Restated	229,974,684	15,695,208	161,127,908	115,757,300	82,588,171	5,161,572	67,102,347	82,783,673	25,000,000	785,190,863
Lebihan/(kurangan) pendapatan / Surplus/(Deficit) Income	18,493,565	1,825,792	(283,735)	9,730,646	11,197,572	62,788	14,250,620	(5,174)	-	55,272,074
	248,468,249	17,521,000	160,844,173	125,487,946	93,785,743	5,224,360	81,352,967	82,778,499	25,000,000	840,462,937
Pindahan (dari) : / Transfer (Form) :										
Kolej Kediaman ke Pembangunan / Residential College To Development	0	(6,000,000)	6,000,000	0	0	0	0	0	0	0
Penyelidikan ke Tabung Pusingan dan Amanah Lain / Research To Revolving & Other Trust Fund	0	0	0	(1,157,023)	1,157,023	0	0	0	0	0
Tabung Pusingan dan Amanah Lain ke Pembangunan Revolving & Other Trust Fund To Development	0	0	5,600,000	0	(5,600,000)	0	0	0	0	0
Kursus,Seminar,Konferensi dan Lawatan Sambil Belajar ke Pembangunan Course, Seminar, Conference & Study Visit To Development	0	0	1,200,000	0	0	0	0	(1,200,000)	0	0
Tabung Pusingan dan Amanah Lain ke Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar Revolving & Other Trust Fund To Course, Seminar, Conference & Study Visit	0	0	0	0	(3,526,000)	0	0	3,526,000	0	0
Pelaburan ke Tabung Pusingan dan Amanah Lain Investment To Revolving & Other Trust Fund	0	0	0	0	30,000,000	0	(30,000,000)	0	0	0
	248,468,249	11,521,000	173,644,173	124,330,923	115,816,766	5,224,360	51,352,967	85,104,499	25,000,000	840,462,937
Geran Kerajaan Tertunda / Deferred Government Grants										
Pada 1 Januari / As At 1 January	0	0	251,421,031	0	0	0	0	0	0	251,421,031
Perubahan dalam tahun semasa / Changes In Current Year	0	0	31,620,311	0	0	0	0	0	0	31,620,311
	0	0	283,041,342	0	0	0	0	0	0	283,041,342
	248,468,249	11,521,000	456,685,515	124,330,923	115,816,766	5,224,360	51,352,967	85,104,499	25,000,000	1,123,504,279

PENYATA ALIRAN TUNAI BAGI TAHUN BERAKHIR 31 DISEMBER 2004

Cash Flow Statement for the year ended December 2004

	NOTA / NOTE	2004 RM	2003 RM
TUNAI DARI AKTIVITI OPERASI / CASH GENERATED FROM OPERATING ACTIVITIES			
Lebihan / (Kurangan) pendapatan / Surplus / (Deficit) income	m/s 4 / Page 4	(85,443,812)	55,272,074
Pelarasan ke atas: / Adjustment to:			
Susutnilai / Depreciation	5	87,415,697	76,214,018
Pelunasan tanah / Amortisation of land	5	74,401	74,401
Peruntukan susutnilai / Provision for Depreciation	5	(7,547,520)	0
(Untung) / Rugi atas jualan aset tetap / (Profit) / Loss from sale of fixed assets		(111,729)	(127,568)
Pelupusan / Disposal	5	5,816,003	20,997
Geran kerajaan tertunda direalisasi / Realisation of deferred Government grants	21	(34,285,403)	(24,028,938)
(Untung) / Rugi atas jualan saham / (Profit) / Loss on sale of shares		(79,180)	(552,245)
Peruntukan rosotnilai saham / Provision for diminution of shares		51,997	(288,763)
Pelarasan tahun lalu / Prior year adjustment	25	5,429,473	931,019
Geran kerajaan tertunda / Deferred Government grants		4,744,522	55,649,249
Lebihan / (Kurangan) pendapatan sebelum perubahan modal kerja / Surplus / (Deficit) income prior to working capital adjustment		(23,935,551)	163,164,244
(Penambahan) / Pengurangan penghutang / (Increase) / Decrease in debtors		33,376,393	(36,399,842)
Penambahan / (Pengurangan) pemiutang / Increase / (Decrease) in creditors		11,015,160	(10,506,323)
Manfaat Pekerja / Employee benefits		17,263,408	0
Tunai bersih dihasilkan dari aktiviti operasi / Net cash generated from operating activities		37,719,410	116,258,079
TUNAI DARI AKTIVITI PELABURAN / CASH FROM INVESTMENT ACTIVITIES			
Pembelian aset tetap / Purchase of fixed assets	5	(229,323,197)	(129,431,926)
Pembinaan dalam kemajuan / Works in progress	6	15,496,756	(77,744,823)
Jualan aset tetap / Sale of fixed assets		111,729	127,568
Jualan saham / Sale of shares		7,550,708	8,245,221
Pembelian saham / Purchase of shares		(6,254,476)	(6,961,201)
Simpanan dengan pengurus portfolio / Deposits with portfolio manager	7	(9,330,799)	(708,159)
Tunai bersih dihasilkan sebelum perbelanjaan luar biasa / Net cash derived before exceptional expenditure		(221,749,279)	(206,473,320)
Tolak: Perbelanjaan luar biasa / Less: Extraordinary expenditure		(1,537,743)	0
Tunai bersih dihasilkan dari aktiviti pelaburan / Net cash generated from investment activities		(223,287,022)	(206,473,320)
Pengurangan bersih dalam jumlah tunai dan kesetaraan tunai / Net decrease in cash and cash equivalents		(185,567,612)	(90,215,241)
Jumlah tunai dan kesetaraan pada awal tahun / Cash and cash equivalents at beginning of the year		400,779,381	490,994,622
Jumlah tunai dan kesetaraan pada akhir tahun / Total cash and cash equivalents at the end of year		215,211,769	400,779,381
Tunai dan kesetaraan tunai diwakili oleh: / Cash and cash equivalents represented by:			
Simpanan tetap / Fixed deposits	9	133,535,910	350,000,000
Wang di tangan dan di bank / Cash in hand and bank	10	81,675,859	50,779,381
		215,211,769	400,779,381

Sila lihat nota-nota yang mengiringi penyata kewangan ini /
Please refer to the notes accompanying this Financial Statement

NOTA-NOTA KEPADA PENYATA KEWANGAN
Notes to the Financial Statement

1. KEGIATAN UTAMA / MAIN ACTIVITY

Universiti Putra Malaysia (UPM) adalah sebuah universiti yang ditubuhkan di bawah Akta Universiti dan Kolej Universiti 1971. UPM beroperasi di dua lokasi di mana kampus induknya terletak di Serdang, Selangor manakala kampus cawangannya terletak di Bintulu, Sarawak.

Aktiviti utama UPM ialah untuk meningkatkan mutu pendidikan dalam usaha melahirkan siswazah yang berkualiti dan berdaya saing serta memberi penumpuan kepada aktiviti penyelidikan dan pembangunan khususnya dalam bidang pertanian yang melibatkan aktiviti bagi mencerna nilai tambah yang tinggi serta berciri komersial.

Universiti Putra Malaysia (UPM) is a university established under the University and University Colleges Act 1971. UPM operates two campuses with the main campus at Serdang, Selangor whereas the branch campus is situated at Bintulu, Sarawak.

The main activity of UPM is to improve the quality of education in its efforts to produce quality and competitive graduates and provide emphasis to research and development activities specifically in the agriculture sector which involves projects that generate increased commercial and added value.

2. DASAR-DASAR PERAKAUNAN PENTING / IMPORTANT ACCOUTING POLICIES

(a) Asas Perakaunan / Basis of Accounting

Penyata Kewangan UPM disediakan berdasarkan konvensyen kos sejarah dan mengikut piawaian-piawaian perakaunan yang diluluskan oleh Lembaga Piawaian Perakaunan Malaysia (MASB) dengan pengubahsuaian dibuat mengikut kesesuaian peruntukan yang telah ditetapkan oleh Akta Universiti dan Kolej Universiti (Pindaan) 1997.

The Financial Statement of UPM is prepared according to the historical cost convention and in consistent with the standards approved by the Malaysian Accounting Standards Board (MASB) with the necessary modifications required by provisions which have been established by the University and University Colleges Act (Amendment)1971.

(b) Pengiktirafan Pendapatan / Recognition of income

(i) Geran Kerajaan bagi Belanja Mengurus diakaunkan berdasarkan asas tunai dan dinyatakan dalam Penyata Pendapatan dan Perbelanjaan.
Government Grants for Operating Expendiure has been accounted on cash basis and stated under Income and Expenditure Statement.

(ii) Geran Kerajaan untuk projek-projek penyelidikan *Intensification Of Research In Priority Areas (IRPA)* diakaunkan di dalam Kumpulanwang Penyelidikan.
Government Grants for IRPA *(Intensification Of Research In Priority Areas)* research projects has been accounted under Research Fund.

