

LAPORAN TAHUNAN

2002

ANNUAL REPORT



UNIVERSITI PUTRA MALAYSIA

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2002



Perpustakaan Sultan Abdul Samad
Universiti Putra Malaysia

TARIKH DIPULANGKAN (DATE DUE)

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MISI

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.

Wawasan
Universiti
ialah untuk
menjadi
Universiti
Bertaraf
Dunia

The
University's
vision is
to be
a world class
university

MISSION

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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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

UPM has established eight (8) goals to realize its vision. Each goal has its own specific objectives. The achievement of each objective depends on the execution of respective action plan. 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 upgrade UPM as a renowned centre of learning, agricultural and bio-resources services internationally;
- To enhance a quality management system that is effective, efficient, transparent and client-friendly;
- To develop and create excellent human resources and professional environment;
- To promote an Information and Communication Technology (ICT) culture through e-University;
- To effectively generate and manage University Financial Resources;
- To establish UPM as the Centre of Professional Development Services and Continuing Education.

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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.

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 Bersabar
- Cekap, Cepat dan Tepat
- Ikhlas
- Penyayang
- Berdisiplin
- Bersih
- Bertanggungjawab
- Berdedikasi

QUALITY POLICY

We, the staff of Universiti 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.

WORK ETHICS

Definition

Work Ethics is the behavioral and conduct principles and guidance that are based on good universal values adhered by every staff of Universiti Putra Malaysia

Objectives

- To instil positive attitude in discharging given tasks/duties that will improve the quality of the service
- To improve 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

The Universiti Putra Malaysia Work Ethics should be implemented and practised based on the following principles:

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

Value

The Universiti Putra Malaysia Work Ethics is based on 12 good values

- Trustworthy
- Just
- Truthful and Transparent
- Wise
- Grateful and Patient
- Efficient, Prompt and Accurate
- Sincere
- Compassionate
- Disciplined
- Honest
- Responsible
- Dedicated



CANSELOR

CHANCELLOR

DYMM Sultan Sharafuddin Idris Shah Ibni

Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj

(Mulai 1 April 2002 / Beginning 1st April 2002)



CANSELOR

CHANCELLOR

Yang Amat Berbahagia Tun Dato' Seri (Dr.) Haji Hamdan Sheikh Tahir

(Sehingga 31 Mac 2002 / Until 31st March 2002)



PRO-CANSELOR

PRO-CHANCELLOR

Yang Berbahagia

Tan Sri Dato'

Haji Hashim Aman



PRO-CANSELOR

PRO-CHANCELLOR

Yang Berbahagia

Tan Sri Dato'

Thong Yaw Hong

Lembaga Pengarah

Board of Directors

Pengerusi Chairman

Y.Bhg. Datuk Ramly Ahmad



Ahli

Members

1. Y.Bhg. Prof. Dato' Dr. Ir. Mohd. Zohadie Bardaie
(Naib Canselor / Vice Chancellor)
2. Y.Bhg. Dato' Ambrin Buang
3. Dr. Wan Abdul Aziz Wan Abdullah
4. Y.Bhg. Datuk Dr. Abdul Aziz Sheikh Abdul Kadir
5. Y.Bhg. Datuk Haji Isahak Mohd. Yusuf
6. Y.Bhg. Tan Sri Dato' Lee Shen Cheng
7. Y.Bhg. Datuk Patrick Lim Soo Kit



Setiausaha

Secretary

Encik Kamalul Aripin Musa
(Pendaftar / Registrar)



Senat

Senate

PENGERUSI / CHAIRMAN

Y.Bhg. 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)

Prof. Madya (Assoc. Prof.) Dr. Hj. Makhdzir Mardan

- Timbalan Naib Canselor (Pembangunan)

- Deputy Vice-Chancellor (Development)

Prof. Madya (Assoc. Prof.) Dato' Dr. Hj. Idris Abdol

- Timbalan Naib Canselor (Hal Ehwal Pelajar)

- Deputy Vice-Chancellor (Student Affairs)

Prof. Dr. Wan Sulaiman Wan Harun

- Provos, UPM Kampus Bintulu (sehingga April)

- Provos, UPM Bintulu Campus (Until April)

Prof. Dr. Mohd Yusof Hussin

- Provos, UPM Kampus Bintulu (mulai Mei)

- Provos, UPM Bintulu Campus (Beginning May)

Prof. Dr. Shaik Mohd. Noor Alam S.M. Hussain

- Dekan, Fakulti Bahasa Moden dan Komunikasi

- Dean, Faculty of Modern Languages and Communication

Prof. Dr. Abdullah Al-Hadi Muhammed

- Dekan, Fakulti Ekologi Manusia

- Dean, Faculty of Human Ecology

Prof. Dr. Nik Mustapha Raja Abdullah

- Dekan, Fakulti Ekonomi dan Pengurusan

- Dean, Faculty of Economics and Management

Prof. Dr. Abdul Salam Abdullah

- Dekan, Fakulti Perubatan Veterinar (sehingga November)

- Dean, Faculty of Veterinary Medicine (Until November)

Prof. Dr. Mohd Zamri Saad

- Dekan, Fakulti Perubatan Veterinar (mulai Disember)

- Dean, Faculty of Veterinary Medicine (Beginning December)

Prof. Ir. Dr. Radin Umar Radin Sohadi

- Dekan, Fakulti Kejuruteraan

- Dean, Faculty of Engineering

Prof. Dr. Kamariah Abu Bakar

- Dekan, Fakulti Pengajian Pendidikan (sehingga November)
- Dean, Faculty of Educational Studies (Until November)

Prof. Madya (Assoc. Prof.) Dr. Zakaria Kasa

- Dekan, Fakulti Pengajian Pendidikan (mulai Disember)
- Dean, Faculty of Educational Studies (Beginning December)

Prof. Dato' Dr. Nik Muhamad Nik Majid

- Dekan, Fakulti Perhutanan (sehingga Mac)
- Dean, Faculty of Forestry (Until March)

Prof. Madya (Assoc. Prof.) Dr. Mohd Hamami Sahri

- Dekan, Fakulti Perhutanan (mulai April)
- Dean, Faculty of Forestry (Beginning April)

Prof. Madya (Assoc. Prof.) Dr. Mohd. Khanif Yusop

- Dekan, Fakulti Pertanian
- Dean, Faculty of Agriculture

Prof. Madya (Assoc. Prof.) Dr. Mustafa Kamal Mohd Shariff

- Dekan, Fakulti Rekabentuk dan Senibina
- Dean, Faculty of Design and Architecture

Prof. Madya (Assoc. Prof.) Dr. Abd. Azim Abdul Ghani

- Dekan, Fakulti Sains Komputer dan Teknologi Maklumat
- Dean, Faculty of Computer Science and Information Technology

Prof. Dr. Gulam Rusul Rahmat Ali

- Dekan, Fakulti Sains Makanan dan Bioteknologi (sehingga November)
- Dean, Faculty of Food Science and Biotechnology (Until November)

Prof. Dr. Jinap Selamat

- Dekan, Fakulti Sains Makanan dan Bioteknologi (mulai Disember)
- Dean, Faculty of Food Science and Biotechnology (Beginning December)

Prof. Madya (Assoc. Prof.) Dr. Jammal Ahmad Essa

- Dekan, Fakulti Perubatan dan Sains Kesihatan (sehingga April)
- Dean, Faculty of Medicine and Health Sciences (Until April)

Prof. Dr. Azhar Md. Zain

- Dekan, Fakulti Perubatan dan Sains Kesihatan (mulai Mei)
- Dean, Faculty of Medicine and Health Sciences (Beginning May)

Prof. Dr. Wan Md. Zin Wan Yunus

- Dekan, Fakulti Sains dan Pengajian Alam Sekitar
- Dean, Faculty of Science and Environmental Studies

Prof. Dr. Aini Ideris

- Dekan, Sekolah Pengajian Siswazah
- Dean, School of Graduate Studies

Prof. Madya (Assoc. Prof.) Hj. Zainal Abidin Kidam

- Dekan, Sekolah Pengajian Siswazah Pengurusan
- Dean, Graduate School of Management

Prof. Dr. Dahlan Ismail

- Dekan, Fakulti Sains Pertanian dan Makanan (UPMKB)
- Dean, Faculty of Agriculture and Food Science (UPMKB)

Prof. Madya (Assoc. Prof.) Dr. Iskandar Abdullah

- Dekan, Fakulti Sains Sosial dan Pengurusan (UPMKB)
- Dean, Faculty of Social Science and Management (UPMKB)

Prof. Dr. Abu Bakar Salleh

- Pengarah, Institut Biosains
- Director, Institute of Bioscience

Prof. Ir. Dr. Wan Ishak Wan Ismail

- Pengarah, Institut Teknologi Maju (ITMA)
- Director, Institute of Advanced Technology (ITMA)

Prof. Madya (Assoc. Prof.) Dr. Salihan Siais

- Pengarah, Institut Pendidikan dan Pembelajaran Jarak Jauh (IDEAL)
- Director, Institute for Distance Education and Learning (IDEAL)

Prof. Madya (Assoc. Prof.) Dr. Abdul Aziz Saharee

- Pengarah, Pusat Program Luar
- Director, Center for External Program

Prof. Dr. Rahim Md Sail

- Pengarah, Institut Pengajian Komuniti dan Keamanan (PEKKA)
- Director, Institute for Community and Peace Studies (PEKKA)

Prof. Dr. Kamel Ariffin Mohd Atan

- Pengarah, Institut Penyelidikan Matematik (INSPERM)
- Director, Institute of Mathematical Research

Prof. Dr. Borhanuddin Mohd Ali

- Pengarah, Institut Multimedia dan Perisian (IMP)
- Director, Institute of Multimedia and Software

Puan Kamariah Abdul Hamid

- Ketua Pustakawan
- Chief Librarian

Prof. Madya (Assoc. Prof.) Dr. Saberi Othman

- Pengetua, Kolej Kelima
- Principal, Fifth College

Prof. Dr. Fatimah Mohd. Arshad**Prof. Dr. Annuar Md Nassir**

Prof. Dr. Mohammed Yusoff

Prof. Dr. Wan Omar Abdullah

Prof. Dr. Mohamed Ismail Abdul Karim

Prof. Dr. Abdul Rahman Md. Aroff

Prof. Dr. Shamshuddin Jusop

Prof. Dr. Sariah Meon

Prof. Dr. Mohd Yusof Sulaiman

Prof. D.N. Trikha

Prof. Dr. Mohamed Shariff Mohamed Din

Prof. Dr. Yaakob Che Man

Prof. Dr. Kamaruzaman Jusoff

Prof. Dr. Mad Nasir Shamsudin

Prof. Dr. Md. Nordin Hj. Lajis

Prof. Hanafie Mohd. Imam

Prof. Dr. Kaida Khalid

SETIAUSAHA / SECRETARY

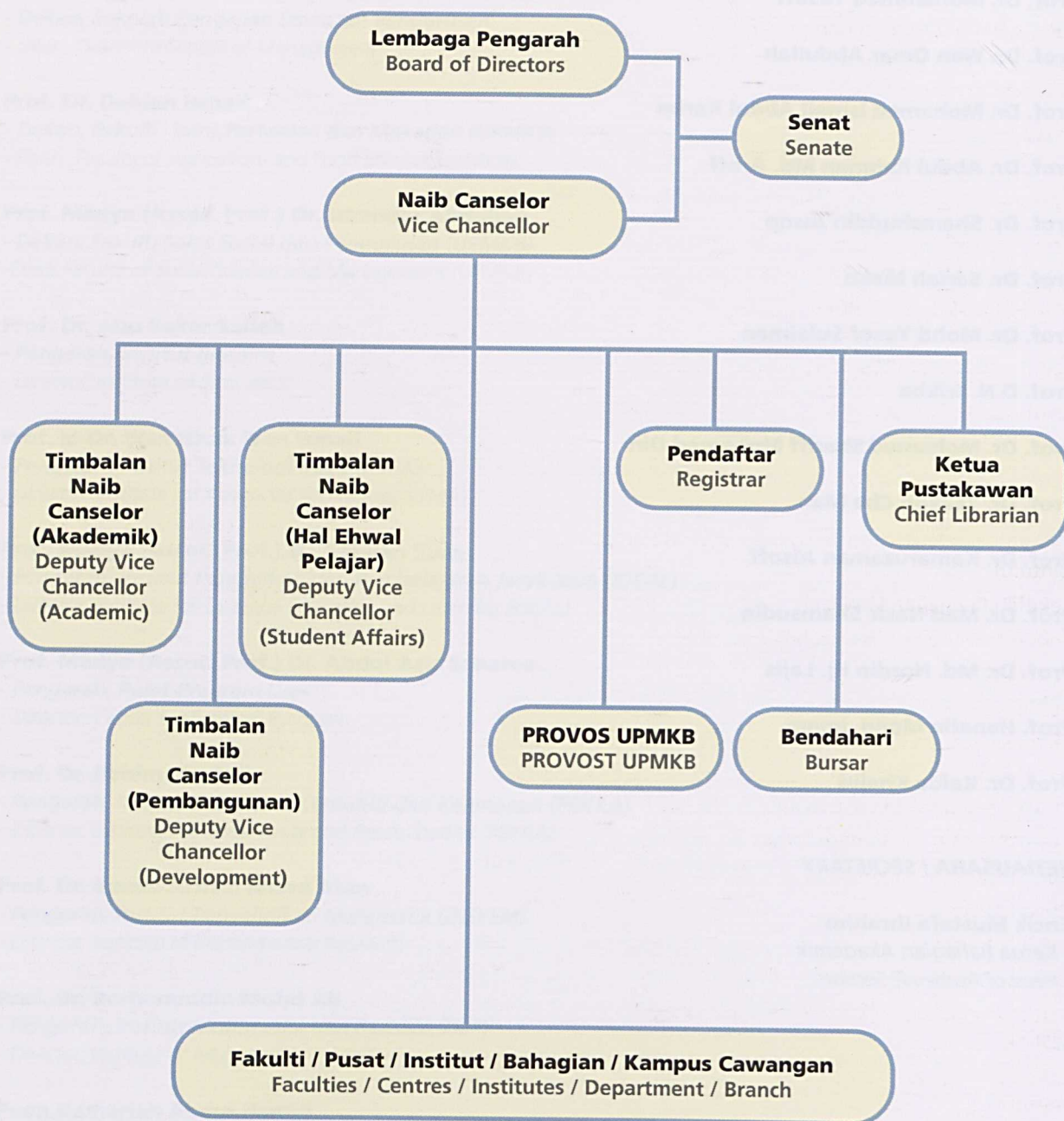
Encik Mustafa Ibrahim

- Ketua Bahagian Akademik

- Head of Academic Section

Struktur Organisasi

Organisational Structure



Fakulti / Pusat / Institut / Bahagian / Kampus Cawangan

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 dan Pengajian Alam Sekitar
 Fakulti Sains Komputer dan Teknologi Maklumat
 Fakulti Sains Makanan dan Bioteknologi
 Fakulti Sains Pertanian dan Makanan (UPM
 Kampus Bintulu)
 Fakulti Sains Sosial dan Pengurusan (UPM Kampus
 Bintulu)
 Sekolah Pengajian Siswazah
 Sekolah Pengajian Siswazah Pengurusan
 Pusat Program Luar
 Pusat Islam
 Pusat Kebudayaan dan Kesenian Sultan
 Salahuddin Abdul Aziz Shah
 Pusat Pengurusan Penyelidikan
 Pusat Pembangunan Perniagaan
 Pusat Pengurusan Ilmu
 Pusat Alumni
 Institut Biosains
 Institut Multimedia dan Perisian
 Institut Pendidikan dan Pembelajaran Jarak Jauh
 (IDEAL)
 Institut Pengajian Komuniti dan Keamanan
 (PEKKA)
 Institut Teknologi Maju (ITMA)
 Institut Gerontologi
 Institut Penyelidikan Matematik
 Taman Pertanian Universiti
 Kampus Cawangan Bintulu

Faculty / Centre / Institute / Division / Branch Campus

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 Sciences
 Faculty of Veterinary Medicine
 Faculty of Design and Architecture
 Faculty of Science and Environmental Studies
 Faculty of Computer Science and Information
 Technology
 Faculty of Food Science and Biotechnology
 Faculty of Agriculture and Food Science (UPMKB)
 Faculty of Social Science and Management (UPMKB)
 School of Graduate Studies
 Graduate School of Management
 Center for External Program
 Islamic Center
 Sultan Salahuddin Abdul Aziz Shah Arts and Cultural
 Center
 Research Management Center
 University Business Center
 Knowledge Management Center
 Alumni Centre
 Institute of Bioscience
 Institute of Multimedia and Software
 Institute for Distance Education and Learning (IDEAL)
 Institute Community and Peace Studies (PEKKA)
 Institute of Advance Technology (ITMA)
 Institute of Gerontology
 Institute of Mathematical Research
 University Agriculture Park
 Bintulu Campus

Pengurusan

Management



Naib Canselor

Vice Chancellor

1. 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)

1. Prof. Dr. Muhamad Awang
FASc. Drs. (ITB), Ph.D. (Sheffield)



Timbalan Naib Canselor (Pembangunan)

Deputy Vice Chancellor (Development)

2. Prof. Madya (Assoc. Prof.) Dr. Makhzir Mardan
Dip. Agric. (UPM), B.S., M.S. (Louisiana State), Ph.D. (Guelph)



Timbalan Naib Canselor (Hal Ehwal Pelajar)

Deputy Vice Chancellor (Student Affairs)

3. Prof. Madya (Assoc. Prof.) Dato' Dr. Haji Idris Abdol
Dip. Agric. (Malaya), B.S., M.S., Ph.D. (Louisiana State)



Pendaftar

Registrar

4. Kamalul Aripin Musa
B.A. (Hons) (Malaya)



Bendahari

Bursar

5. Hajjah Noormah Haji Mohamed
Corporation of Secretaries (UK), ADIA (ITM), R.A. (M)



Ketua Pustakawan

Chief Librarian

6. Kamariah Abdul Hamid
A.L.A. (London), M.L.S. (Hawaii)

LAPORAN NAIB CANSOLOR

VICE CHANCELLOR'S REPORT



Laporan Naib Canselor

Kemunculan era globalisasi, perkembangan teknologi biologi (bioteknologi), bioekonomi dan ekonomi yang berasaskan pengetahuan atau k-Ekonomi merupakan satu cabaran baru kepada UPM untuk melahirkan graduan yang relevan, fleksibel, cekap, dinamik dan berakhlak mulia serta dapat menghasilkan penemuan yang dapat menyumbang kepada kemajuan negara. Oleh yang demikian melalui Rancangan Strategik UPM 2001-2010, lapan matlamat telah pun digaris untuk menjadikan UPM sebagai sebuah universiti terunggul dalam bidang pembelajaran dan penyelidikan yang menyumbang bukan sahaja untuk kemajuan manusia dan penerokaan ilmu tetapi juga kepada pembentukan kekayaan dan pembangunan negara.

ENROLMEN DAN PENGAMBILAN PELAJAR

Pada tahun 2001 UPM telah mengambil seramai 8,928 pelajar manakala pada tahun 2002 jumlah pengambilan telah berkurangan sebanyak 4.77% kepada 8,502 orang. Daripada jumlah itu 230 orang pelajar Doktor Falsafah, 1,650 orang pelajar Sarjana, 5,381 orang pelajar Ijazah Pertama dan 1,241 orang pelajar Diploma.

Dari segi enrolmen pelajar, UPM mempunyai seramai 30,755 pelajar (tidak termasuk pelajar Pendidikan Jarak Jauh, Program Siswazah Pengurusan dan Program Kerjasama) berbanding 32,321 orang pada tahun sebelumnya. Jumlah ini menunjukkan penurunan enrolmen sebanyak 4.84% bagi ijazah pertama dan diploma.

PENGAJIAN SISWAZAH

Sekolah Pengajian Siswazah menjadi arkitek penting bagi merealisasikan hasrat UPM untuk melahirkan lebih ramai penyelidik dan tenaga pakar negara dalam bidang-bidang tertentu. Oleh itu, pada tahun 2002 seramai 891 pelajar telah mendaftar dalam pelbagai bidang pengajian yang menjadikan enrolmen pelajarannya mencecah angka 5,850 orang berbanding 5,266 orang pada tahun 2001, iaitu peningkatan 11.1%. Daripada jumlah tersebut, seramai 836 orang adalah pelajar-pelajar dari 51 buah negara di seluruh dunia.



Vice Chancellor's Report

The emergence of the globalization era, the advancement in biotechnology and bio economy as well as knowledge economy or k-economy is a new challenge for UPM to produce graduates who are relevant, flexible, efficient, dynamic, of respectable character and able to contribute to the progress of the nation. In response to this challenge, UPM has revised its strategic planning for the period of 2001-2010. Eight objectives have been identified in our mission to enhance the status of UPM as a renowned university in the areas of learning and research. UPM hopes

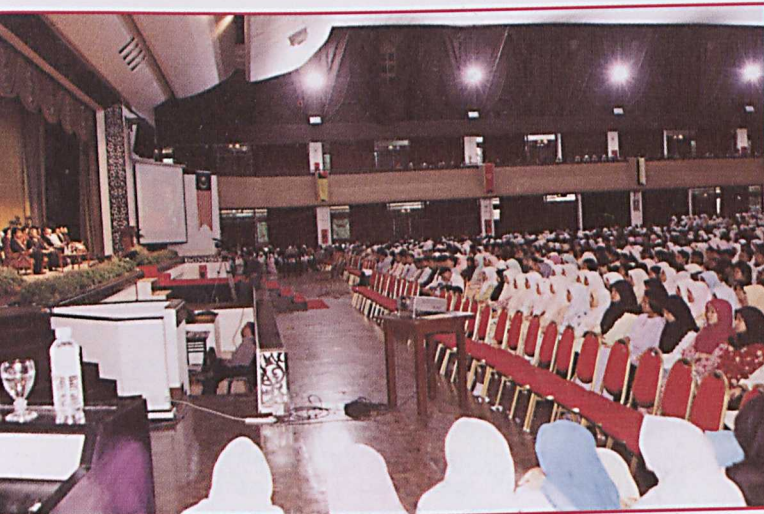
to contribute to the progress of knowledge and mankind and also the creation of wealth and development of the nation.

STUDENT INTAKE AND ENROLMENT

The student intake for 2001 was 8,928 and this number was reduced by 4.77% to 8,502 students in 2002. Out of this total, there were 230 Doctor of Philosophy candidates, 1,650 Masters students, 5,381 Bachelor's degree students and 1,241 Diploma students.

In terms of enrolment, UPM has 30,755 students (excluding Distance Learning students, Management Graduate Program and Collaborative Program) compared to 32,321 previously. This shows a reduction of 4.84% in the enrolment of First degree and Diploma students.





PENGAJIAN SISWAZAH PENGURUSAN

Sekolah Pengajian Siswazah Pengurusan (GSM) dengan kerjasama Fakulti Ekonomi dan Pengurusan menawarkan pelbagai program pengajian siswazah dan program eksekutif. Pada tahun 2002, GSM telah menerima masuk 316 orang pelajar baru yang menjadikan enrolmen keseluruhannya 620 orang di mana Program Sarjana Pentadbiran Perniagaan (MBA) menjadi pilihan utama.

PROGRAM JARAK JAUH (PJJ)

Institut Pendidikan dan Pembelajaran Jarak Jauh UPM atau dikenali sebagai IDEAL menjadi entiti penting dalam membantu negara melahirkan tenaga profesional dari kalangan masyarakat yang bekerja serta ingin mempertingkatkan tahap pendidikan mereka. Pengambilan pelajar PJJ pada tahun 2002 adalah seramai 2,232 orang yang menjadikan jumlah enrolmen pelajarinya mencatatkan pertambahan 17% iaitu 15,342 orang



GRADUATE STUDIES

The School of Graduate Studies is pertinent in UPM's quest to produce more researchers and experts in various fields. Hence, in 2002, 891 students registered in the various course programs offered making the total enrolment to be 5,850 compared to 5,266 in 2001, that is an increase of 11.1%. From this number 836 students are from 51 different countries.

GRADUATE SCHOOL OF MANAGEMENT

The Graduate School of Management with the cooperation of the Economic and Management Faculty offers various post graduate and executive programs. In 2002 the Graduate School of Management accepted 316 new students making the total enrolment 620 and the number one course choice was the Masters In Business Administration Program.

DISTANCE LEARNING PROGRAM (PJJ)

The UPM Institute For Distance Education and Learning (IDEAL) has been one important entity in helping the working class who wish to further their studies. The enrolment for 2002 was 2,232 making the total enrolment 15,342 that is an increase of 17% compared to 13,109 the year before. The increase is in line with the government's aim to allow Malaysians especially the workers and professionals in the public sector to further their studies. In 2002 the distant learning program produced 826 graduates.

berbanding 13,109 orang pada tahun sebelumnya. Peningkatan ini sejajar dengan matlamat kerajaan untuk memberi peluang kepada rakyat Malaysia terutama para pekerja dan profesional di sektor awam dan swasta untuk melanjutkan pendidikan mereka ke peringkat yang lebih tinggi. Program PJJ juga telah melahirkan graduan seramai 826 orang pada tahun 2002.

PROGRAM KERJASAMA UPM - IPTS

Pusat Program Luar UPM juga menjadi satu lagi saluran penting untuk melahirkan masyarakat berpendidikan tinggi dengan kerjasama Institut Pengajian Tinggi Swasta. Pada tahun 2002, UPM telah bekerjasama dengan 26 kolej swasta untuk mengendalikan pelbagai program pengajian. Seramai 1,583 orang telah mendaftar dalam pelbagai program pengajian kerjasama ini iaitu 89 orang untuk program ijazah pertama dan 1,494 orang program diploma. Secara keseluruhannya jumlah enrolmennya ialah 6,893 orang sepanjang tahun 2002. Pemantauan tahap pencapaian dan kualiti akademik IPTS dibuat secara berterusan dari semasa ke semasa. Melalui program ini juga seramai 2,628 orang pelajar telah bergraduat pada tahun 2002.

PENYELIDIKAN

Dalam bidang penyelidikan UPM telah menunjukkan peningkatan yang amat membanggakan. UPM telah menerima geran penyelidikan IRPA (*Intensification of Research Priority Area*) yang terbesar berbanding dengan IPTA dan Institut Penyelidikan lain. Pada tahun 2002, UPM telah menerima hampir RM115 juta peruntukan IRPA yang telah diluluskan untuk membiayai 152 projek.