(iii) Geran Kerajaan bagi Belanja Pembangunan yang diterima untuk membiayai kos projek modal pembangunan diakaunkan ke akaun geran kerajaan tertunda.
Government Grants for Development Expenditure received for financing capital development projects have been accounted under Deferred Government Grants.

(iv) Pendapatan yuran pengajian adalah berasaskan akruan dan diiktiraf apabila pelajar mendaftar dalam tahun berkenaan.
Tuition fees Income from is based on an accrual basis and recognised when a student registers in a particular year.

(v) Faedah dan keuntungan dari pinjaman kenderaan dan komputer diakaunkan mengikut konsep akruan.
Interest and profit from vehicle and computer loans have been recognised according to the accrual concept.

(vi) Pendapatan untuk sewa diakrukan mengikut perjanjian yang telah dipersetujui di antara UPM dan penyewa.
Rental income has been accrued according to contract which has been agreed between UPM and the tenant.

(vii) Pendapatan faedah ke atas simpanan tetap dari institusi kewangan berlesen diakaunkan mengikut konsep akruan kecuali keuntungan atas simpanan tetap melalui skim Mudharabah diiktiraf berdasarkan asas tunai mengikut tarikh matang.
Interest income on fixed deposits from licensed financial institutions has been accounted according to the accrual concept except profit on fixed deposits through the Mudharabah scheme which has been recognised based on cash basis according to the maturity.

(vii) Sumbangan diiktiraf berdasarkan asas tunai.
Contributions have been recognised on cash basis.

(c) Liabiliti Cukai Pendapatan / Income Tax Liability

UPM adalah dikecualikan dari cukai pendapatan atas pendapatannya di bawah perenggan 13 Jadual 6, Akta Cukai Pendapatan 1967 kecuali bagi pendapatan dividen.

UPM is exempted from income tax on its income under para 13, 6th Schedule, Income Tax Act 1967 except on its dividend income.

(d) Peruntukan Hutang Ragu / Allowance for doubtful debts

Peruntukan dibuat bagi hutang ragu berdasarkan kepada penyemakan akhir tahun ke atas hutang yang belum dapat dipungut. Polisi UPM dalam mengakaunkan peruntukan hutang ragu adalah seperti berikut :-

Allowance is made for doubtful debts based on a year-end appraisal of debts that have not been recovered. UPM's policy in accounting for doubtful debts allowance is as follows:-

(i) Hutang yang berusia di antara 6 - 12 bulan, peruntukan hutang ragu dibuat pada kadar 50%, dan
For doubtful debts aged between 6-12 months, doubtful debt allowance is set at the rate of 50%; and

(ii) Hutang yang berusia melebihi 12 bulan, peruntukan hutang ragu dibuat pada kadar 100%
For doubtful debts aged more than 12 months, allowance is set at the rate of 100%.

(e) Susutnilai Aset Tetap / Fixed Asset Depreciation

Aset Tetap dinyatakan pada kos setelah ditolak susutnilai dan ditakrifkan sebagai barang-barang tak luak yang mempunyai tempoh penggunaan ekonomik yang lebih daripada 12 bulan yang bernilai RM3,000 atau lebih setiap satu, kecuali bagi pembelian langsir, kapet, bidai dan pengadang, pinggan mangkuk, buku, ternakan dan tumbuhan tanpa mengambilkira kos dikelaskan sebagai perbelanjaan bukan harta tetap.
Fixed assets are quoted at cost less depreciation and are defined as tangible assets that have an economic usage of more than 12 months and are valued at more than RM3,000 each with the axception of purchase of curtain, carpet, blinds and screens, crockery, books, livestock and plants which are classified as non fixed asset expenses without taking into consideration their costs.

Tanah dipermodalkan mulai tahun 1993 dan tanah milik bebas tidak dilunaskan manakala tanah pajakan dilunaskan samarata mengikut tempoh pajakan.
Land has been capitalized from the year 1993 and freehold land is not amortised whereas leasehold land is amortised equally over the leasehold period.

Mulai tahun kewangan 2001, semua bangunan yang dibina sebelum tahun 1984 telah dipermodalkan.
As from the financial year of 2001, all buildings built before 1984 have been capitalized.

Susutnilai dikira berasaskan kaedah garis lurus ke atas anggaran hayat kegunaan aset berkenaan. Kadar susutnilai tahunan yang digunakan adalah seperti berikut :-

Bangunan dan pembaikan bangunan	2%
Infrastruktur dan kemudahan	5%
Kenderaan dan jentera	20%
Perabot dan kelengkapan	20%
Mesin dan komputer	20%

(f) Pembinaan Dalam Kemajuan / Work in Progress

Pembinaan dalam kemajuan adalah kerja-kerja yang masih belum disempurnakan pada akhir tahun kewangan. Jumlah yang diambilkira adalah semua perbelanjaan yang terlibat dengan projek berkaitan. Kos pembinaan akan dipindahkan ke aset tetap yang berkenaan apabila Sijil Perakuan Siap Kerja dikeluarkan.

Work in Progress are works that have not been completed at the end of financial year. Amount considered are all expenditures related to the concerned projects. Construction costs will be transferred to the relevant fixed assets when the Certificate of Practical Completion of Work is issued.

(g) Pelaburan / Investment

Pelaburan dinyatakan pada kos ditolak rosotan nilai pelaburan berkenaan.

Investments are stated at cost less depreciation value of investments concerned.

(h) Tunai dan Kesetaraan Tunai / Cash and Cash Equivalents

Tunai dan kesetaraan tunai terdiri daripada tunai di tangan, baki di bank, simpanan tetap dan pasaran wang di dalam institusi kewangan.

Cash and cash equivalents consists of cash in hand, bank balances, fixed deposits and money markets in financial institutions.

(i) Geran Kerajaan Bagi Projek Pembangunan / Government Grants for Development Projects

Mulai tahun 2001, UPM telah mengubah polisi perakaunan berkenaan dengan Geran Kerajaan bagi projek pembangunan bersesuaian dengan kehendak *MASB 31 – Accounting for Government Grants and Disclosure of Government Assistance*. Geran Kerajaan untuk projek pembangunan diiktiraf sebagai geran tertunda dan akan direalisasikan mengikut susutnilai projek yang telah siap dan aset yang dibeli serta belanja operasi yang tidak dimodalkan.

As from year 2001, UPM has changed its policy concerning Governments Grants Development Assistance according to requirement of *MASB 31 - Accounting for Government Grants and Disclosure of Government Assistance*. Government grants for development projects is recognised as deferred grants and will be settled according to the depreciation values of completed projects and assets purchased as well as non-capitalised operating expenditures.

(j) Pertukaran Matawang Asing / Foreign Currency Conversions

Urusniaga dalam matawang asing sepanjang tahun ditukar kepada Ringgit Malaysia pada kadar pertukaran yang berkuatkuasa pada tarikh urusniaga tersebut.

Keuntungan atau kerugian pertukaran yang timbul daripada penjelasan urusniaga matawang asing diiktiraf sebagai item biasa di dalam penyata pendapatan.

Item-item di Lembaran Imbangan tiada melibatkan transaksi yang mempunyai nilai dalam matawang asing.

Transactions in foreign currencies throughout the year have been converted to Ringgit Malaysia at rates of exchange prevailing at the transaction dates. All exchange losses and gains arising from settlement of foreign exchange are recognised as ordinary items in the Statement of Income.

Items in the Balance Sheet do not involve any transactions of value in foreign currencies.

3. POLISI PENGURUSAN RISIKO KEWANGAN / FINANCIAL RISK MANAGEMENT POLICY

Polisi pengurusan risiko kewangan UPM adalah untuk memastikan ianya mempunyai sumber-sumber kewangan yang mencukupi untuk menjalankan operasinya dengan lancar. UPM membiayai operasinya dengan geran kerajaan, sumbangan luar dan dana dalaman dan oleh itu tidak terdedah kepada risiko kewangan.

Polisi UPM bagi aktiviti yang berisiko kewangan adalah seperti berikut :-

Financial risk management policy of UPM is to ensure UPM has sufficient financial resources to carry out its operations efficiently. UPM finances its operations from government grants, external contributions and internal funds and as such it is not exposed to financial risks.

UPM policy with regard to activities involving financial risk are as follows:-

(a) Risiko Pelaburan / Investment risk

UPM melabur melalui pengurus dana yang dilantik dan pengurusannya perlu mengikut mandat yang ditetapkan oleh Jawatankuasa Tetap Kewangan. Mandat tersebut menekankan supaya tidak menjejaskan pelaburan pokok tetapi menghasilkan kadar pulangan yang lebih tinggi daripada kadar simpanan tetap institusi kewangan.

UPM invests through appointed fund managers and the management of the funds has to comply with the mandate established by the Standing Finance Committee. The mandate emphasises that the principal investment should not be jeopardised and should generate rate of returns higher than the interest rates offered by the financial institutions.

(b) Risiko Kecairan dan Aliran Tunai / Liquidity risk and cash flow

UPM menguruskan aliran tunai bagi memastikan kesemua keperluan pembayaran dipenuhi. Di antara kaedah pengurusan kecairan yang diamalkan adalah untuk memastikan tahap tunai dan simpanan tetap boleh ditukar kepada tunai bagi memenuhi keperluan kecairan aliran tunai dari masa ke semasa.

UPM manages cash flows to ensure all payment requirements are followed. Among the liquidity management rules practised is to ensure that cash level and fixed deposits can be converted to cash in order to fulfill the requirements of cash flow liquidity from time to time.

(c) Risiko Kredit / Credit Risk

Risiko kredit UPM kebanyakannya timbul daripada akaun-akaun belum terima. Akaun-akaun ini adalah dipantau dari masa ke semasa melalui prosedur-prosedur pengurusan dan tindakan akan diambil bagi hutang yang tertunggak.

Most of the credit risks of UPM arises from accounts which have not been received. These accounts are being monitored from time to time according to management procedures and action will be taken to recover arrears of debts.

(d) Risiko Pertukaran Matawang Asing / Foreign Exchange Risk

UPM terdedah kepada risiko pertukaran matawang asing dalam pembayaran dan penerimaan di mana sebahagian besar didominasikan dalam matawang US Dollar, Euro dan British Pound. UPM tidak menangani risiko pertukaran matawang asing. Keuntungan atau kerugian atas tukaran matawang asing diambilkira dalam penyata pendapatan.

UPM is open to foreign exchange risks involving payments and receipts in which a major portion of the currencies is denominated in US Dollar, Euro and British Pound. UPM does not monitor foreign currency risks. Gains and losses arising from foreign currency exchanges have been accounted in the Statement of Income.

4. MANFAAT PEKERJA / EMPLOYEE BENEFITS

(a) Manfaat Pekerja Jangka Pendek / Short term employee benefits

Upah, gaji, bonus dan sumbangan keselamatan sosial dikira sebagai perbelanjaan dalam tahun di mana perkhidmatan berkaitan diberikan oleh pekerja. UPM juga telah mengakaunkan bayaran ganjaran cuti rehat bagi pekerja tetap yang akan bersara pada tahun berikutnya serta bayaran pampasan bagi pekerja kontrak yang akan tamat pada tahun berikutnya sebagai liabiliti manfaat pekerja jangka pendek.

Salaries, wages, bonus and social security contributions are considered as current year expenditures in the relevant year in which the employees have provided their services. UPM had also accounted for payment for rest days for permanent employees who will retire in the following year and also compensation for contract employees whose services will expire in the following year as short term employee benefit liability.

(b) Pelan Caruman Tetap / Permanent Contribution Plan

UPM membuat caruman kepada KWSP bagi pekerja yang memilih faedah KWSP atau Tabung Amanah Pencen Kerajaan bagi staf yang telah diletakkan di dalam skim pencen dan sumbangan tersebut diambilkira sebagai perbelanjaan di dalam Penyata Pendapatan apabila perbelanjaan tersebut dilakukan.

UPM makes contributions to EPF for employees who have opted for the EPF scheme or to Government Pension Trust Fund for staff who have been emplaced under the pension scheme and those contributions have been taken into account as expenditures in the Statement of Income when the expenditures were incurred.

(c) Manfaat Pekerja Jangka Panjang / Long Term Employee Benefits

Mulai tahun kewangan berakhir 31 Disember 2004, UPM telah menerima pakai keperluan *MASB 29 - Employee Benefits* yang mana bayaran manfaat pekerja yang dibayar selepas persaraan diiktiraf secara akruan dalam Penyata Pendapatan tahun semasa sebagai Perbelanjaan Manfaat Pekerja dan di dalam Lembaran Imbangan sebagai liabiliti yang dikenali sebagai Manfaat Pekerja Jangka Panjang.

Jenis manfaat pekerja jangka panjang yang diiktiraf secara akruan adalah bagi bayaran gantian cuti rehat untuk pekerja yang telah mencapai umur 48 tahun dengan andaian seseorang pekerja akan mengumpulkan cuti tahunannya sebanyak 15 hari setahun sehingga mencapai maksima 120 hari semasa ianya bersara. Kadar gaji semasa telah digunakan untuk mengira amaun liabiliti tersebut.

Kesan kewangan kepada UPM pada tahun 2004 kerana pematuhan kepada **MASB 29 – Employee Benefits** ialah pengiktirafan belanja sebanyak RM17,263,409 telah dinyatakan dalam Penyata Pendapatan tahun semasa dan sejumlah yang sama telah diiktiraf sebagai liabiliti dalam Lembaran Imbangan.

As from 31 December 2004, UPM is following the requirements of *MASB 29 - Employee Benefits* in which payment of employee benefits after retirement is recognised as accrual in the Statement of Income in the current year as Employee Benefits expenditure and in the Balance Sheet as liability and is termed as Long Term Employee Benefits.

The type of long term employee benefits recognised as accruals is for payment in lieu of rest day holidays for employees who have reached 48 years of age on the assumption that an employee may accumulate 15 days of his annual leave per year until reaching a maximum of 120 days when he retires. Current rate of wages is used to calculate the said total liability.

Financial effect to UPM in the year 2004 as a result of compliance with **MASB 29 - Employee Benefits** is the recognition of expenditure amounting RM17,263,409 which have been stated in the Statement of Income in the current year and a similar amount has been recognised as liability in the Balance Sheet.

NOTA-NOTA KEPADA PENYATA KEWANGAN (samb.)
Notes to the Financial Statement (cont'd)

5. ASET TETAP / FIXED ASSETS

2004	KOS / COST					SUSUTNILAI / DEPRECIATION						Nilai Buku Bersih / Net BooK Value	
	1 Januari / 1 January	Tambahan / Addition	Pelupusan / Disposal	Pindahan ke KUSTEM / Transfer to KUSTEM	31.12.2004	1 Januari / 1 January	Pelarasan / Adjustment	Tambahan / Addition	Pelupusan / Disposal	Pindahan ke KUSTEM / Transfer to KUSTEM	31.12.2004	2004	2003
	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
(a) Kumpulanwang Mengurus / Operating Fund													
Tanah pajakan / Leasehold Land	6,802,736	0	0	0	6,802,736	2,179,007	0	74,401	0	0	2,253,408	4,549,328	4,623,729
Tanah milik kekal / Freehold land	8,962,151	0	0	0	8,962,151	0	0	0	0	0	0	8,962,151	8,962,151
Bangunan / Building	41,941,771	6,568,877	(484,238)	0	48,026,410	8,309,695	(4,768,633)	972,514	(118,291)	0	4,395,285	43,631,125	33,632,076
Infrastruktur & kemudahan / infrastructure & facilities		26,105,927	14,755,766 (149,120)	0	40,712,573	2,625,158	437,454	2,046,868	(65,617)	0	5,043,863	35,668,710	23,480,769
Kenderaan dan jentera / Vechiles & machinery	19,158,585	2,125,644	(1,517,287)	0	19,766,942	9,373,343	2,612,542	2,930,244	(1,517,250)	0	13,398,879	6,368,063	9,785,242
Perabot dan kelengkapan / Furniture & fittings	12,903,501	1,152,287	(2,156,146)	0	11,899,642	7,889,818	256,435	1,920,292	(2,155,040)	0	7,911,505	3,988,137	5,013,683
Mesin dan komputer / Machines & computer	210,260,521	31,818,026	(12,111,839)	0	229,966,708	123,135,453	1,259,270	36,661,536	(12,005,565)	0	149,050,694	80,916,014	87,125,068
	326,135,192	56,420,600	(16,418,630)	0	366,137,162	153,512,474	(202,932)	44,605,855	(15,861,763)	0	182,053,634	184,083,528	172,622,718
(b) Kumpulanwang Pembangunan / Development Fund													
Bangunan / Building	250,458,944	100,627,196	(5,269,534)	(6,872,194)	338,944,412	30,671,529	(5,800,867)	7,814,889	(1,150,427)	(541,864)	30,993,260	307,951,152	219,787,415
Infrastruktur & kemudahan / Infrastructure & facilities	72,863,695	38,006,247	(1,881,731)	0	108,988,211	13,174,000	(45,080)	5,553,480	(1,142,152)	0	17,540,248	91,447,963	59,689,695
Kenderaan dan jentera / Vehicles & machinery		2,150,674	29,400 (140,017)	0	2,040,057	1,713,508	90,644	119,670	(140,011)	0	1,783,811	256,246	437,166
Perabot dan kelengkapan / Furniture & fittings	1,783,585	94,377	(360,044)	0	1,517,918	1,562,930	21,590	110,421	(359,997)	0	1,334,944	182,974	220,655
Mesin dan komputer / Machines & computer	141,847,068	10,814,140	(16,206,485)	0	136,454,723	106,717,235	217,349	17,088,806	(16,188,224)	0	107,835,166	28,619,557	35,129,833
	469,103,966	149,571,360	(23,857,811)	(6,872,194)	587,945,723	153,839,202	(5,516,364)	30,687,266	(18,980,811)	(541,8641)	159,487,429	428,457,892	315,264,764
(c) Kumpulanwang Penyelidikan / Research Fund													
Bangunan / Building	646,364	0	(19,975)	0	626,389	204,932	(9,477)	12,963	(2,799)	0	205,619	420,770	441,432
Infrastruktur & kemudahan / Infrastructure & facilities	1,624,895	0	(4,900)	0	1,619,995	1,622,934	(1,133,771)	81,467	(3,188)	0	567,442	1,052,553	1,961
Kenderaan dan jentera / Vehicles & machinery	390,227	0	(64,700)	0	325,527	255,151	5	46,433	(64,698)	0	236,891	88,636	135,076
Perabot & kelengkapan / Furniture & fittings	492,290	102,208	(65,434)	0	529,064	430,433	34	49,240	(65,420)	0	414,287	114,777	61,857
Mesin dan komputer / Machines & computer	60,314,478	14,120,282	(8,244,488)	0	66,190,272	48,516,256	10,829	7,199,213	(8,237,576)	0	47,488,722	18,701,550	11,798,222
	63,468,254	14,222,490	(8,399,497)	0	69,291,247	51,029,706	(1,132,380)	7,389,316	(8,373,681)	0	48,912,961	20,378,286	12,438,548