Selain itu UPM juga menerima geran penyelidikan daripada agensi-agensi tempatan dan luar negara antaranya *International Atomic Energy Agency (IAEA)*, *Japan International Cooperation Agency (JICA)*, *International Plant Genetic Resources Institute (IPGRI)*, *Ministry of Housing and Local Government*, *Ministry of Agriculture*, *Tenaga Nasional Berhad (TNB)*, *Malaysian Palm Oil Board (MPOB)*, *FELDA*, *Sapura Holdings Berhad* dan lain-lain lagi. UPM juga telah menerima bayaran sebanyak RM4.943 juta untuk bayaran perundingan bagi tahun 2002 dan dijangka jumlah ini akan terus meningkat.

UPM-IPTS COLLABORATIVE PROGRAM

The Centre for External Program with the cooperation of Private Higher Institutions of Learning is another important channel to produce a better educated society. In 2002, UPM collaborated with 26 private colleges to organise various course programs. 1,583 students registered in the various programs offered i.e. 89 for the first degree program and 1,494 for the diploma program. The total enrolment is 6,893 students for the year 2002. The level of achievement and academic quality are monitored continuously from time to time. The collaborative programs produced 2,628 graduates in 2002.

RESEARCH

UPM is proud of its achievement in the field of research. UPM received the biggest allocation of the IRPA (*Intensification of Research Priority Area*) research grant compared to other Public Higher Institutions of Learning and Research Institutes. In 2002, UPM received almost RM115 million to fund 152 projects.

UPM also received research grants from local and foreign agencies like *International Atomic Energy Agency (IAEA)*, *Japan International Cooperation Agency (JICA)*, *International Plant Genetic Resources Institute (IPGRI)*, *Ministry of Housing and Local Government*, *Ministry of Agriculture*, *Tenaga Nasional Berhad (TNB)*, *Malaysian Palm Oil Board (MPOB)*, *FELDA*, *Sapura Holdings Berhad* etc. UPM received RM4.943 million as consultation fee for the year 2002 and the amount is expected to increase further.

INFORMATION AND COMMUNICATION TECHNOLOGY POLICY (ICT)

Apart from the on-line Lecture Application via e-University in the previous year, UPM has widened the e-University concept by providing the hand phone SMS facility for students to obtain information regarding intake and examination results. This facilities will provide an opportunity for faster access to information required by students. This will be continued and widened to include time table, registration etc. The Students' Health Centre has started using the e-Clinic system in all its dealings.

DASAR TEKNOLOGI KOMUNIKASI DAN MAKLUMAT (ICT)

Selain memperkenalkan kaedah Aplikasi Kuliah *on-line* melalui e-Universiti pada tahun sebelumnya, UPM telah memperluaskan lagi konsep e-Universiti dengan menyediakan kemudahan SMS menerusi telefon bimbit untuk pelajar mendapat maklumat mengenai kemasukan dan keputusan peperiksaan. Kemudahan seperti ini akan dapat memberi peluang kepada pelajar mendapat akses kepada maklumat berkenaan dengan lebih cepat. Kemudahan ini akan diteruskan dan diperluaskan meliputi jadual waktu, pendaftaran dan sebagainya. Pusat Kesihatan Pelajar pula telah memulakan sistem e-Klinik yang mana semua proses perawatan dijalankan secara berkomputer keseluruhannya.

ANUGERAH DAN PENERBITAN

Tahun 2002 adalah tahun emas penyelidikan UPM apabila para penyelidiknya telah berjaya memenangi banyak anugerah sama ada di peringkat antarabangsa atau kebangsaan. Di peringkat antarabangsa, para penyelidik UPM telah berjaya memenangi dua pingat emas dan tiga pingat perak di Pertandingan Reka Cipta Antarabangsa ke-30 di Geneva, Switzerland. Sementara di Pameran Penemuan dan Produk Baru (INPEX 2002) yang diadakan di Pittsburgh, USA pula, penyelidik UPM telah memenangi dua pingat emas, tiga pingat perak dan satu pingat gangsa.

Di peringkat kebangsaan pula, UPM telah berjaya mendapat satu pingat emas, tiga pingat perak dan dua pingat gangsa di Anugerah I-TEX 2002 (*International, Invention, Innovation Industrial Design and Technology*). Sementara di Ekspo Sains dan Teknologi (S&T) pula UPM telah berjaya mendapat 23 pingat yang terdiri dari enam pingat emas, sembilan pingat perak dan lapan pingat gangsa daripada 24 penyertaan.

Selain daripada itu, UPM juga menerbitkan 23 judul buku karya asli, 4 isu *Pertanika Journal of Tropical Agriculture*, 2 isu *Pertanika Journal of Science & Technology* dan 6 *Pertanika Journal of Social Sciences & Humanities*. Penerbit UPM juga menerbitkan 15 judul *prosiding* sepanjang tahun 2002. Sementara hasil-hasil penyelidikan telah dipatenkan dan dikomersialkan.



AWARDS AND PUBLICATIONS

2002 is a golden year for research at UPM when its researchers successfully achieved numerous awards at national and international levels. UPM researchers won two gold medals and three silver medals at the 30th International Invention Competition in Geneva, Switzerland. At the New Product and Finding Exhibition (INPEX 2002) in Pittsburgh, USA, researchers from UPM won two gold medals, three silver medals and one bronze medal.

At the national level, UPM successfully bagged one gold medal, three silver medals and two bronze medals at the I-TEX 2002 Awards (International, Invention, Innovation Industrial Design and Technology). UPM also bagged 23 medals i.e. six gold medals, nine silver medals and eight bronze medals out of 24 entries at the Science and Technology Expo.

Apart from that, UPM has published 23 original book titles, 4 issues of *Pertanika Journal of Tropical Agriculture*, 2 issues of *Pertanika Journal of Science and Technology*





PENGURUSAN BERKUALITI

UPM telah memulakan usaha membentuk sistem pengurusan yang berkualiti dan diiktiraf di peringkat antarabangsa melalui ISO 9000. Ketika ini tiga Fakulti telah berjaya mendapat pengiktirafan ISO 9000 iaitu Fakulti Perubatan Veterinar (1999), Fakulti Kejuruteraan (2001) dan yang terbaharu Fakulti Sains dan Pengajian Alam Sekitar (2002). Di samping itu, Fakulti Kejuruteraan telah berjaya memenangi tempat kedua bagi Anugerah Kualiti Y.A.B. Menteri Besar Selangor 2002.

PIAGAM PELANGGAN DAN ETIKA KERJA

UPM telah mengambil langkah mengadakan Piagam Pelanggan yang boleh diakses melalui Laman Web UPM dan juga melancarkan Panduan Etika Kerja UPM. Etika Kerja UPM digubal untuk beberapa objektif iaitu antara lainnya ialah untuk menanamkan sifat positif dalam menjalankan tugas dan mempertingkatkan perkhidmatan yang cemerlang untuk memenuhi kehendak pelanggan. Dengan berpanduan Etika Kerja ini akan membolehkan UPM melaksanakan Pelan Strategi dengan lebih cekap dan berkesan.

PENGURUSAN SUMBER MANUSIA

Pada tahun 2002, seramai 286 orang telah dilantik mengisi pelbagai kekosongan jawatan. Daripada jumlah itu, seorang dari Kumpulan Pengurusan Tertinggi, 150 orang dari Kumpulan Pengurusan dan Profesional dan 135 orang dari Kumpulan Sokongan. Sementara itu, seramai 70 orang dari Pegawai Kumpulan Pengurusan dan Profesional dan 228 orang pegawai Kumpulan Sokongan telah dilantik secara kontrak bagi melaksanakan

and 6 Pertanika Journal of Social Sciences and Humanities. The UPM Publisher has also published 15 titles of proceedings in the year 2002. UPM research products and output have also been patented and commercialized.

QUALITY MANAGEMENT

UPM has made the effort to establish a quality management system which is acknowledged internationally via the ISO 9000 certification. To date, three faculties have received the ISO 9000 certification i.e. the Faculty of Veterinary Medicine (1999), Faculty of Engineering (2001) and the latest is the Faculty of Science and Environmental Studies (2002). The Faculty of Engineering has also managed to secure second place for the YAB Menteri Besar Selangor 2002 Quality Award.

CLIENT'S CHARTER AND WORK ETHICS

UPM has launched its Work Ethics Guide and UPM's client charter can be accessed via the UPM Website. The objectives of UPM Work Ethics are to instill positive work attitude and to work towards excellence in order to satisfy the clients. It is hoped that the Work Ethics will enable UPM to carry out its Strategic Plan more effectively and efficiently.

HUMAN RESOURCE MANAGEMENT

In the year 2002, 286 staff were recruited to fill various vacancies. The breakdown is one for the Highest Level Management Group, 150 for the Professional and Management Group and 135 for the Support Group. Apart from that, 70 contract officers for the Professional and Management Group and 228 contract officers for the Support Group were also recruited to enable all university activities to be carried out successfully.

In 2002, 275 UPM officers were promoted, 52 retired and 89 officers were given study leave to further their studies; Masters (16), Doctor of Philosophy (73) locally and abroad. Sabbatical leave was also approved to 29 academic staff.

185 officers consisting of 74 officers from the Professional and Management Group and 111 from the Support Group received the Excellent Service Award in 2002. UPM has also introduced three new awards beginning 2002 i.e. Setia Putra Award (174 officers), Jasa Putra Award (39 officers) and Jasamu Dikenang Award (6 officers). These awards are as a gesture of appreciation from UPM



perjalanan aktiviti-aktiviti Universiti yang lebih sempurna

Sepanjang tahun 2002 juga, seramai 275 orang pegawai UPM telah dinaikkan pangkat, 52 orang telah bersara dan 89 orang telah diluluskan cuti belajar bagi melanjutkan pelajaran dalam bidang Sarjana (16) dan Doktor Falsafah (73) di dalam dan luar negara sepanjang tahun. Di samping itu, seramai 29 orang pegawai akademik telah diluluskan cuti sabatikal.

Seramai 185 orang yang terdiri dari 74 orang Kumpulan Pengurusan dan Profesional dan 111 orang Kumpulan Sokongan telah menerima Anugerah Khidmat Cemerlang tahun 2002. Selain itu, UPM juga memperkenalkan tiga anugerah lain mulai 2002 iaitu Anugerah Setia Putra kepada 174 orang pegawai, Anugerah Jasa Putra kepada 39 orang pegawai dan Anugerah Jasamu Dikenang kepada 6 orang pegawai. Anugerah-anugerah ini diberi sebagai menghargai jasa para pegawai UPM yang telah berkhidmat lebih dari 20 tahun, meninggal dunia semasa bertugas dan yang telah bersara. Selain itu, 5 orang pegawai telah dianugerahkan Anugerah *Fellowship* Naib Canselor. Bersesuaian dengan penstrukturan semula Sistem Saraan Baru (SSB) ke Sistem Saraan Malaysia (SSM), seramai 3,361 orang pegawai telah menerima SSM sementara 56 orang pegawai memilih kekal dalam Sistem Saraan Baru.

PEMBANGUNAN FIZIKAL

Sepanjang tahun 2002, UPM telah meluluskan 34 projek pembangunan di kampus Serdang dan Bintulu yang meliputi projek pembinaan baru, kerja-kerja menaik taraf, pengubahsuaian dan perolehan peralatan utama. Peruntukan Kerajaan bagi maksud pembangunan fizikal pada tahun 2002 adalah sebanyak RM169.4 juta, manakala peruntukan selebihnya ditampung oleh Kumpulan Wang Pembangunan UPM.

to officers who served UPM for more than 20 years, died on duty or those who have retired. In the same year, 5 officers received the Vice Chancellor's Fellowship Award.

Under the restructuring of the New Remuneration System (SSB) to the Malaysia Renumeration System (SSM), 3,361 officers have opted to join the SSM while 56 officers have chosen to remain with the SSB.

PHYSICAL DEVELOPMENT

In the year 2002, UPM has approved 34 development projects for both the Serdang and Bintulu campuses. These projects involve new buildings, upgrading works, renovation and purchase of major equipment. The funding of these projects came from the Government Grant (RM169.4 million) and the rest of the funding comes from UPM Development Fund.





HUBUNGAN LUAR

UPM bergiat aktif dalam memperkukuhkan hubungan kerjasama dengan sektor industri, sektor awam dan sektor swasta, juga dengan universiti-universiti terkemuka dari dalam dan luar negara terutamanya dalam bidang pengajaran, penyelidikan, pembangunan teknologi dan teknologi komunikasi maklumat (ICT). Untuk tujuan itu sebanyak 6 Memorandum Persefahaman (MoU)/ Perjanjian Kerjasama sepanjang 2002 ditandatangani. Ini termasuk 2 Memorandum Persefahaman (MoU) dengan dua institusi luar negara. Dalam pada itu, UPM juga telah menerima sebanyak 17 delegasi pelawat dari seluruh dunia dan 67 delegasi pelawat dari dalam negara bagi mewujudkan kerjasama dalam bidang pendidikan dan pengajaran. Di samping itu juga UPM telah membuat 29 promosi pendidikan sepanjang tahun 2002.

EXTERNAL LINKAGES

UPM has always been actively involved in strengthening its ties with the industrial, public and private sectors, local and foreign universities especially in the fields of teaching, learning, research, technological development and information and communication technology. For this purpose, 6 Memorandum of Understanding (MoU)/ Cooperative Agreements were signed in 2002. This includes 2 Memorandum of Understanding (MoU) with two foreign institutions. UPM also received visitors by 17 foreign delegations and 67 local delegations to establish cooperation in the fields of learning and teaching. UPM also carried out 29 educational promotions in the year 2002.





KONVOKESYEN

Majlis Konvokesyen Ke-26 UPM telah diadakan dalam tiga sidang. Sidang Pertama pada 9-10 Februari 2002, Sidang Kedua pada 13-14 Julai 2002 dan Sidang Ketiga pada 7-8 September 2002. Dalam Konvokesyen tersebut UPM telah melahirkan seramai 10,515 orang graduan dari pelbagai bidang. Dari jumlah tersebut seramai 115 orang telah mendapat ijazah kepujian kelas pertama, 2,705 orang kepujian kelas kedua tinggi, 2,904 kepujian kelas kedua rendah dan 874 ijazah kelas ketiga.

UPM juga telah menganugerahkan Ijazah Kehormat kepada 5 orang tokoh penting yang banyak berjasa kepada UPM dan negara iaitu Y.Bhg. Tan Sri Dato' Lee Shen Cheng, Yang Amat Berbahagia Tun Dato' Seri (Dr.) Haji Hamdan bin Sheikh Tahir, Y.Bhg. Tan Sri Dato' Dr. Ahmad Mustafa bin Haji Babjee, Y.Bhg. Tan Sri Dato' Dr. Haji Nayan bin Ariffin dan Profesor Dr. Kisho Kurokawa.

CONVOCATION

UPM's 26th Convocation Ceremony was held in three sittings. The First Sitting was from 9-10 February, Second Sitting from 13-14 July and Third Sitting from 7-8 September 2002. 10,515 graduates from various disciplines received their degrees during the 26th Convocation Ceremony. Out of that number, 115 obtained a First Class Honours degree, 2,705 Second Class Upper Honours degree, 2,904 Second Class Lower Honours degree and 874 Third Class degree.

UPM conferred Honorary Doctorates to five important people who contributed in many ways to the country and UPM. The recipients are; Y.Bhg. Tan Sri Dato' Lee Shen Cheng, Yang Amat Berbahagia Tun Dato' Seri (Dr.) Haji Hamdan bin Sheikh Tahir, Y.Bhg. Tan Sri Dato' Dr. Ahmad Mustafa bin Haji Babjee, Y. Bhg. Tan Sri Dato' Dr. Haji Nayan bin Ariffin and Professor Dr. Kisho Kurokawa.





PEMASYHURAN DYMM SULTAN SELANGOR SEBAGAI CANSELOR YANG BARU

Tahun 2002 juga mencatatkan sejarah apabila DYMM Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj dilantik sebagai Canselor UPM yang ketiga. Pelantikan ini bagi menggantikan Yang Amat Berbahagia Tun Dato' Seri (Dr.) Haji Hamdan bin Sheikh Tahir yang telahpun tamat tempoh perkhidmatannya. UPM berasa bangga dengan pelantikan DYMM Tuanku Canselor kerana ia adalah kesinambungan dari perantikan Almarhum Ayahanda Baginda yang pernah menjadi Canselor Pertama UPM.

PENUTUP

Akhir sekali, saya ingin mengambil kesempatan ini untuk mengucapkan jutaan terima kasih dan penghargaan kepada semua pihak yang telah menyumbangkan tenaga untuk memastikan UPM terus unggul sebagai sebuah universiti perdana yang menjadi kebanggaan negara dalam kelasnya tersendiri.

Semoga UPM akan terus berkembang pesat menjana kecemerlangan, seiring kepesatan pembangunan massa ke arah menjadikan UPM, UNIVERSITI BERTARAF DUNIA.

Mohtouh

PROFESOR DATO' MOHD. ZOHADIE BARDAIE

Ph.D., P.Eng.

Naib Canselor

PROCLAMATION OF HRH SULTAN OF SELANGOR AS THE NEW CHANCELLOR

The year 2002 was a very historical year for UPM when HRH Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj was appointed as the third UPM Chancellor. HRH Sultan Sharafuddin Idris Shah replaces Yang Amat Berbahagia Tun Dato' Seri (Dr.) Haji Hamdan bin Sheikh Tahir who has completed his term. UPM is very proud with the appointment of HRH Tuanku Chancellor since it provides a continuity to the appointment of the HRH Tuanku Chancellor's late father who was UPM's First Chancellor.

CONCLUSION

Lastly, I would like to state my heartfelt gratitude and a million thanks to those who have contributed in any way to ensure that UPM will always be a prime university in its own class and the pride of the nation.

Let us work together to reach for excellence to cope with the rapid mass development and in our quest to be A WORLD CLASS UNIVERSITY.

Mohtouh

PROFESSOR DATO' MOHD. ZOHADIE BARDAIE,
Ph.D., P.Eng.

Vice Chancellor

LAKARAN SEJARAH KECEMERLANGAN

A BRIEF HISTORY OF EXCELLENCE



Lakaran Sejarah Kecemerlangan

Sekolah Pertanian Malaya dirasmikan oleh John Scott, Pegawai Pentadbir Negeri-negeri Selat pada 21 Mei 1931. Institusi pendidikan yang ditubuhkan ini memberi tumpuan dan penekanan kepada pengajian dalam bidang pertanian dan ditubuhkan untuk memenuhi keperluan tenaga kerja di Jabatan Pertanian ketika itu.

Sebagai permulaan, hanya dua program ditawarkan iaitu pengajian diploma selama tiga tahun dan kursus sijil selama setahun. Selepas 10 tahun menyediakan peluang pendidikan, Sekolah Pertanian Malaya berjaya melahirkan 155 pemegang diploma dan 166 lulusan sijil.

Hasrat menaikkan taraf sekolah berkenaan kepada kolej hasil kesedaran tentang kepentingan peranan dan kemajuan sekolah berkenaan dilaksanakan oleh Gabenor Kesatuan Malaya, Sir Edward Grant yang merasmikan Kolej Pertanian Malaya pada 23 Jun 1942. Menjelang ulang tahun Jubli Perak Ke-25, pada tahun 1956 Kolej Pertanian Malaya telah mengeluarkan sejumlah 699 pelajar iaitu 288 pemegang Diploma Pertanian dan 411 pemegang Sijil Pertanian.

Kecemerlangan Kolej tersebut mendapat perhatian semua pihak, maka timbul cadangan pada 1948 untuk menaikkan tarafnya kepada universiti. Penubuhan Fakulti Pertanian, Universiti Malaya pada 1960 merupakan titik tolak kepada pembentukan UPM kerana penubuhan fakulti tersebut mengambil kira peranan Majlis Kolej Pertanian Malaya dengan pelantikan kolej tersebut sebagai salah satu pihak berkuasa universiti berkenaan pada 1 Januari 1962.

Kemajuan dan pembangunan pertanian dan sebagai tunjang ekonomi negara pada masa itu menyerlahkan hasrat dan kepentingan memperkembangkan Kolej Pertanian Malaya. Hasilnya pada 31 Mac 1969, Timbalan Perdana Menteri Malaysia, Yang Amat Berhormat Tun Hj. Abdul Razak Tun Hussein telah mencadangkan supaya Kolej Pertanian dinaik taraf kepada sebuah universiti.

Sehubungan itu, pada Mei 1969, Menteri Pelajaran Malaysia, Yang Berhormat Datuk Haji Abdul Rahman Yaakub telah menyiapkan memorandum menubuhkan Universiti Pertanian Malaysia dan

A Brief History Of Excellence

The Malaya School of Agriculture was officiated by John Scott, Administrator of the States of the Straits Settlement on May 21st, 1931. This new education institution emphasized on the study of agriculture and was established in line with the needs of the Agriculture Department then.

Initially, only two programs were offered i.e. a three year diploma program and a one year certificate program. The Malaya Agriculture School produced 155 diploma holders and 166 certificate holders after 10 years of its inception.

Realising the importance of the role and development of the school, prompted Sir Edward Grant, Malayan Union Governor to upgrade the school to a college. The Malaya Agriculture College was officiated by Sir Edward Gant, the Malayan Union Governor on 23rd June 1942. The Malayan Agriculture College, on the eve of its 25th Silver Jubilee in 1956 had produced 699 students comparing of 288 Diploma in Agriculture holders and 411 Certificate in Agriculture holders.

The development and progress of the college caught the interest of many parties and thus in 1948 there were suggestions that the college be upgraded to university level. The establishment of the Faculty of Agriculture in University Malaya in 1960 was the turning point in the establishment of UPM since it considered the role of the College of Agriculture Malaya Council and appointment of the college as one of the University's governing power in 1st January 1962.

The development and advancement in agriculture which was the backbone of the country's economy had made the authorities realized the importance of upgrading the Malayan Agriculture College. As a result, on 31st March 1969, the Deputy Prime Minister of Malaysia, YAB Tun Hj. Abdul Razak Tun Hussein suggested that the Agriculture College be upgraded to the status of university.

Thus, in May 1969, the Education Minister of Malaysia, Yang Berhormat Datuk Haji Abdul Rahman Yaakub completed a memorandum for establishing Universiti Pertanian Malaysia (UPM) and Dr. Mohd. Rashdan Haji Baba was given the honour to be the First Vice Chancellor.

pada ketika itu, Dr. Mohd. Rashdan Haji Baba diberi penghormatan sebagai Naib Canselor.

Universiti Pertanian Malaysia pada tanggal 23 Julai 1973, bersama 1,559 pelajar memulakan sesi akademik yang pertama dengan tiga fakulti asas iaitu Fakulti Pertanian, Fakulti Perhutanan dan Fakulti Kedoktoran Veterinar dan Sains Peternakan serta satu Bahagian Sains Asas. Manakala, empat tahun kemudian, Universiti Pertanian Malaysia telah mengadakan Majlis Konvokesyen Pertamanya pada 30 Julai 1977.

Pegangan falsafah "ilmu untuk berbakti," adalah asas operasi Universiti Pertanian Malaysia yang berpandukan kepada tiga kegiatan utama, iaitu pengajaran, penyelidikan dan pengembangan. Maka itulah Universiti Pertanian Malaysia menjuruskan tumpuan kepada penerokaan pelbagai bidang penyelidikan yang memberikan sumbangan ke arah mutu kehidupan yang lebih baik, keperluan masyarakat terhadap pengeluaran makanan berasaskan tanaman dan haiwan dengan lebih cekap serta persekitaran yang lebih bersih dengan penggunaan sumber-sumber yang berdaya kekal. Di samping itu juga, universiti ini meneroka perkembangan teknologi komputer dengan menjanakannya dalam pengajaran, pentadbiran dan kegiatan penyelidikan.

Beriltizamkan kecemerlangan dalam pendidikan bagi melahirkan individu pemikir yang berilmu, kreatif dan berdisiplin, Universiti Pertanian Malaysia berhasrat menjadi pusat pembelajaran dan penyelidikan unggul dan ulung yang menyumbang kepada kemajuan manusia dan penerokaan ilmu di samping pembentukan kekayaan dan pembangunan negara.

Universiti Pertanian Malaysia sekali lagi mengalami titik perubahan bersejarah apabila Yang Amat Berhormat Perdana Menteri Malaysia, Datuk Seri Dr. Mahathir Mohamed pada 3 April 1997 mengisytiharkan nama Universiti Putra Malaysia (UPM) sebagai menggantikan Universiti Pertanian Malaysia.

Pengisytiharan tersebut merupakan pemangkin kepada proses transformasi ke arah institusi pendidikan tinggi multidisiplinari negara yang

UPM began its first academic session on 23rd July 1971. The first batch of 1,559 students began their study in 3 basic faculties i.e. Faculty of Agriculture, Faculty of Forestry and Faculty of Veterinary Medicine and Animal Science and a Basic Science Division. The first convocation was held four years later on 30th July 1977.

UPM's philosophy "Knowledge Is For Serving" was the basis of its operation. The three main activities of UPM were teaching, research and extension and emphasis is given on venturing into various fields of research which could contribute to a better quality of life, the society's needs to efficient agriculture and animal based food production and the use of permanent resources for a cleaner environment. The university also ventured into the computer technology by using it for teaching, administration and research activities.

UPM is dedicated to provide excellent education in order to produce individuals who are creative, knowledgeable and disciplined as UPM aims to be the leading centre of learning and research, contributing not only towards the progress of mankind and exploration of knowledge but also to the creation of wealth and the development of the nation.

Universiti Pertanian Malaysia once again underwent a historical moment when its name was changed to Universiti Putra Malaysia. The announcement was made by Yang Amat Berhormat The Prime Minister of Malaysia, Datuk Seri Dr. Mahathir Mohamed on 3rd April 1997.

The announcement is the catalyst in UPM's transformation process towards a competitive national multidisciplinary higher institution of learning. The name change is a strategic step in portraying UPM's status as a higher institution of learning which offers the latest course programs including information technology apart from emphasizing on agriculture.

mampu bersaing di peringkat antarabangsa. Perubahan nama itu juga merupakan langkah strategik yang mencerminkan kedudukan UPM sebagai institusi pengajian tinggi yang menawarkan pelbagai pengajian terkini, termasuk teknologi maklumat (IT) di samping penumpuan kepada bidang pertanian.