NOTA-NOTA KEPADA PENYATA KEWANGAN (samb.)
Notes to the Financial Statement (cont'd)

5. ASET TETAP (samb.) / FIXED ASSETS (cont'd)

2004	KOS / COST					SUSUTNILAI / DEPRECIATION						Nilai Buku Bersih / Net Book Value	
	1 Januari / 1 January	Tambahan / Addition	Pelupusan / Disposal	Pindahan ke KUSTEM / Transfer KUSTEM	31.12.2004	1 Januari / 1 January	Pelarasan / Adjustment	Tambahan / Addition	Pelupusan / Disposal	Pindahan ke KUSTEM / Transfer KUSTEM	31.12.2004	2004	2003
	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
(d) Kumpulanwang Amanah Lain* / Other Trust Fund*													
Bangunan / Building	4,180,237	1,481,867	(84,099)	0	5,578,005	467,917	(106,130)	113,471	(16,010)	0	459,248	5,118,757	3,712,320
Infrastruktur & kemudahan / Infrastructure & facilities	4,213,087	52,197	(51,276)	0	4,214,008	1,051,112	(133,321)	213,842	(21,148)	0	1,110,485	3,103,523	3,161,975
Kenderaan dan jentera / Vechiles & machinery	6,224,615	420,276	(3,200)	0	6,641,691	2,396,265	85,800	1,086,799	(3,199)	0	3,565,665	3,076,026	3,828,350
Perabot & kelengkapan / Furniture & fittings	1,118,477	442,162	(239,692)	0	1,320,947	743,124	78	220,153	(239,656)	0	723,699	597,248	375,353
Mesin dan komputer / Machines & computer	12,077,155	5,713,529	(1,221,568)	0	16,569,116	7,610,918	(55,923)	2,743,998	(1,214,928)	0	9,084,065	7,485,051	4,466,237
	27,813,571	8,110,031	(1,599,835)	0	34,323,767	12,269,336	(209,496)	4,378,263	(1,494,941)	0	14,943,162	19,380,605	15,544,235
(e) Kumpulanwang Kolej Kediaman / Residential College Fund													
Bangunan / Building	1,796,735	224,222	(349,140)	0	1,671,817	592,186	(433,148)	40,518	(105,370)	0	94,186	1,577,631	1,204,549
Infrastruktur & kemudahan / Infrastructure & facilities	322,312	374,054	(19,156)	0	677,210	168,330	(54,307)	34,862	(13,356)	0	135,529	541,681	153,982
Kenderaan dan jentera / Vechiles & machinery	137,736	3,250	(42,551)	0	98,435	132,718	1,744	1,743	(42,549)	0	93,656	4,779	5,018
Perabot & kelengkapan / Furniture & fittings	752,115	63,130	(237,424)	0	577,821	635,030	84	77,440	(237,376)	0	475,178	102,643	117,085
Mesin dan komputer / Machines & computer	2,041,663	334,060	(267,902)	0	2,107,821	1,515,478	(721)	274,834	(266,095)	0	1,523,496	584,325	526,185
	5,050,561	998,716	(916,173)	0	5,133,104	3,043,742	(486,348)	429,397	(664,746)	0	2,322,045	2,811,059	2,006,819
Jumlah / Total	891,571,544	229,323,197	(51,191,946)	(6,872,194)	1,062,830,601	373,694,460	(7,547,520)	87,490,097	(45,375,942)	(541,864)	407,719,231	655,111,370	517,877,084

Termasuk di dalam tambahan aset tetap adalah sejumlah RM148,596,883 (2003 : RM44,624,872) pindahan dari pembinaan dalam kemajuan yang telah siap dalam tahun semasa.

Included in fixed assets addition is the sum of RM148,596,883 (2003 : RM44,624,872) which has been transferred from works in progress completed in the current year.

* Jumlah aset dalam Kumpulanwang Amanah Lain adalah jumlah aset yang digabungkan daripada Kumpulanwang Tabung Pusingan dan Amanah Lain, Kumpulanwang Penginapan dan Rekreasi dan Kumpulanwang Kursus, Seminar,Konferensi dan Lawatan Sambil Belajar.

* Total assets in the Other Trust Fund is the total assets which has been consolidated from Revolving & Other Trust Fund, Accommodation & Recreation Fund and Course, Seminar,Conference & Study Visit Fund.

6. PEMBINAAN DALAM KEMAJUAN / WORK IN PROGRESS

2004	Pada awal Tahun RM Beginning of the year	Tambahan RM Addition	Pindahan ke penyelenggaraan RM Transfer to Maintenance	Pindahan ke Aset Tetap RM Transfers to Fixed Assets	Pindahan ke KUSTEM RM Transfers to KUSTEM	Pada akhir tahun RM Year end
2004	**RM**	**RM**	**RM**	**RM**	**RM**	**RM**
Bangunan dan Pembaikan Buildings & repairs	92,275,358	110,618,352	0	90,380,360	5,255,478	107,257,872
Kemudahan dan Pembaikan Facilities & repairs	34,704,574	30,005,749	0	52,437,124	0	12,273,199
Harta Modal Yang Lain Other capital properties	5,175,557	603,842	0	5,779,399	0	0
Penyelenggaraan Maintenance	2,801,721	1,022,707	3,824,428	0	0	0
Lain-Lain / Others	70,617	17,908	88,525	0	0	0
	135,027,827	142,268,558	3,912,953	148,596,883	5,255,478	119,531,071
2003						
Bangunan dan Pembaikan Buildings & repairs	28,273,511	78,190,678	0	14,188,831	0	92,275,358
Kemudahan dan Pembaikan Facilities & repairs	27,399,399	37,741,216	0	30,436,041	0	34,704,574
Harta Modal Yang Lain Other capital properties	1,594,297	3,581,260	0	0	0	5,175,557
Penyelenggaraan Maintenance	0	8,075,509	5,273,788	0	0	2,801,721
Lain-Lain / Others	15,797	54,820	0	0	0	70,617
	57,283,004	127,643,483	5,273,788	44,624,872	0	135,027,827

Pada tahun 2004, pembinaan dalam kemajuan sebanyak RM148,596,883 (2003 : RM44,624,872) telah dipindahkan ke aset tetap, RM3,912,953 (2003: RM5,273,788) dipindahkan ke penyelenggaraan dan RM5,255,478 telah dipindahkan ke Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM).

In the year 2004, work in progress amounting RM148,596,883 (2003 : RM44,624,872) has been transferred to fixed assets, RM3,912,953 (2003: RM5,273,788) to maintenance and the sum of RM5,255,478 has been transferred to Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM).

7. PELABURAN / INVESTMENT

	2004 RM	2003 RM
(a) Kumpulanwang Pelaburan / INVESTMENT FUND		
Pelaburan tersiarharga - di Malaysia, pada kos Quoted investment- in Malaysia, at cost	10,114,909	12,070,869
Tolak: / Less:		
Peruntukan rosotnilai pelaburan Provision for diminution of investments	(1,512,517)	(1,460,520)
Nilai pasaran pelaburan tersiarharga - di Malaysia Market value of quoted investment – of Malaysia	8,602,392	10,610,349
Campur: / Add:		
Pelaburan tidak tersiarharga - di Malaysia Unquoted price of investment in Malaysia.	500,000	500,000
Simpanan dengan Pengurus Portfolio Deposits with Portfolio Manager	1,571,094	1,597,877
	10,673,486	12,708,226

Kumpulanwang Pelaburan telah dimulakan dengan pelaburan pokok sebanyak RM6.38 juta di AmInvestment Management Sdn Bhd dan RM2 juta di RHB Asset Management Sdn Bhd.

Investment Fund has been commenced with the placement of RM6.38 million with Aminvestment Management Sdn. Bhd. and RM2.00 million with RHB Asset Management Sdn. Bhd.

(b) Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund-Endowment Fund - Tabung Endowmen		
Pelaburan tersiarharga - di Malaysia, pada kos Quoted investment – in Malaysia, at cost	738,908	0
Campur: / Add:		
Simpanan dengan Pengurus Portfolio Deposits with Portfolio Manager	9,357,582	0
	10,096,490	0
Jumlah Pelaburan / Total Investment	**20,769,976**	**12,708,226**

Tabung Endowmen UPM bermula pada bulan Disember 2004 dengan nilai awal RM10 juta.

The UPM Endowment Fund commenced in December 2004 with the initial deposit of RM10.00 million

7.1 PERUNTUKAN ROSOTNILAI PELABURAN / PROVISION FOR DIMINUTION OF INVESTMENT

	2004 RM	2003 RM
Baki awal tahun / Balance beginning of year	1,460,520	1,749,283
Campur / (Tolak): / Add / (Less)		
Tambahan / (Kurangan) dalam tahun Increase / (Decrease) in current year	51,997	(288,763)
	1,512,517	1,460,520

8. PENGHUTANG PELBAGAI / SUNDRY DEBTORS

Perkara / Itmes	KUMPULANWANG-KUMPULANWANG / FUNDS										
	MENGURUS OPERATING	KOLEJ KEDIAMAN RESIDENTIAL COLLEGES	PEMBANGUNAN DEVELOPMENT	PENYELIDIKAN RESEARCH	TABUNG PUSINGAN DAN AMANAH LAIN REVOLVING & OTHER TRUSTS FUND	PENGINAPAN DAN REKREASI ACCOMMODATION & RECREATION	PELABURAN INVESTMENT	KURSUS,SEMINAR KONFERENSI DAN LAWATAN SAMBIL BELAJAR COURSE, SEMINAR CONFERENCE & STUDY VISIT	PINJAMAN KENDERAAN DAN KOMPUTER VEHICLE & COMPUTER LOAN	JUMLAH TOTAL 2004	JUMLAH TOTAL 2003
	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
Siberhutang / Debtors	15,534,455	0	0	0	0	0	0	0	13,014,891	28,549,346	31,965,812
Yuran Tertunggak / Fees in arrears	44,594,411	0	0	27,000	8,746,107	0	0	30,461,695	0	83,829,213	78,449,863
Faedah Simpanan Tetap Terakru / Accrued fixed deposits interests	1,018,519	0	0	0	0	0	37,101	0	272	1,055,892	2,840,482
Geran Kerajaan Terakru / Accrued Government Grants	0	0	0	0	0	0	0	0	0	0	11,244,438
Bantuan Pendahuluan Projek (Pembangunan) / Project Advance Assistance (Development)	0	0	8,227,628	0	0	0	0	0	0	8,227,628	10,000,000
Pengurus Portfolio / Portfolio Manager	0	0	0	0	0	0	47,534	0	0	47,534	761,119
Pendahuluan Pegawai dan Pelajar UPM / Advances to UPM officers & students	543,768	2,953	0	469,103	310,760	118,135	0	202,965	0	1,647,684	1,569,643
Cagaran / Deposits	482,750	104,900	20,000	4,225	19,050	0	0	0	0	630,925	551,797
Pelbagai / Miscellaneous	0	0	0	0	0	0	0	0	0	0	4,425
Jumlah / Total	62,173,903	107,853	8,247,628	500,328	9,075,917	118,135	84,635	30,664,660	13,015,163	123,988,222	137,387,579
Tolak: / Less: Peruntukan Hutang Ragu / Provision for doubtful debts	31,312,565	0	0	15,875	4,362,744	0	0	23,785,343	0	59,476,527	39,499,491
	30,861,338	107,853	8,247,628	484,453	4,713,173	118,135	84,635	6,879,317	13,015,163	64,511,695	97,888,088

Angka-angka penghutang pelbagai adalah nilai bersih setelah diselaraskan dalam proses penyatuan item-item kontra antara akaun-akaun penghutang dan pemiutang.

Figures for sundry debtors represent net values adjusted after reconciliation of the contra items between creditor and debtor accounts

8.1 HUTANG PECAH KONTRAK / BREACH OF CONTRACTS

	2004 RM	2003 RM
Kumpulanwang Mengurus - Staf / Operating Fund – Staff	0	2,183,297
Kumpulanwang Tabung Pusingan dan Amanah Lain Pelajar Pasca Siswazah / Revolving & Other Trust Fund - Post-graduate students	0	650,056
	0	2,833,353

Mulai tahun 2004 hutang pecah kontrak tidak diakaunkan sebagai hutang kerana risiko yang tidak dapat ditentukan samada hutang tersebut dapat dikutip semula. Sebanyak RM2,296,247 merupakan hutang pecah kontrak yang melibatkan staf UPM yang melanggar perjanjian cuti belajar manakala sebanyak RM656,205 merupakan hutang pecah kontrak Pasca Siswazah yang dibiayai oleh Kementerian Sains Teknologi dan Inovasi tetapi tidak menamatkan pengajian.

Beginning from year 2004, breach of contracts debts has not been accounted as debts due to uncertainties in whether the debts can be recovered. Breach of contract debts amounting RM2,296,247 involved UPM staff who have breached study leave contracts whereas the sum of RM656,205 is debts due to breach of contract by Post-graduates who have not completed their studies financed by the Science, Technology and Innovation Ministry.

8.2 MULTIMEDIA TECHNOLOGY ENHANCEMENT OPERATION SDN BHD (METEOR) / MULTIMEDIA TECHNOLOGY ENHANCEMENT OPERATION SDN BHD (METEOR)

Jumlah berikut telah diakaunkan sebagai yuran tertunggak: /
The following amount has been accounted as fees in arrears:

	2004 RM	2003 RM
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit Fund	6,417,991	6,417,991

8.3 PERUNTUKAN HUTANG RAGU / PROVISION FOR DOUBTFUL DEBTS

	2004 RM	2003 RM
Tambahan dalam tahun / Addition in current year	21,410,212	16,944,540
Pengurangan dalam tahun / Decrease in current year	(1,433,176)	(4,501,531)
Peruntukan dalam tahun / Provision in current year	19,977,036	12,443,009
Baki awal tahun / Balance at beginning of year	39,499,491	27,056,482
Jumlah tahun ini / Total for this year	59,476,527	39,499,491

Tambahan atau kurangan peruntukan hutang ragu dikira pada akhir tahun kewangan yang berkenaan.
The increase or decrease in the allowance for doubtful debts is calculated at the end of year of the relevant financial year.

9. SIMPANAN TETAP / FIXED DEPOSITS

	2004 RM	2003 RM
Simpanan dengan institusi kewangan berlesen: / Deposits with licensed financial institutions:		
Bank / Bank	114,535,910	274,000,000
Syarikat Kewangan / Financial Institutuions	19,000,000	76,000,000
	133,535,910	350,000,000

10. WANG DI TANGAN DAN DI BANK / CASH IN HAND AND BANK

	2004 RM	2003 RM
Wang di tangan: / Cash in Hand:		
Kampus Serdang / Serdang Campus	63,356	64,881
Kampus Bintulu / Bintulu Campus	5,331	4,520
	68,687	69,401
Wang di bank: / Cash in Bank:		
Kampus Serdang / Serdang Campus	80,958,443	50,295,740
Kampus Bintulu / Bintulu Campus	648,729	414,240
	81,607,172	50,709,980
Jumlah wang di tangan dan di bank / Total cash in hand and bank	81,675,859	50,779,381

11. PEMIUTANG PELBAGAI / SUNDRY CREDITORS

	2004 RM	2003 RM
Pemiutang Pembekal / Staf / Suppliers/staff creditors	4,141,563	10,994,878
Akaun Penaja / Pelajar / Sponsors Account/Students	19,868,863	16,700,696
Cagaran Pelbagai / Miscellaneous Deposits	5,352,394	4,227,363
Canary Infoport Sdn Bhd / Canary Infoport Sdn Bhd	17,000,000	0
Lain-lain / Others	5,428,667	8,853,390
	51,791,487	40,776,327

Angka-angka pelbagai pemiutang adalah nilai bersih setelah diselaraskan dalam proses penyatuan item-item kontra antara akaun-akaun penghutang dan pemiutang.