Kegemilangan Teknologi Pertanian

Penekanan kepada bidang pertanian masih diteruskan oleh Universiti Putra Malaysia (UPM) walaupun tiada lagi rujukan "pertanian" setelah 70 tahun tertera pada namanya. Ini kerana bidang pertanian adalah teras dan tujuan asal penubuhannya, malah, disiplin berasaskan bidang pertanian akan terus diperkukuhkan lagi mengikut dasar kerajaan dan keperluan masyarakat.

UPM terus membantu memodenkan sektor pertanian selaras dengan hasrat kerajaan dalam Rangka Rancangan Jangka Panjang Ketiga (RRJP3) menjadikan pertanian terutama pengeluaran bahan makanan sebagai sumber pertumbuhan ekonomi yang ketiga selepas elektronik dan perkhidmatan. Dengan itu, kerajaan menerusi Kementerian Pertanian mahu menjadikan sektor pertanian negara sebagai industri yang menguntungkan dan menggunakan teknologi maju. Sehubungan itu, salah satu matlamat Pelan Strategi 10 tahun UPM (2001-2010) iaitu meningkatkan keupayaan UPM dalam penjaan ilmu pertanian yang baru serta menghasilkan produk atau teknologi inovatif melalui penyelidikan.

Pengalaman dan latar belakang UPM selama 70 tahun dalam bidang pertanian, memungkinkan peningkatan keupayaan pengeluaran tenaga mahir

Excellence In Agriculture Technology

UPM continues to emphasize on agriculture although "Pertanian" is no longer in its name after 70 years. The emphasis is continued as agriculture is still the core and main objective of UPM's inception. The agriculture based discipline will be further strengthened in line with the government's policy and the needs of the society.

UPM continues to help modernize the agriculture sector in line with the government's wish in the Third Long Term Planning Framework (RRJP3) to make agriculture especially food production as the third source of economic growth after electronics and services. The government through the Ministry of Agriculture wish to make the agriculture sector a profitable industry using advanced technology. In this connection, one of the objectives of the 10 year Strategy Plan UPM (2001-2010) is to increase UPM's ability to generate new agriculture studies and production of innovative product and technology via research.

UPM's 70 years experience and sound background in agriculture, has enabled it to produce skilled workers and carry out research in various aspects of agriculture. The exploitation of modern equipment and communication and information technology (ICT), together with agriculture engineering have enabled food production to be increased by many folds.

Apart from that, UPM has many specific faculties and research institutes to assist the government to modernize and upgrade the agriculture sector. The faculties involved are the Faculty of Agriculture, Faculty of Forestry, Faculty of Veterinary Medicine and the Faculty of Food Science and Biotechnology. The Bioscience Institute is also





dan penyelidikan dalam semua aspek bidang tersebut. Pengeksploitasian peralatan moden seperti teknologi maklumat dan komunikasi (ICT), di samping kejuruteraan pertanian berupaya meningkatkan produktiviti pengeluaran makanan.

Di samping itu, UPM mempunyai fakulti-fakulti dan institut penyelidikan yang khusus untuk membantu kerajaan membangun dan memoden sektor pertanian negara seperti Fakulti Pertanian, Fakulti Perhutanan, Fakulti Perubatan Veterinar dan Fakulti Sains Makanan dan Bioteknologi. Selain itu, UPM juga mempunyai Institut Biosains yang memberi tumpuan kepada penyelidikan dalam bidang penghasilan baja baru, vaksin, pemantauan kesuburan tanah menggunakan satelit, penghasilan makanan haiwan yang lebih baik dan benih pokok yang tahan penyakit atau cepat membesar, ubat herba, makanan kesihatan dan sebagainya.

Institusi sokongan pertanian yang sedia ada seperti Fakulti Kejuruteraan dan Institut Teknologi Maju (ITMA) turut berperanan menjalankan penyelidikan dan pembangunan berkenaan potensi penggunaan mesin khusus dalam semua proses pertanian. UPM adalah satu-satunya universiti yang menawarkan program kejuruteraan biologi dan pertanian menerusi Fakulti Kejuruteraan dengan tujuan mengeluarkan jurutera pertanian dan penyelidik kejuruteraan pertanian.

Kegemilangan Program Akademik

Bermula dengan hanya menawarkan dua program iaitu pengajian diploma dan kursus sijil tujuh dekad lalu, Universiti Putra Malaysia kini memperkembangkan program akademiknya

emphasizing on research in producing new fertilizers, vaccines, monitoring of soil fertility via satellite, better animal fodder and more resilient seedlings, medicinal herbs, health food etc.

Other existing support institutes include the Faculty of Engineering and the Institute of Advanced Technology (ITMA) also play an important role in research and development of potential use of specific machineries in all aspects of agriculture. UPM is the only university which offers the Biological and Agricultural Engineering Program offered by the Faculty of Engineering. The objective of such program is to produce agriculture engineers and researchers.



melalui 15 fakulti, 7 pusat dan 7 institut yang membantu peningkatan perkembangan akademiknya serta kemajuan industri penyelidikan dan pembangunan.

Fakulti-fakulti di UPM

- Fakulti Perubatan dan Sains Kesihatan
- Fakulti Ekologi Manusia
- Fakulti Perubatan Veterinar
- Fakulti Ekonomi dan Pengurusan
- Fakulti Perhutanan
- Fakulti Kejuruteraan
- Fakulti Pengajian Pendidikan
- Fakulti Sains Makanan dan Bioteknologi
- Fakulti Sains dan Pengajian Alam Sekitar
- Fakulti Pertanian
- Fakulti Bahasa Moden dan Komunikasi
- Fakulti Rekabentuk dan Senibina
- Fakulti Sains Komputer dan Teknologi Maklumat
- Fakulti Sains Sosial dan Pengurusan (UPM Kampus Bintulu)
- Fakulti Sains Pertanian dan Makanan (UPM Kampus Bintulu)

Institut

- Institut Pendidikan dan Pembelajaran Jarak Jauh (IDEAL)
- Institut Biosains
- Institut Teknologi Maju (ITMA)
- Institut Multimedia dan Perisian (IMP)
- Institut Pengajian Keamanan dan Komuniti (PEKKA)
- Institut Penyelidikan Matematik (INSPERM)
- Institut Gerontologi

Akademi

- Akademi Hutan Hujan

Pusat Pengajaran, Pembelajaran dan Penyelidikan

- Sekolah Pengajian Siswazah (GSO)
- Sekolah Pengajian Siswazah Pengurusan (GSM)
- Pusat Program Luar (PPL)
- Pusat Pengajian Umum (PPU)
- Pusat Islam
- Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah
- Pusat Pengurusan Ilmu
- Pusat Pembangunan Perniagaan (UBC)
- Pusat Pengurusan Penyelidikan (RMC)

Excellence In Academic Program

Seven decades ago Universiti Pertanian Malaysia started with only two programs i.e. the diploma program and certificate program. Now, Universiti Putra Malaysia has 15 faculties, 7 centres and 7 institutes which assist in the development of its academic programs and progress in industrial research industries and development.

Faculties at UPM

- Faculty of Medicine and Health Sciences
- Faculty of Human Ecology
- Faculty of Veterinary Medicine
- Faculty of Forestry
- Faculty of Engineering
- Faculty of Educational Studies
- Faculty of Food Science and Biotechnology
- Faculty of Science and Environmental Studies
- Faculty of Agriculture
- Faculty of Modern Languages and Communication
- Faculty of Design and Architecture
- Faculty of Computer Science and Information Technology
- Faculty of Economics and Management
- Faculty of Social Sciences and Management (UPM Bintulu Campus)
- Faculty of Agricultural and Food Science (UPM Bintulu Campus)

Institutes

- Institute for Distance Education and Learning
- Institute of Bioscience
- Institute of Advanced Technology (ITMA)
- Institute of Multimedia and Software (IMP)
- Institute for Community and Peace Studies (PEKKA)
- Institute of Mathematical Research (INSPERM)
- Institute of Gerontology

Academy

- Rainforest Academy

Centres For Teaching, Learning and Research

- School of Graduate Studies (GSO)
- Graduate School of Management (GSM)
- External Program Centre (PPL)
- General Studies Centre (PPU)
- Islamic Centre
- Sultan Salahuddin Abdul Aziz Shah Cultural and Arts Centre
- Knowledge Management Centre

Sehingga kini UPM menawarkan 10 program ijazah lanjutan, 69 program bachelor dan 8 program diploma. Program berkenaan adalah seperti berikut:

Program Ijazah Lanjutan

- M.A. - Master Sastera
 - M.Agric.Sc. - Master Sains Pertanian
 - M.B.A - Master Pentadbiran Perniagaan
 - M.Econ. - Master Ekonomi
 - M.Env. - Master Alam Sekitar
 - M.L.A. - Master Seni Bina Landskap
 - M.S. - Master Sains
 - M.V.M - Master Sains Veterinar
 - Ph.D. - Doktor Falsafah
- Diploma Lepas Ijazah Perubatan Reproduksi

Program Bachelor

- Doktor Perubatan
- Bachelor Sains (Sains Bioperubatan)
- Bachelor Sains (Pemakanan dan Kesihatan Komuniti)
- Bachelor Sains (Kesihatan Persekitaran & Pekerjaan)
- Bachelor Muzik
 - Pengutamaan Persembahan Muzik
 - Pengutamaan Teknologi Muzik
 - Pengutamaan Pendidikan Muzik
- Bachelor Sains (Pembangunan Manusia)
- Bachelor Sains (Sains Pengguna)
- Bachelor Ekonomi
- Bachelor Perakaunan
- Bachelor Pentadbiran Perniagaan
- Bachelor Perakaunan dengan Pendidikan
- Bachelor Sains Perhutanan
- Doktor Perubatan Veterinar
- Bachelor Kejuruteraan (Awam)
- Bachelor Kejuruteraan (Elektrik dan Elektronik)
- Bachelor Kejuruteraan (Kimia)
- Bachelor Kejuruteraan (Biologi dan Pertanian)
- Bachelor Kejuruteraan (Mekanikal)
- Bachelor Kejuruteraan (Aero Angkasa)
- Bachelor Kejuruteraan (Proses dan Makanan)
- Bachelor Kejuruteraan (Sistem Komputer dan Komunikasi)
- Bachelor Pendidikan (Pendidikan Jasmani)
- Bachelor Pendidikan (Bimbingan dan Kaunseling)
- Bachelor Pendidikan (PBMP)
- Bachelor Pendidikan (TESL)
- Bachelor Pendidikan (Sains Rumahtangga)
- Bachelor Pendidikan (Sains Pertanian)
- Bachelor Sains (Pembangunan Sumber Manusia)
- Bachelor Pendidikan (Teknologi Maklumat)
- Bachelor Sains (Bioteknologi)
- Bachelor Sains (Teknologi Makanan)

- University Business Centre (UBC)
- Research Management Centre (RMC)

To date, UPM has offered 10 post graduate programs, 69 bachelor's programs and 8 diploma programs. The programs are as listed below:

Post Graduate Program

- M.A. - Master of Arts
 - M.Agric. Sc. - Master of Agricultural Science
 - M.B.A. - Master of Business Administration
 - M.Econ. - Master of Economics
 - M.Env. - Master of Environment
 - M.L.A. - Master of Landscape Architecture
 - M.S. - Master of Science
 - M.V.M. - Master of Veterinary Medicine
 - Ph.D. - Doctor of Philosophy
- Advanced Postgraduate Diploma in Reproductive Medicine

Bachelor's Program

- Doctor of Medicine
- Bachelor of Science (Biomedical Sciences)
- Bachelor of Science (Nutrition and Community Health)
- Bachelor of Science (Environmental and Occupational Health)
- Bachelor of Music
 - Music Performance Major
 - Music Technology Major
 - Music Education Major
- Bachelor of Science (Human Development)
- Bachelor of Science (Consumer Science)
- Bachelor of Economics
- Bachelor of Accountancy
- Bachelor of Business Administration
- Bachelor of Forestry Science
- Doctor of Veterinary Medicine
- Bachelor of Engineering (Civil)
- Bachelor of Engineering (Electrical and Electronic)
- Bachelor of Engineering (Chemical)
- Bachelor of Engineering (Biological and Agricultural)
- Bachelor of Engineering (Mechanical)
- Bachelor of Engineering (Aerospace)
- Bachelor of Engineering (Process and Food)
- Bachelor of Engineering (Computer Systems and Communication)
- Bachelor of Education (Physical Education)
- Bachelor of Education (Counselling and Consultation)
- Bachelor of Education (The Teaching of Malay as a First Language)
- Bachelor of Education (The Teaching of English as a Second Language)
- Bachelor of Education (Home Science)

- Bacelor Sains (Pengajian Makanan)
- Bacelor Sains (Alam Sekitar)
- 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
- Bacelor Sains (Perniagaantani)
- Bacelor Sastera
 - Pengkhususan Bahasa Inggeris
 - Pengkhususan Bahasa & Linguistik Melayu
 - Pengkhususan Kesusasteraan Melayu
 - Pengkhususan Kesusasteraan Inggeris
 - Pengkhususan Bahasa Asing
 - Bahasa Mandarin
 - Bahasa Arab
 - Bahasa Perancis
 - Bahasa Jerman
- Bacelor Komunikasi
- Bacelor Seni Bina Lanskap
- Bacelor Reka Bentuk (Senibina)
- Bacelor Reka Bentuk (Reka Bentuk Perindustrian)
- Bacelor Sains Komputer
 - Pengkhususan Sistem Komputer
 - Pengkhususan Multimedia
 - Pengkhususan Kejuruteraan Perisian
 - Pengkhususan Rangkaian Komputer