The figures in the sundry creditors account represents the net value less adjustment after reconciliation of the contra items between the debtors and creditors account

12. KUMPULANWANG MENGURUS / OPERATING FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Geran kerajaan / Government grants	287,888,227	326,130,561
Geran kerajaan tertunda direalisasi / Realisation of deferred Government grants	0	623,808
Pelbagai yuran / Miscellaneous fees	41,326,797	50,524,115
Pelbagai sewa / Sundry rentals	240,463	287,741
Jualan aset tetap / Sale of fixed assets	111,729	127,568
Hasil ladang / Plantation revenue	297,180	433,331
Pendapatan lain / Other income	4,362,146	6,883,909
	334,226,542	385,011,033
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Emolumen / Emolument	196,618,231	188,597,477
Perbelanjaan manfaat pekerja / Employee benefit expenditure	17,263,408	0
Bekalan dan bahan-bahan / Supplies & materials	65,140,078	64,831,944
Penyelenggaraan dan pembaikan / Maintenance & repairs	23,363,802	22,748,727
Perkhidmatan iktisas dan perbelanjaan lain / Professional services & other expenditures	51,759,523	47,624,374
Susutnilai / Depreciation	44,531,454	42,002,685
Pelunasan tanah / Amortisation of land	74,401	74,401
Pelupusan / Disposal	556,867	2,319
Hutang ragu / Doubtful debts	18,899,294	635,541
	418,207,058	366,517,468
LEBIHAN / (KURANGAN) PENDAPATAN / SURPLUS (CREDIT) INCOME	(83,980,516)	18,493,565
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / As previously stated	248,468,249	229,974,684
- Pelarasan tahun lalu / - Prior year adjustment	(1,830,383)	0
- Seperti yang dinyatakan semula / - As restated	246,637,866	229,974,684
Pindahan (ke): / Transfer (to):		
Kumpulanwang Pembangunan / Development Fund	(3,500,000)	0
Kumpulanwang Penyelidikan / Research Fund	(94,500)	0
Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	(38,250)	0
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit Fund	(25,200)	0
BAKI KUMPULANWANG DIHANTAR KE HADAPAN / FUND BALANCE CARRIED FORWARD	158,999,400	248,468,249

13. KUMPULANWANG KOLEJ KEDIAMAN / RESIDENTIAL COLLEGE FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Yuran Kolej Kediaman / Residential College fees	9,260,789	9,601,434
Yuran-yuran lain / Other fees	0	104,477
Pelbagai sewa / Sundry rentals	34,500	33,690
Pendapatan lain / Other income	493,783	262,764
	9,789,072	10,002,365
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & materials	3,824,114	3,209,745
Penyelenggaraan dan pembaikan / Maintenance & repairs	2,347,295	2,210,691
Perkhidmatan iktisas dan perbelanjaan lain / Professional services & other expenditures	2,642,469	2,294,200
Susutnilai / Depreciation	429,398	461,931
Pelupusan / Disposals	251,427	6
	9,494,703	8,176,573
LEBIHAN PENDAPATAN / SURPLUS INCOME	294,369	1,825,792
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	11,521,000	18,747,899
- Pelarasan tahun lalu / - Prior year adjustment	485,872	0
- Pindahan Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / - Transfer of Course, Seminar, Conference & Study Visit Fund	0	(3,052,691)
- Seperti yang dinyatakan semula / - As restated	12,006,872	15,695,208
Pindahan (ke) : / Transfer (to) :		
Kumpulanwang Pembangunan / Development Fund	(2,300,000)	(6,000,000)
BAKI KUMPULANWANG DIHANTAR KE HADAPAN / FUND BALANCE CARRIED FORWARD	10,001,241	11,521,000

14. KUMPULANWANG PEMBANGUNAN / DEVELOPMENT FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Geran kerajaan tertunda direalisasi / Realisation of deferred Government grants	34,285,403	31,320,881
Pendapatan lain / Other income	2,080,824	1,205,896
	36,366,227	32,526,777
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & materials	1,486,797	1,209,568
Penyelenggaraan dan pembaikan / Maintenance & repairs	5,905,085	6,489,206
Perkhidmatan iktisas dan perbelanjaan lain / Professional services & other expenditures	133,490	216,977
Susutnilai / Depreciation	30,687,266	24,880,599
Pelupusan / Disposals	4,877,000	14,162
	43,089,638	32,810,512
LEBIHAN / (KURANGAN) PENDAPATAN / SURPLUS / (DEFICIT) INCOME	(6,723,411)	(283,735)
Tolak : Perbelanjaan luar biasa / Less: Extraordinary expenditure	(1,537,743)	0
	(8,261,154)	(283,735)
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	173,644,173	160,392,850
- Pelarasan tahun lalu / - prior year adjustment	6,085,614	735,058
- Seperti yang dinyatakan semula / - As restated	179,729,787	161,127,908
Pindahan dari: / Transfer from:		
Kumpulanwang Mengurus / Operating Fund	3,500,000	0
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit Fund	3,000,000	1,200,000
Kumpulanwang Pelaburan / Investment Fund	0	5,600,000
Kumpulanwang Kolej Kediaman / Residential College Fund	2,300,000	6,000,000
	180,268,633	173,644,173
Geran Kerajaan Tertunda / Deferred Government Grants		
Baki pada 1 Januari / Balance as at 1 January	283,041,342	251,421,031
Pemberian Kerajaan pada tahun semasa / Government grants in current year	10,000,000	63,565,000
Pindahan aset ke Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) / Transfer of asset to Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM)	(6,330,330)	0
Pindahan pembinaan dalam kemajuan ke KUSTEM / Transfer of construction in progress to KUSTEM	(5,255,478)	0
	281,455,534	314,986,031
Tolak: Pelunasan dalam tahun / Less: Amortisation in current year		
Susutnilai ke atas aset tetap / Depreciation of fixed assets	(26,760,031)	(24,028,938)
Belanja operasi projek yang tidak dimodalkan / Non capitalised expenditure on project operations	(7,525,372)	(7,915,751)
	(34,285,403)	(31,944,689)
Baki pada 31 Disember / Balance as at 31 December	247,170,131	283,041,342
BAKI KUMPULAN WANG DIHANTAR KE HADAPAN / FUND BALANCE CARRIED FORWARD	427,438,764	456,685,515

15. KUMPULANWANG PENYELIDIKAN / RESEARCH FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Geran kerajaan / Government grants	29,285,565	41,168,791
Pelbagai yuran / Miscellaneous fees	349,959	220,069
Sumbangan / Contributions	8,378,565	6,600,303
Faedah simpanan tetap / Fixed deposit interest	5,790	5,127
Pelbagai sewa / Sundry rentals	97,920	343,704
Pendapatan lain / Other income	5,140,135	5,979,041
	43,257,934	54,317,035
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & materials	16,101,747	14,642,946
Penyelenggaraan dan pembaikan / Maintenance & repairs	950,587	679,789
Perkhidmatan iktisas dan perbelanjaan lain / Professional services & other expenditures	28,828,400	23,729,007
Susutnilai / Depreciation	7,389,316	5,534,584
Hutang ragu / Doubtful debts	15,875	0
Pelupusan / Disposals	25,816	63
	53,311,741	44,586,389
LEBIHAN/(KURANGAN) PENDAPATAN / SURPLUS/(DEFICIT) INCOME	(10,053,807)	9,730,646
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	124,330,923	115,757,300
- Pelarasan tahun lalu / Prior year adjustment	1,132,380	0
	125,463,303	125,487,946
Pindahan dari/ (ke): / Transfer from/(to):		
Kumpulanwang Mengurus / Operating Fund	94,500	0
Kumpulanwang Pelaburan / Investment Fund	5,000,000	0
Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	(19,989)	(1,157,023)
BAKI KUMPULANWANG DIHANTAR KE HADAPAN / FUND BALANCE CARRIED FORWARD	120,484,007	124,330,923