Program Diploma

- Diploma Pembangunan Manusia
- Diploma Pengurusan Perniagaan
- Diploma Perhutanan
- Diploma Pertanian
- Diploma Kesihatan Haiwan dan Peternakan
- Diploma Pengurusan Perladangan Makanan
- Diploma Sains Komputer
- Diploma Kejuruteraan (Kecemasan dan Keselamatan)

- Bachelor of Education (Agricultural Science)
- Bachelor of Education (Information Technology)
- Bachelor of Science (Human Resource Development)
- Bachelor of Science (Biotechnology)
- Bachelor of Science (Food Studies)
- Bachelor of Science (Food Technology)
- Bachelor of Science (Environment)
- 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)
 - Biology Major
 - Physics Major
 - Chemistry Major
 - Mathematics Major
 - Statistics Major
- Bachelor of Science (Agribusiness)
- Bachelor of Arts
 - English Major
 - Malay Language and Linguistics Major
 - Malay Literature Major
 - English Literature Major
 - Mandarin Major
 - Arabic Major
 - French Major
 - German Major
- Bachelor of Communication
- Bachelor of Design and Landscape
- Bachelor of Design (Architecture)
- Bachelor of Design (Industrial Design)
- Bachelor of Computer Science
 - Computer Systems Major
 - Multimedia Major
 - Software Engineering Major
 - Computer Network Major

Diploma Program

- Diploma in Human Development
- Diploma in Business Administration
- Diploma in Forestry
- Diploma in Agriculture
- Diploma in Animal Health and Production
- Diploma in Food Estate Management
- Diploma in Computer Science
- Diploma in Engineering (Emergency and Safety)

PENGAJARAN DAN PEMBELAJARAN

TEACHING AND LEARNING



Pengajaran Dan Pembelajaran

Kadar pertumbuhan enrolmen pelajar sepanjang tempoh 2001-2010 adalah dijangkakan sebanyak 18% setahun. Bagi memenuhi sasaran sebagaimana yang digariskan dalam Pelan Strategi 2001-2010, UPM telah meningkatkan penawaran program di peringkat ijazah pertama dan pasca siswazah. Di samping itu, tahap pengajaran dan kualiti pengajar juga ditingkatkan.

Melalui Pelan Strategi UPM 2001-2010, enrolmen pelajar ijazah pertama dianggarkan akan kekal pada tahap 20,000 orang untuk melahirkan graduan yang berkualiti, berdaya saing dan berupaya untuk terus maju melalui pendidikan berterusan.

Penawaran Program Baru di UPM

Mulai sesi November 2002, pengambilan pelajar Diploma Pengurusan Perniagaan di Fakulti Ekonomi dan Pengurusan telah diambil alih oleh UPM Kampus Bintulu.

Manakala beberapa buah fakulti telah menawarkan program-program baru iaitu:

- Bachelo Sains (Pertanian) dan Bachelo Sains (Hortikultur) di Fakulti Pertanian
- Bachelo Reka Bentuk (Reka Bentuk Perindustrian) di Fakulti Rekabentuk dan Senibina
- Bachelo Sains (Pembangunan Manusia dan Pengurusan) dan Bachelo Sains (Pembangunan Manusia dan Teknologi Maklumat) di Fakulti Ekologi Manusia*.

Teaching And Learning

Student enrolment growth rate over the period of 2001-2010 is expected at 18% per year. To accomplish the goal as outlined in the Strategic Plan 2001-2010, UPM has increased its offering of programmes at the undergraduate and post graduate levels. In addition, its teaching prestige and quality of lecturers were upgraded.

With the UPM Strategic Plan 2001-2010, the enrolment of the bachelor's degree students is estimated to remain at 20,000, in line with its aim to produce quality graduates who are competitive and capable of progressing through continuous education.

New Courses Offered At UPM

Since the November 2002 session, the intake of Diploma of Business Management students at the Faculty of Economics and Management has been taken over by UPM Bintulu Campus.

A number of faculties have offered new programmes, namely:

- Bachelor of Science (Agriculture) and Bachelor of Science (Horticulture) at the Faculty of Agriculture
- Bachelor of Design (Industrial Design) at the Faculty of Design and Architecture
- Bachelor of Science (Human Development and Management) and Bachelor of Science (Human Development and Information Technology) at the Faculty of Human Ecology.*





* Program *dwi-major* ini adalah satu pendekatan baru selaras dengan saranan Yang Berhormat Menteri Pendidikan supaya pihak UPM mengkaji semula kurikulum yang ditawarkan bagi menentukan ianya bertepatan dengan keperluan negara untuk melahirkan graduan yang berkualiti dan berdaya saing. Kekuatan program ini adalah bercirikan *multi* dan *inter-disiplin* serta lebih praktikal selaras dengan konteks k-Masyarakat dan k-Ekonomi.

Makmal Realiti Maya di Fakulti Sains Komputer dan Teknologi Maklumat

Pada tahun 2002, Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM) telah menyediakan satu makmal realiti maya yang dilengkapi dengan sebuah pelayan SGI (*Silicon Graphics Inc.*) yang berkeupayaan tinggi untuk visualisasi, peralatan penjelajahan maya. Lima unit Stesen Kerja SGI dan perisian *World Tool Kit* yang digunakan untuk pembangunan aplikasi dan pengaturcaraan 3 dimensi (3D). Fakulti juga telah menyediakan perisian OPNET untuk digunakan bagi merekabentuk sistem rangkaian dan melaksanakan simulasi terhadap sistem rangkaian. Perisian komputer lain seperti *System Architect*, *Rational Rose*, *Macromedia Director*, dan *Authorware* turut disediakan. Selain itu, FSKTM juga telah menyediakan satu sistem *Thin-Client* yang mempunyai persekitaran sistem pengoperasian UNIX. Sistem *Thin-Client* ini adalah dilengkapi dengan bahasa-bahasa pengaturcaraan utama seperti bahasa C++ dan JAVA. Fakulti juga telah memperolehi pangkalan data *Oracle* dan *Sybase*.

* This dual-major programme is a new approach, which is in line with the Honourable Minister of Education's recommendation that UPM review the curriculum offered to ensure that it is consistent with the country's need for producing quality and competitive graduates. The strength of this programme is in its *multi and interdisciplinary*, as well as more practical characteristics, in line with the context of k-Community and k-Economy.

Virtual Reality Laboratory at the Faculty of Computer Science and Information Technology

In 2002, the Faculty of Computer Science and Information Technology provided a virtual reality laboratory equipped with an SGI server (*Silicon Graphics Inc.*) of high capacity for visualisation of virtual roaming equipment. Five units of SGI Work Station and *World Tool Kit* software were used for the application and development of 3 dimensional (3D) programming. The Faculty had also provided the OPNET software for designing network systems and implementing simulations for network system. Other computer software such as *System Architect*, *Rational Rose*, *Macromedia Director* and *Authorware* were also provided. In addition, the Faculty has also provided a *Thin-Client* system, which has a UNIX operations system environment. The *Thin-Client* system is equipped with major language programming, such as C++ language and JAVA. The Faculty has also obtained *Oracle* and *Sybase* databases.

Fakulti turut menerima sumbangan empat unit Pelayan Teknikal *Sequent* daripada Syarikat Faber Medi-Serve Sdn. Bhd. pada 18 Julai 2002. Mesin ini dapat memberikan manfaat kepada pelajar dan pengajar untuk mendalami bidang Komputan Selari. Setiap mesin ini berupaya melaksanakan arahan-arahan komputer secara selari mengikut bilangan Unit Pemprosesan Utama yang ada.

Fakulti juga telah mengemaskini sistem e-Fakulti. Sistem Penempahan Makmal telah diwujudkan untuk membantu pengurusan makmal komputer yang terdapat di fakulti. Fakulti juga telah menyediakan Sistem Pengurusan Anti Virus untuk mengendalikan perisian anti virus di persekitaran komputer yang terdapat di fakulti supaya pemantauan terhadap serangan virus dan kod-kod bahaya dapat dilaksanakan.

Penstrukturan Semula Jabatan di Fakulti Perubatan Veterinar

Bermula pada bulan Januari 2002, Fakulti Perubatan Veterinar mengubah semula struktur organisasinya dengan penubuhan semula Jabatan Patologi dan Mikrobiologi Veterinar dan Jabatan Pengajian Klinikal Veterinar. Pihak pentadbiran fakulti juga telah menstrukturkan semula Universiti Hospital Veterinar (UVH) di bawah pentadbiran Jabatan Pengajian Klinikal Veterinar dan memansuhkan jawatan Pengarah Hospital. Penstrukturan ini seiring dengan hasrat fakulti untuk mengekalkan dan meningkatkan tahap kualiti pentadbiran dan pengajaran setelah dianugerahkan pensijilan MS ISO 9001.

Pengajian Siswazah

Sekolah Pengajian Siswazah (GSO) menyumbang kepada pengantarabangsaan UPM melalui pengeluaran graduan antarabangsanya. Pemeriksaan tesis oleh pegawai-pegawai akademik antarabangsa telah juga membantu dalam menjalinkan perhubungan akademik dan penyelidikan dengan institut pengajian tinggi dan institut penyelidikan terkemuka di peringkat antarabangsa.

On 18 July 2002, the Faculty received a contribution of four units of Technical *Sequent* Server from Faber Med-Serve Co. Ltd. This machine is useful for students and lecturers pursuing the field of Parallel Computation. Each machine is capable of implementing parallel computer instructions according to the number of major Processing Units available.

The Faculty has also updated the e-Faculty system. The Laboratory Allocation System has been established to assist the management of computer laboratories available at the Faculty. The Faculty has also provided an Anti Virus Management System to operate the anti virus software within the computer environment at the Faculty so that the monitoring of virus attacks and dangerous codes are achievable.

Restructuring of Departments at the Faculty of Veterinary Medicine

Since January 2002, the Faculty of Veterinary Medicine has revised its structure of organisation with the reformation of the Department of Veterinary Pathology and Microbiology and Department of Clinical Veterinary Studies. The Faculty's administration has also restructured the University Veterinary Hospital, placing it under the Department of Clinical Veterinary Studies and dissolving the post of Hospital Director. This structure is parallel to the Faculty's intention to maintain and increase the level of quality management and teaching after achieving the MS ISO 9001 certification.

Postgraduate Studies

The School of Graduate Studies (GSO) has contributed to the internationalisation of UPM via producing international graduates. Thesis examination by international academics has also assisted in forging academic relationship and research with higher learning institutions and renowned research institutes at the international level.

Program Jarak Jauh

Institut Penyelidikan dan Pembelajaran Jarak Jauh (IDEAL), Universiti Putra Malaysia ditubuhkan pada 26 Jun 1995 berdasarkan saranan Kementerian Pendidikan Malaysia agar semua Institusi Pengajian Tinggi menawarkan program pendidikan jarak jauh (PJJ). Penubuhan IDEAL adalah berasaskan penyusunan semula Unit Pendidikan Lanjutan (UPL) dan Pusat Pengembangan dan Pendidikan Lanjutan (PPPL).

Pada masa ini program-program yang ditawarkan ialah:

- Bachelo Pendidikan (Bimbingan dan Kaunseling)
- Bachelo Pendidikan (Pengajaran Bahasa Inggeris sebagai Bahasa Kedua)
- Bachelo Sains (Pembangunan Manusia)
- Bachelo Komunikasi
- Bachelo Sastera (Bahasa Inggeris)
- Bachelo Sastera (Bahasa dan Linguistik Melayu)
- Bachelo Pentadbiran Perniagaan
- Bachelo Sains (Pembangunan Sumber Manusia)
- Master Sains (Pembangunan Sumber Manusia)
- Master Sains (Komunikasi Korporat)
- Master Sains (Pengajaran Bahasa Malaysia sebagai Bahasa Pertama)
- Master Sains (Pengurusan Sumber Lestari)
- Master Sastera (Bahasa Melayu)

PJJ menekankan pembelajaran secara sendiri melalui modul-modul khusus yang diberikan semasa sesi bertemu pensyarah di Kampus UPM. Antara kemudahan yang diberikan kepada pelajar ialah penggunaan perkhidmatan Perpustakaan Sultan Abdul Samad, UPM dan sesi tutorial yang diadakan oleh tutor-tutor yang dilantik di pusat-pusat pembelajaran PJJ UPM di bandar-bandar strategik di seluruh Malaysia.

Program Kerjasama UPM-IPTS

Pusat Program Luar (PPL) telah ditubuhkan pada Mei 1997 untuk menggalakkan penawaran program akademiknya secara kerjasama dengan Institusi Pendidikan Tinggi Swasta (IPTS). Menerusi Kerjasama dengan IPTS, UPM mengharapkan bukan sahaja dapat memperluaskan peluang pendidikan tinggi tetapi juga membawa pendidikan tinggi yang berkualiti lebih dekat dengan masyarakat sebagai

Distance Learning Programmes

The Institute of Research and Distance Learning (IDEAL), Universiti Putra Malaysia was formed on 26th June 1995 on the Malaysian Ministry of Education's recommendation that all higher learning institutions offer distance-learning programmes. The formation of IDEAL is based on the restructuring of the Advanced Education Unit (UPL) and the Centre of Advanced Extension and Education (PPPL).

Currently, the programmes offered are as follows:

- Bachelor of Education (Guidance and Counselling)
- Bachelor of Education (Teaching of English as Second Language)
- Bachelor of Science (Human Development)
- Bachelor of Communication
- Bachelor of Arts (English Language)
- Bachelor of Arts (Malay Language and Linguistic)
- Bachelor of Business Management
- Bachelor of Science (Human Resource Development)
- Master of Science (Human Resource Development)
- Master of Science (Corporate Communication)
- Master of Science (Teaching of Bahasa Malaysia as First Language)
- Master of Science (Sustainable Resource Management)
- Master of Arts (Malay Language)

Distance learning education emphasises self-organised learning methods through specific modules that are given during meeting sessions with UPM campus lecturers. Among the facilities provided for students are the use of UPM Sultan Abdul Samad Library services and tutorials by tutors appointed by UPM PJJ learning centres in strategic cities throughout Malaysia.

UPM-IPTS Collaborative Programmes

The External Programme Centre (PPL) was formed in May 1997 to encourage the offering of academic programmes through collaboration with private higher learning institutions (IPTS). Through its collaborations with IPTS, UPM hopes to not only be able to widen higher learning opportunities but also to bring quality higher education closer to the general public. This is to support the government policy of democratisation and liberalisation

menyokong dasar kerajaan untuk mendemokrasi dan meliberalisasikan pendidikan secara menyeluruh. Secara keseluruhannya jumlah enrolmennya ialah 6,893 orang sepanjang tahun 2002. Melalui program ini juga seramai 2,628 pelajar telah bergraduat pada tahun 2002.

of education as a whole. Overall, the total enrolment was 6893 throughout the year 2002. A total of 2628 students graduated in 2002.

PENYELIDIKAN DAN PEMBANGUNAN

RESEARCH AND DEVELOPMENT



Penyelidikan Dan Pembangunan

Program *Intensification of Research in Priority Area* (IRPA) merangkumi tiga kategori penyelidikan iaitu Penyelidikan *Experimental Applied Research* (EA), *Prioritised Research* (PR) dan *Strategic Research* (SR). Dalam Rancangan Malaysia Ketujuh (RMK7) bagi tahun 1996-2000, pihak UPM telah memperolehi geran penyelidikan sebanyak **RM185,500,000**. Dalam tempoh dua tahun pelaksanaan RMK8 (bagi tempoh 2001-2005), UPM telah menerima sejumlah **RM152,556,885**.

Ini merupakan suatu pencapaian yang cemerlang dan dijangka sehingga penghujung Rancangan Malaysia Kelapan (RMK8) iaitu pada tahun 2005, UPM akan mencapai sehingga RM500 juta geran penyelidikan. UPM tidak seharusnya berbangga dengan jumlah peruntukan yang terbesar sahaja dan sudah menjadi kewajipan UPM untuk menterjemahkan peruntukan tersebut kepada hasil penyelidikan dan pembangunan yang berinovatif dan terkehadapan yang mampu meletakkan keupayaan R&D negara setaraf dengan negara-negara maju.

Peruntukan Rancangan Malaysia Ke 8 (RMK8)

Tempoh : 2001 – 2005

- Sumber Dana dari Kerajaan (MOSTE)
- IPRA – EAR RM52,708,274 (314 projek)
 - IRPA PR (7 program) RM40,347,346
 - IRPA SR (1 program) RM51,755,800
 - Top Down RM4,908,057
- Geran Penyelidikan Fundamental RM2,837,408
 - 118 projek
- **Jumlah RM152,556,885**

Rajah I : Peruntukan IRPA Rancangan Malaysia Kelapan (RMK8) yang diterima UPM

Research And Development

The Intensification of Research in Priority Areas (IRPA) Programme includes three research categories, namely, Experimental Applied Research (EAR), Priorities Research (PR) and Strategic Research (SR). During the 7th Malaysian Plan (RMK7), between 1996-2000, UPM obtained research grants of RM 185,500,000. Within the two-year period of the implementation of the 8th Malaysia Plan (RMK8) (for the period between 2001-2002), UPM received a total of RM 152,556,885.

This is considered an excellent achievement, and it is expected that until the end of the 8th Malaysia Plan (RMK8), i.e., in the year 2005, UPM is able to achieve up to RM 500 million of research grants. UPM should not only be proud of the large sum of allocation received, but it is UPM's responsibility to translate the grant into innovative and advanced research and development contributions which are capable of placing the national R & D capability on par with other developed countries.

8th Malaysia Plan (RMK8) Allocation

Period : 2001-2005

- Source of funding from Government (MOSTE)
- IRPA– EAD (314 projects) RM 52,708,274
 - IRPA – PR (7 programs) RM 40,347,346
 - IRPA – SR (1 program) RM 51,755,800
 - Top Down RM 4,908,057
- National Biotechnology (9 projects)
- Fundamental Research Grants RM 2,837,408
 - 118 projects
- **Total RM 152,556,885**

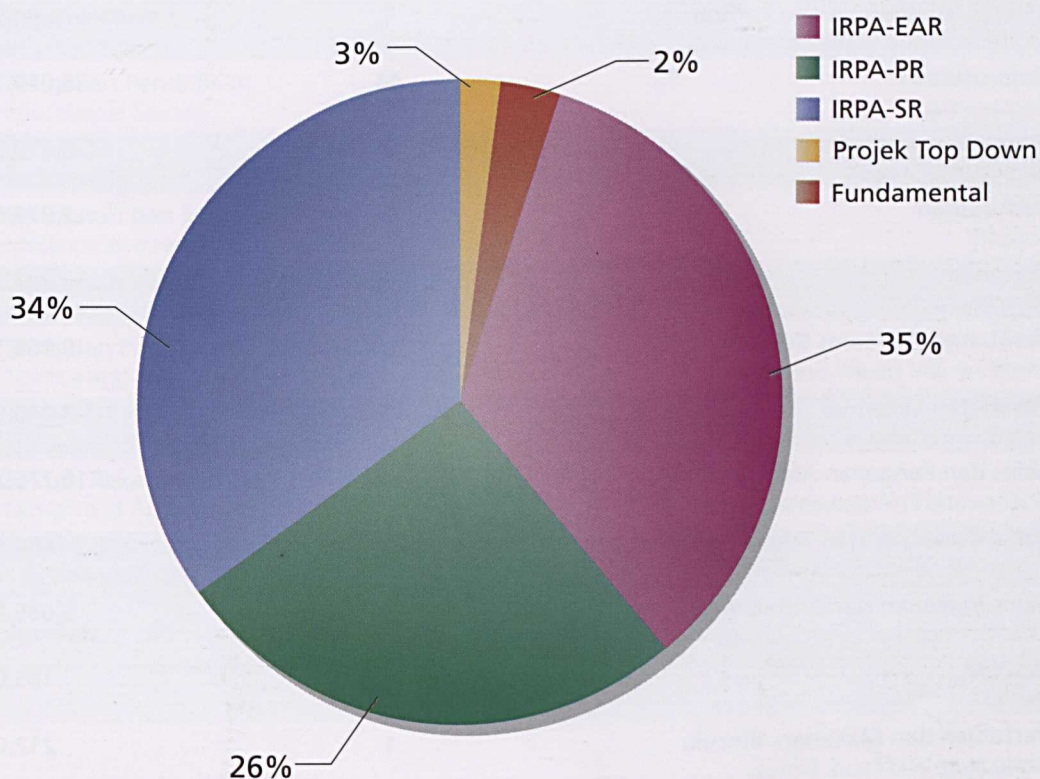
Figure I : 8th Malaysia Plan (RMK8) IRPA Allocation received by UPM



**Peruntukan Projek Penyelidikan yang diterima oleh UPM
di bawah Rancangan Malaysia Ke 8 (RMK8)**

IRPA Research Project Allocation received by UPM
under the 8th Malaysia Plan (RMK8)

Jan-Dis 2002 / Jan-Dec 2002



Rajah II : Peratusan Pecahan Peruntukan Projek Penyelidikan IRPA yang diterima UPM dalam Rancangan Malaysia Kelapan (RMK8)

Figure II : Percentage Division of IRPA Research Project Allocation received by UPM under the 8th Malaysia Plan (RMK8)

Kelulusan Geran Penyelidikan Projek IRPA – (EAR/PR/SR RMK8) Berdasarkan Fakulti / Institut (Januari 2001 – Disember 2002)

IRPA Research Project Grant Approval – (EAR/PR/SR RMK8) according to Faculties/Institutes (January 2001 – December 2002)

Bil No	Fakulti / Institut Faculty/Institute	Jumlah Projek/ Program Total project/ Programme	Jumlah Mengikut Fakulti(RM) Total according to Faculty (RM)
1	Bahasa Moden dan Komunikasi Modern Languages and Communication	1	182,000
2	Ekologi Manusia Human Ecology	4	689,984
3	Ekonomi dan Pengurusan Economics and Management	20	2,220,882
4	Institut Biosains Bioscience Institute	26	56,276,256
5	Institut Pengajian Komuniti dan Keamanan Community Studies and Peace Institute	4	606,580
6	Institut Teknologi Maju Advanced Technology Institute	7	1,166,080
7	Institut Multimedia dan Perisian Multimedia and Software Institute	1	84,500
8	Kejuruteraan Engineering	44	36,055,704
9	Pengajian Pendidikan Educational Studies	6	2,172,585
10	Perhutanan Forestry	13	1,975,616
11	Pertanian Agriculture	48	8,393,385
12	Perubatan dan Sains Kesihatan Medicine and Health Sciences	16	9,068,156
13	Perubatan Veterinar Veterinary Medicine	18	3,040,900
14	Sains dan Pengajian Alam Sekitar Science and Environmental Studies	81	16,775,298
15	Sains Komputer dan Teknologi Maklumat Computer Science and Information Technology	3	660,560
16	Sains Makanan dan Bioteknologi Food Science and Biotechnology	28	5,045,934
17	INSPEM INSPEM	1	185,000
18	Pertanian dan Makanan, Bintulu Agriculture and Food, Bintulu	1	212,000
Jumlah / Total		322	144,811,420

Kelulusan Geran Penyelidikan Jangka Pendek – Fundamental/Siswazah RMK8 Berdasarkan Fakulti / Institut (Januari 2002)

IRPA Research Project Grant Approval – (EAR/PR/SR RMK8) according to Faculties/Institutes (January 2001 – December 2002)

Bil No	Fakulti / Institut Faculty/Institute	Jumlah Projek/ Program Total project/ Programme	Jumlah Mengikut Fakulti(RM) Total according to Faculty (RM)
1	Bahasa Moden dan Komunikasi Modern Languages and Communication	6	58,859
2	Ekologi Manusia Human Ecology	3	84,559
3	Ekonomi dan Pengurusan Economics and Management	13	205,147
4	Institut Biosains Bioscience Institute	1	33,000
5	Institut Pengajian Komuniti dan Keamanan Community Studies and Peace Institute	1	15,000
6	Institut Teknologi Maju Advanced Technology Institute	2	52,000
8	Kejuruteraan Engineering	16	369,500
9	Pengajian Pendidikan Educational Studies	20	467,632
11	Pertanian Agriculture	16	424,300
12	Perubatan dan Sains Kesihatan Medicine and Health Sciences	8	300,511
13	Perubatan Veterinar Veterinary Medicine	6	138,896
14	Sains dan Pengajian Alam Sekitar Science and Environmental Studies	20	545,600
16	Sains Makanan dan Bioteknologi Food Science and Biotechnology	4	78,500
17	Fakulti Rekabentuk dan Senibina Design and Architecture	2	73,300
18	Pusat Pengajian Siswazah Pengurusan Management Graduate Studies Centre	1	9,000
Jumlah / Total		119	2,855,804



Hasil Penyelidikan

Pusat Pengurusan Penyelidikan (RMC) yang menjadi agensi pengurus penyelidikan di UPM telah melaporkan sebanyak 1,861 penulisan rencana saintifik dan kertas kerja persidangan telah dihasilkan sepanjang tahun 2002. Laporan terperinci adalah seperti yang ditunjukkan dalam Jadual I di bawah:

Sementara itu, lebih daripada 20 hasil-hasil penyelidikan telah dan sedang dalam proses pemfailan untuk dipatenkan dan dikomersialkan. Fokus penyelidikan meliputi sembilan sektor utama dalam program IRPA iaitu Agroindustri, Pembuatan, Alam Sekitar, Kesihatan, Perkhidmatan, Sosial, Ekonomi, Sains Bahan dan Geosains.

Research Findings

The Research Management Centre (RMC), which is the research management agency at UPM has reported 1,861 scientific documented writing and conference papers produced throughout 2002. The detailed report is as shown in the Table below:

Besides the above, more than 20 research findings were and are in the process of being filed for patenting and commercialisation. The focus of the research encompassed nine priority sectors in the IRPA programme, namely, Agroindustry, Manufacturing, Environmental, Medical, Services, Social, Economics, Material Sciences, and Geosciences.