16. KUMPULANWANG TABUNG PUSINGAN DAN AMANAH LAIN / REVOLVING & OTHER TRUST FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Geran kerajaan / Government grants	12,283,814	16,688,417
Pelbagai yuran / Miscellaneous fees	16,850,217	15,222,380
Sumbangan / Contributions	4,567,583	2,704,304
Faedah simpanan tetap / Fixed deposit interests	486,134	411,699
Pelbagai sewa / Sundry rentals	57,817	97,590
Pendapatan lain / Other income	10,624,704	14,999,776
	44,870,269	50,124,166
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & Other materials	4,586,145	4,977,925
Penyelenggaraan dan pembaikan / Maintenance & repairs	1,086,457	1,476,220
Perkhidmatan iktisas dan perbelanjaan lain / Professional services & other expenditure	34,145,807	29,520,943
Susutnilai / Depreciation	2,489,962	1,539,625
Pelupusan / Disposal	26,149	32
Hutang ragu / Doubtful debts	2,216,618	1,411,849
	44,551,138	38,926,594
LEBIHAN PENDAPATAN / SURPLUS INCOME	319,131	11,197,572
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	115,816,766	82,392,210
- Pelarasan tahun lalu / Prior year adjustment	(617,567)	195,961
- Seperti yang dinyatakan semula / - As restated	115,199,199	82,588,171
Pindahan dari / (ke) : / Transfer from/ (to) :		
Kumpulanwang Mengurus / Operating Fund	38,250	0
Kumpulanwang Pembangunan / Development Fund	0	(5,600,000)
Kumpulanwang Penyelidikan / Research Fund	0	1,157,023
Kumpulanwang Pelaburan / Investment Fund	0	30,000,000
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit Fund	(6,309)	(3,526,000)
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	115,550,271	115,816,766

17. KUMPULANWANG PENGINAPAN DAN REKREASI / ACCOMMODATION & RECREATION FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Sumbangan / Contributions	10,981	17,425
Pelbagai sewa / Sundry rentals	199,774	167,761
Pendapatan lain / Other income	967,801	759,922
	1,178,556	945,108
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & materials	162,384	338,157
Penyelenggaraan dan pembaikan / Maintenace & repairs	431,093	138,839
Perkhidmatan iktisas dan hospitaliti / Professional & hospitality services	142,519	169,454
Susutnilai / Depreciation	282,832	235,870
Pelupusan / Disposals	22,727	0
	1,041,555	882,320
LEBIHAN PENDAPATAN / SURPLUS INCOME	137,001	62,788
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE CARRIED FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	5,224,360	5,161,572
- Pelarasan tahun lalu / - Prior year adjustment	71,236	0
- Seperti yang dinyatakan semula / - As restated	5,295,596	5,161,572
BAKI KUMPULANWANG DIHANTAR KE HADAPAN / FUND BALANCE CARRIED FORWARD	5,432,597	5,224,360

18. KUMPULANWANG PELABURAN / INVESTMENT FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Faedah dan dividen / Interest and Dividend	9,446,081	13,223,199
Untung atas jualan saham / Profit form sale of shares	79,180	552,245
Pengurangan peruntukan rosotnilai saham / Less provision for diminution of shares	0	288,763
Pendapatan lain / Other income	29	237,720
	9,525,290	14,301,927
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Perkhidmatan iktisas dan perbelanjaan lain / Professional services and other expenditures	41,937	51,307
Penambahan rosotnilai saham / Increase in diminution of shares	51,997	0
	93,934	51,307
LEBIHAN PENDAPATAN / SURPLUS INCOME	9,431,356	14,250,620
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE CARRIED FORWARD	51,352,967	67,102,347
	60,784,323	81,352,967
Pindahan (ke): / Transfer (to):		
Kumpulanwang Penyelidikan / Research Fund	(5,000,000)	0
Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	0	(30,000,000)
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	55,784,323	51,352,967

19. KUMPULANWANG KURSUS, SEMINAR, KONFERENSI DAN LAWATAN SAMBIL BELAJAR / COURSE,SEMINAR,CONFERENCE & STUDY VISIT FUND

	2004 RM	2003 RM
PENDAPATAN / INCOME		
Pelbagai yuran / Miscellaneous fees	24,515,534	35,204,962
Sumbangan Luar / External contributions	358,890	436,453
Faedah simpanan tetap / Fixed deposit interest	320,927	318,000
Pelbagai sewa / Sundry rentals	0	4,288
Pendapatan lain / Other income	3,147,755	7,926,582
	28,343,106	43,890,285
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies & materials	3,541,098	4,269,491
Penyelenggaraan dan pembaikan / Maintenance & repairs	496,236	435,487
Perkhidmatan iktisas dan hospitaliti / Professional & hospitality services	17,233,796	22,730,193
Susutnilai / Depreciation	1,605,469	1,558,724
Pelupusan / Disposals	56,017	4,415
Hutang ragu / Doubtful debts	278,425	14,897,149
	23,211,041	43,895,459
LEBIHAN / (KURANGAN) PENDAPATAN / SURPLUS / (DEFICIT) INCOME	5,132,065	(5,174)
BAKI KUMPULANWANG DIBAWA KE HADAPAN / FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / - As previously stated	85,104,499	79,730,982
- Pelarasan tahun lalu / Prior year adjustment	102,321	0
- Pindahan dari Kumpulanwang Kolej Kediaman / Transfer from Residential College Fund	0	3,052,691
- Seperti yang dinyatakan semula / - As restated	85,206,820	82,783,673
Pindahan dari /(ke): / Transfer from/(to):		
Kumpulanwang Penyelidikan / Research Fund	19,989	0
Kumpulanwang Mengurus / Operating Fund	25,200	0
Kumpulanwang Pembangunan / Development Fund	(3,000,000)	(1,200,000)
Kumpulanwang Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	6,309	3,526,000
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	87,390,383	85,104,499

20. KUMPULANWANG PINJAMAN KENDERAAN DAN KOMPUTER / VEHICLE & COMPUTER LOAN FUND

	2004 RM	2003 RM
Kumpulanwang Pinjaman Kenderaan / Vehicle Loan Fund		
Baki pinjaman yang telah diluluskan / Balance of loans which have been approved	12,032,898	13,351,680
Baki yang belum dipinjamkan / Balance fund not borrowed	10,967,102	9,648,320
Baki kumpulanwang dibawa dan dihantar ke hadapan / Fund balance brought and carried forward	23,000,000	23,000,000
Kumpulanwang Pinjaman Komputer / Computer Loan Fund		
Baki pinjaman yang telah diluluskan / Balance of loans which have been approved	960,170	949,984
Baki yang belum dipinjamkan / Balance of loans which have not been borrowed	1,039,830	1,050,016
Baki Kumpulanwang dibawa dan dihantar ke hadapan / Fund balance brought and carried forward	2,000,000	2,000,000
JUMLAH BAKI KUMPULANWANG PINJAMAN KENDERAAN DAN KOMPUTER DIHANTAR KE HADAPAN / TOTAL VEHICLE AND COMPUTER FUND BALANCE CARRIED FORWARD	25,000,000	25,000,000

Jumlah faedah yang diperolehi pada tahun 2004 sebanyak RM508,884 telah dipindahkan ke Kumpulanwang Pelaburan pada 31 Disember 2004.

Interest payments totaling RM508,884 which had been obtained in the year 2004 has been transferred to Investment Fund on 31 December 2004

21. GERAN KERAJAAN TERTUNDA DIREALISASI / REALISATION OF DEFERRED GOVERNMENT GRANTS

	2004 RM	2003 RM
Susutnilai ke atas aset tetap / Depreciation of fixed assets	26,760,031	24,028,938
Belanja operasi projek yang tidak dimodalkan / Non capitalised expenditure on project operations	7,525,372	7,915,751
	34,285,403	31,944,689

22. GERAN KERAJAAN / GOVERNMENT GRANTS

		2004 RM	2003 RM
Geran kerajaan adalah untuk membiayai perbelanjaan seperti berikut :- / Government grants are for financing expenditure which are as follows:-			
(a)	Mengurus / Operating	287,888,227	326,130,561
(b)	Penyelidikan / Research	29,285,565	41,168,791
(c)	Skim Latihan Pembangunan Sumber Manusia / Human Development Training Scheme	7,716,416	6,582,000
(d)	Skim Latihan Akademik dan Biasiswa (SLAB) Academic Training and Scholarship Scheme (ATSS)	2,940,851	5,606,417
(e)	Skim Sangkutan Pembantu Pengajar / Assistant Tutor Support Scheme	26,547	0
(f)	Skim Pasca Siswazah / Post-graduate Scheme	1,600,000	2,000,000
(g)	Pembangunan Makmal Interim dan Penyelidikan Development of interim and research laboratories	0	2,500,000
		329,457,606	383,987,769

Peruntukan Belanja Mengurus yang telah diluluskan bagi tahun 2004 adalah sebanyak RM374,573,800 dan jumlah penerimaan sebenar adalah sebanyak RM287,888,227. Perbezaan diantara peruntukan yang diluluskan dengan yang diterima adalah sebanyak RM86,685,573.

Provision for Operating Expenditure which had been approved for the year 2004 total RM374,573,800 but actual receipt of funds is only RM287,888,277. The difference between the provision which had been approved and actually received is RM86,685,573.

23. PELBAGAI YURAN / MISCELLANEOUS FEES

		2004 RM	2003 RM
(a)	Yuran Pengajian / Tuition fees	41,326,797	40,559,543
(b)	Yuran Kolej Kediaman / Residential college fees	9,260,789	9,601,434
(c)	Yuran Kursus dan Seminar / Pendidikan Jarak Jauh dan Program Eksekutif / Distance Learning and Executive Programmes Course and Seminar fees	24,515,534	48,038,003
(d)	Yuran Lain / Other fees	17,200,176	12,678,457
		92,303,296	110,877,437

24. PENDAPATAN LAIN / OTHER INCOME

		2004 RM	2003 RM
Pendapatan mengikut klasifikasi kumpulanwang: / Income according to classification of funds			
(a)	Mengurus / Operating	4,362,146	6,883,909
(b)	Kolej Kediaman / Residential College	493,783	262,764
(c)	Pembangunan / Development	2,080,824	1,205,896
(d)	Penyelidikan / Research	5,140,135	5,979,041
(e)	Tabung Pusingan dan Amanah Lain / Revolving & Other Trust Fund	10,624,704	14,999,776
(f)	Penginapan dan Rekreasi / Accommodation & Recreation	967,801	759,922
(g)	Pelaburan / Investment	29	237,720
(h)	Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference & Study Visit	3,147,755	7,926,582
		26,817,177	38,255,610

25. PELARASAN TAHUN LALU / PREVIOUS YEAR ADJUSTMENT

	2004 RM	2003 RM
(a) Pindahan baki Tabung Pusat Islam yang diakaunkan sebagai Akaun Amanah / Transfer of balance Pusat Islam fund which has been accounted as Trust Account	0	195,961
(b) Melaraskan pendapatan agihan sewa daripada Canary Inforport Sdn. Bhd. bagi melunaskan sebahagian daripada kos pembinaan 4 buah dewan kuliah Adjustment to the distribution of rental income from Canary Inforport Sdn. Bhd. for amortising portion of the building cost of 4 lecture halls.	569,249	735,058
(c) Melaraskan perbelanjaan salah caj akaun Adjustment to expenditure mistakenly charged to the account	254,330	0
(d) Melaraskan semula hutang pecah kontrak staf dan pasca siswazah Readjustment of staff and post-graduates' breach of contract debts	(2,941,627)	0
(e) Melaraskan peruntukan susutnilai yang terlebih diambilkira pada tahun sebelum 2003 oleh kerana pertukaran sistem pengurusan aset Adjustment to the provision of depreciation which had been accounted for beforehand for the year before 2003 as result of changes to the asset management system	7,547,521	0
	5,429,473	931,019

26. PENGLIBATAN MODAL DAN BUKAN MODAL / CAPITAL AND NON CAPITAL INVOLVEMENT

	2004 RM	2003 RM
Perbelanjaan modal dan bukan modal yang diluluskan tetapi tidak diperuntukkan di dalam akaun : Capital and non capital expenditure which had been approved but not provided for in the accounts:		
- Baki nilai kerja pembinaan dalam kemajuan Balance value of works in progress	157,153,024	237,667,337
- Jumlah pesanan belian yang ditanggung Total committed purchase orders	51,084,903	35,304,471
	208,237,927	272,971,808

Mulai tahun 2003 jumlah nilai kerja yang belum dikontrakkan tidak diambilkira sebagai sebahagian daripada penglibatan modal.

Beginning year 2003, total value of work yet to be contracted has not been considered as part of the capital involvement.

27. LIABILITI KONTINGENSI / CONTINGENT LIABILITIES

		2004 RM	2003 RM
(a)	Bayaran terakhir Projek Pembinaan Lubang Kedua Padang Golf, UPM tertangguh sehingga mendapat keputusan mahkamah tinggi / Final payment for Projek Pembinaan Lubang Kedua Padang Golf, UPM Construction Project deferred pending receipt of High Court decision	901,710	901,710
(b)	Mercury Network Sdn Bhd telah mengemukakan tuntutan saman berkaitan Projek Pembinaan Dewan Kuliah Fakulti Pendidikan Mercury Network Sdn Bhd have served a summons pertaining to the Faculty of Education's Lecture Theatre Construction Project	0	212,194
(c)	Tindakan undang-undang oleh Canary Inforport Sdn Bhd terhadap UPM berkaitan dengan konsesi penggunaan tanah UPM Legal action by Canary Inforport Sdn Bhd against UPM in respect of use of UPM land concession	0	100,000,000
(d)	Tuntutan saman oleh Acctrack 21 Sdn Bhd terhadap UPM bagi kes hakcipta perisian komputer Court proceedings by Acctrack 21 Sdn Bhd against UPM in respect of computer software copyright	250,000	250,000
(e)	Tuntutan saman oleh staf terhadap UPM bagi kes pemberhentian kerja Court proceedings by staff against UPM in respect of Termination of employment	200,000	200,000
(f)	Tuntutan saman oleh staf terhadap staf UPM yang lain di mana UPM mengakujanji bertindak dan menguruskan bagi pihak defenden Court proceedings by staff against other UPM staff wherein UPM undertook to act and defend on behalf of the defendants	5,000,000	5,000,000
(g)	Tuntutan saman oleh pekerja kontraktor terhadap UPM berkaitan dengan pembinaan bangunan Court proceedings by contractor against UPM in respect of building construction	0	50,000
		6,351,710	106,613,904

28. PERBELANJAAN LUAR BIASA / EXTRAORDINARY EXPENDITURE

Sebanyak RM1,537,743 telah diakaunkan sebagai perbelanjaan luar biasa kerana penyelesaian di antara UPM dengan Canary Infoport Sdn. Bhd. (CISB) di mana satu perjanjian telah dimeterai yang melibatkan pengambilalihan aset dan kemudahan yang telah dibangunkan oleh pihak CISB.

A total of RM1,537,743 has been accounted as an extraordinary following the execution of a settlement agreement between UPM and Canary Infoport Sdn. Bhd. (CISB) which involved UPM acquiring the assets and facilities developed by CISB.

29. PERISTIWA SELEPAS TARIKH LEMBARAN IMBANGAN / EVENTS AFTER BALANCE SHEET DATE

Pada tahun 1997, UPM telah menandatangani perjanjian dengan Canary Infoport Sdn Bhd (CISB) untuk membangunkan tanah UPM seluas lima puluh (50) ekar dengan tempoh konsesi selama tiga puluh (30) tahun dan sebagai balasan UPM akan menerima sejumlah hasil sewaan bangunan dan kemudahan yang dikutip oleh CISB mengikut peratus yang telah ditetapkan dalam perjanjian.

Pada Fasa 1 dalam perjanjian yang sama, CISB telah membina enam belas (16) unit cyberports yang melibatkan kawasan seluas lima (5) ekar untuk disewakan dan sebanyak empat (4) buah dewan kuliah bernilai RM1,304,307 telah dibina dan kos pembinaan dewan kuliah tersebut akan diselaraskan (set-off) dengan pendapatan sewa untuk UPM oleh CISB.

Pada tahun 2003, CISB telah mengemukakan saman terhadap UPM berhubung perjanjian konsesi yang telah ditandatangani bersama. UPM dan CISB bersetuju supaya penyelesaian dibuat di antara kedua-dua pihak. Dan akhirnya satu perjanjian telah dimeterai di mana UPM perlu membayar kepada CISB sebanyak RM17,000,000. Dengan itu perjanjian yang lama dibatalkan dengan pengambilalihan sepenuhnya oleh UPM ke atas kemudahan-kemudahan dan tanah yang terlibat.

In 1997, UPM had entered into an agreement with Canary Infoport Sdn Bhd (CISB) to develop UPM land measuring fifty (50) acres with the concession of 30 years and as consideration UPM will receive a portion of income from the rental of buildings and facilities collected by CISB according to the agreed percentage as determined in the agreement.

In the 1st Phase of the same Agreement, CISB had built sixteen (16) cyberport units involving an area measuring five (5) acres to be rented out and four (4) lecture halls worth RM1,304,307 have also been built and the construction cost of building the lecture halls shall be set off against the rental due to UPM by CISB.

In 2003, CISB has commenced proceedings against UPM in respect of the concession agreement executed by the parties. UPM dan CISB have agreed that an amicable agreement be reached among themselves. Finally, UPM and CISB have reached an agreement whereby UPM had to pay CISB a sum of RM17,000,000. Following that the earlier agreement was terminated with UPM acquiring the entire said facilities and land.

30. ANGKA-ANGKA PERBANDINGAN / COMPARATIVE FIGURES

Mulai tahun 2004, terma Pemberian Modal telah ditukar kepada Geran Kerajaan Tertunda dan telah diklasifikasikan semula serta digabungkan ke dalam Kumpulanwang Pembangunan.

Sehubungan dengan itu, sebahagian daripada angka-angka bandingan tertentu juga telah dikelaskan semula supaya menurut pengkelasan tahun semasa.

Beginning of the year 2004, the terms of the Capital Grants have been changed to Deferred Government Grants and have been reclassified and consolidated in Development Fund.

As a result, a part of the specific comparative figures have also been reclassified so as to conform with the current year classification.

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