Bil. No.	Penerbitan Publication	Jumlah Total
1.	Refereed International Journals Refereed International Journals	496
2.	Refereed Journals (tempatan/serantau) Refereed Journals (local/regional)	328
3.	Refereed Discussion (papers/proceedings) Refereed Discussion (papers/proceedings)	926
4.	Bilangan Buku/Bab Number of Books/Chapters	111
JUMLAH / TOTAL		1,861

Jadual I : Bilangan penerbitan untuk tahun 2002 oleh pensyarah UPM
Table I : No. of publications for 2002 by UPM lecturers

Geran Penyelidikan Lain

Selain itu UPM juga menerima geran penyelidikan daripada agensi-agensi tempatan dan luar negara antaranya International Atomic Energy Agency (IAEA), Japan International Cooperation Agency (JICA), International Plant Genetic Resources Institute (IPGRI), Ministry of Housing and Local Government, Ministry of Agriculture, Tenaga Nasional Berhad (TNB), Malaysian Palm Oil Board (MPOB), FELDA, Sapura Holdings Berhad dan lain-lain lagi.

Ke Arah Melahirkan k-Pekerja dan k-Penyelidik

Sebagai sebuah institusi pengajian tinggi yang menerima geran penyelidikan terbesar di Malaysia, pengurusan dana penyelidikan perlulah dibuat secara cekap dan telus. Oleh yang demikian, RMC telah mengadakan beberapa bengkel untuk memberi pendedahan dan tunjuk ajar kepada para penyelidik untuk menguruskan dana penyelidikan mereka. Bengkel Pengurusan Penyelidikan ini telah dibuat sebanyak 3 kali sepanjang tahun 2002. Ia telah melahirkan seramai 160 orang penyelidik yang berpengetahuan.

Selain itu, RMC juga telah mengadakan 7 seminar dan bengkel untuk melatih penyelidik dan tenaga pekerja yang menggerakkan penyelidikan. Ia bertujuan untuk melahirkan k-Pekerja dan k-Penyelidik yang dapat memahami tanggungjawab mereka untuk mengeluarkan hasil penyelidikan yang terbaik dan penggunaan geran penyelidikan pada tahap yang optimum.

Other Research Grants

UPM has also received research grants from local as well as overseas agencies, amongst which are *International Atomic Energy Agency (IAEA)*, *Japan International Cooperation Agency (JICA)*, *International Plant Genetic Resources Institute (IPGRI)*, *Ministry of Housing and Local Government*, *Ministry of Agriculture*, *Tenaga Nasional Berhad (TNB)*, *Malaysian Palm Oil Board (MPOB)*, *FELDA*, and *Sapura Holdings Berhad*.

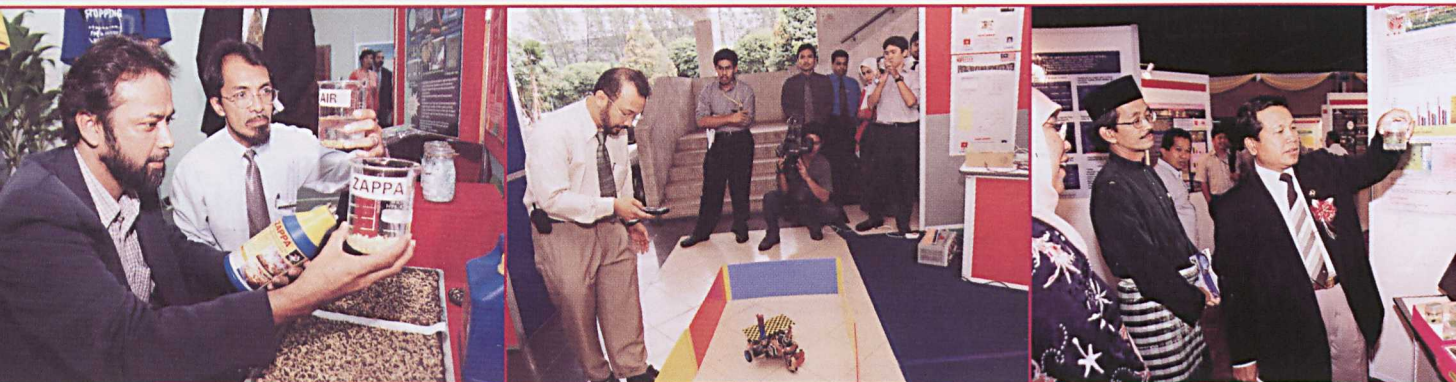
Towards Producing k-Worker and k-Researcher

As a higher learning institute which receives the largest research grant in Malaysia, its management of research funds has to be efficient and transparent. Therefore, the RMC has organised several workshops to provide exposure and teaching demonstrations for researchers to manage their research funds. The Research Management Workshops were held 3 three times throughout 2002. These have yielded a total of 160 knowledgeable researchers.

Besides these, the RMC has also held 7 seminars and workshops to train researchers and workers who have initiated research. The objective was to produce k-Worker and k-Researcher who would be able to understand their responsibilities to produce the best research findings and to utilise research grants at optimum level.

A total of 382 postgraduate students (254 Master and 128 PhD) benefited from research funding obtained from the award of IRPA research grants.





Sementara itu, seramai 382 orang pelajar ijazah tinggi (254 orang pelajar Master dan 128 pelajar Ph.D.) mendapat manfaat melalui pembiayaan penyelidikan mereka daripada pengurniaan geran penyelidikan IRPA ini.

Kerjasama Institusi Antarabangsa Dalam Pengurusan Penyelidikan

UPM telah menjalin kerjasama dengan British Council Malaysia dan University of Birmingham, United Kingdom dalam bidang pengurusan penyelidikan. Wakil dari British Council bersama dengan wakil University of Birmingham telah melawat UPM pada 18 Oktober 2002. Mereka diketuai oleh Dr. Tom Craig-Cameron, Pengarah, British Council Malaysia dan Mr. David J. Allen, Pendaftar & Setiausaha dari University of Birmingham, United Kingdom. Kerjasama ini adalah maklumbalas hasil perbincangan dua hala yang menumpu kepada pertukaran maklumat, idea dan kepakaran dalam bidang pengurusan penyelidikan.

Anugerah

UPM telah mencapai kecemerlangan di dalam bidang penyelidikan di mana penyelidik-penyelidik UPM telah banyak merangkul anugerah penyelidikan baik di peringkat kebangsaan mahupun antarabangsa. Di antara anugerah utama yang diterima adalah di peringkat Antarabangsa ialah di 18th International Invention and New Product Exposition (INPEX) di Pittsburgh, USA dan Geneva International Invention Exhibition di Geneva, Switzerland. Sementara di peringkat kebangsaan pula para penyelidik UPM telah menggondol banyak pingat di Expo Sains & Teknologi (S&T) 2002 diadakan di PWTC, Kuala Lumpur dan Anugerah I-TEX 2002 (International,

Cooperation with International Institutes in Research Management

UPM has cooperated with the British Council of Malaysia and the University of Birmingham, United Kingdom in the area of research management. The representatives from the British Council together with the University of Birmingham visited UPM on 18th October 2002. They were led by Dr. Tom Craig-Cameron, the Director of British Council, Malaysia and Mr. David J. Allen, the Registrar and Secretary from University of Birmingham, United Kingdom. The cooperation was based on feedback obtained from a two-way discussion emphasising the exchange of information, idea and expertise in the area of research management.

Awards

UPM has achieved research excellence where UPM researchers have obtained many research awards both at national and international levels. Among the major awards received at the international level include the 18th International Invention and New Product Exposition (INPEX) in Pittsburgh, USA and the Geneva International Invention Exhibition, Switzerland. At the national level, UPM researchers have received many awards during the Science and Technology Expo (S & T) 2002 held at the PWTC, Kuala Lumpur and I-TEX 2002 Awards



Invention, Innovation Industrial Design and Technology) bertempat di MidValley Exhibition Centre, Kuala Lumpur.

PERINGKAT KEBANGSAAN

- Anugerah I-TEX 2002 (*International, Invention, Innovation Industrial Design and Technology*) bertempat di MidValley Exhibition Centre, Kuala Lumpur pada 29-31 Mac 2002

(International, Invention, Innovation Industrial Design and Technology) held at the Mid Valley Exhibition Centre, Kuala Lumpur on 29-31 March 2002.

- Science & Technology 2000 Expo (S&T) at PWTC, Kuala Lumpur on 2 – 4 November 2002
 - a. UPM Booth achieved a third place for ‘Best Booth Design’ under the special invention category.
 - b. Assoc. Prof. Dr. Mohd Zabir Hussein won the ‘MARS Special Award’ which comprised a certificate, plaque and prize money of RM 4000
 - c. UPM researchers won 23 medals from 24 participations.

Bil No.	Nama Pemenang Name of Winner	Fakulti/Institut Faculty/Institute	Anugerah Award
1	Prof. Madya Dr. Arfah Salleh Assoc. Prof. Dr. Arfah Salleh	Sekolah Pengajian Siswazah Pengurusan Graduate School of Management	Pingat Emas Gold Medal
2	Prof. Madya Dr. Mohd. Khazani Abdullah Assoc.Prof.Dr.Mohd Khazani Abdullah	Kejuruteraan Engineering	Pingat Perak Silver Medal
3	Prof. Madya Dr. Borhanuddin Mohd Ali Assoc.Prof.Dr.Borhanuddin Mohd Ali	Kejuruteraan Engineering	Pingat Perak Silver Medal
4	Dr. Rosely Ab. Malik Dr. Rosely Ab. Malik	Kejuruteraan Engineering	Pingat Perak Silver Medal
5	Dr. Ishak Aris Dr. Ishak Aris	Kejuruteraan Engineering	Pingat Gangsa Bronze Medal
6	Syed Abdul Rahman Al-Haddad Syed Abdul Rahman Al-Haddad	Kejuruteraan Engineering	Pingat Gangsa Bronze Medal

- Expo Science & Technology 2002 (S&T) di PWTC, Kuala Lumpur pada 2-4 November 2002
 - a. Booth UPM telah berjaya mendapat tempat ketiga dalam “Best Booth Design” dalam kategori rekapipta khas.
 - b. Prof. Madya Dr. Mohd. Zobir Hussein telah memenangi “MARS Special Award” yang merangkumi sijil, plak dan wang hadiah sebanyak RM 4,000.
 - c. Penyelidik-penyelidik UPM memenangi 23 pingat daripada 24 penyertaan.



Bil No.	Peserta Participant	Tajuk Penyelidikan Research Title	Pingat Medal
1	Abu Bakar Salleh [Prof. Dr.], Farinazleen Mohd Ghazali, Raja Noor Zaliha Abd Rahman [Prof. Madya Dr.] dan Mahiran Basri [Prof. Dr.] <i>Fakulti Sains dan Pengajian Alam Sekitar</i> Abu Bakar Salleh [Prof. Dr.], Farinazleen Mohd Ghazali, Raja Noor Zaliha Abd Rahman [Assoc. Prof. Dr.] and Mahiran Basri [Prof. Dr.] <i>Faculty of Science and Environmental Studies</i>	<i>Bioremediation of Petroleum Hydrocarbon Pollutions by Microbial Consortium</i> <i>Bioremediation of Petroleum Hydrocarbon Pollutions by Microbial Consortium</i>	Emas Gold
2	Ghizan Saleh [Prof. Madya Dr.] <i>Fakulti Pertanian</i> Ghizan Saleh [Assoc. Prof. Dr.] <i>Faculty of Agriculture</i>	<i>Putra J-58, Hybrid Maize Variety: Breeding Procedure and Characteristics</i> <i>Putra J-58, Hybrid Maize Variety: Breeding Procedure and Characteristics</i>	Emas Gold
3	Maznah Ismail [Prof. Madya Dr.], Abdul Salam Abdullah [Prof. Dato' Dr.], Azrina Azlan dan Abdah Mohamad <i>Fakulti Perubatan dan Sains Kesihatan</i> Maznah Ismail [Assoc. Prof. Dr.], Abdul Salam Abdullah [Prof. Dato' Dr.], Azrina Azlan and Abdah Mohamad <i>Faculty of Medicine and Health Science</i>	<i>Rice Bran Malaysia (RBM): From Wasteful Resource to Useful Health Products</i> <i>Rice Bran Malaysia (RBM): From Wasteful Resource to Useful Health Products</i>	Emas Gold
4	Mohd Azmi Mohd Lila [Prof. Madya Dr.], Zeenathul Nazariah Allaudin [Dr.], Aini Ideris [Prof. Dr.], Ali Saeed Babiker dan Kamarudin Awang <i>Fakulti Perubatan Veterinar</i> Mohd Azmi Mohd Lila [Assoc. Prof. Dr.], Zeenathul Nazariah Allaudin [Dr.], Aini Ideris [Prof. Dr.], Ali Saeed Babiker and Kamarudin Awang <i>Faculty of Veterinary Medicine</i>	<i>Non-Abortogenic Gene-Deleted Pseudorabies Vaccine with an Exclusive Genetic Marker Within</i> <i>Non-Abortogenic Gene-Deleted Pseudorabies Vaccine with an Exclusive Genetic Marker Within</i>	Emas Gold
5	Mohd. Zobir Hussein [Prof. Madya Dr.], Zulkarnain Zainal [Prof. Madya Dr.], Asmah Hj. Yahya [Dr.] dan Dickens Wong Vui Foo <i>Fakulti Sains dan Pengajian Alam Sekitar</i> Mohd. Zobir Hussein [Assoc. Prof. Dr.], Zulkarnain Zainal [Assoc. Prof. Dr.], Asmah Hj. Yahya [Dr.] and Dickens Wong Vui Foo <i>Faculty of Science and Environmental Studies</i>	<i>Nanocomposite as a controlled release formulation of a plant growth regulator, -naphthaleneacetate</i> <i>Nanocomposite as a controlled release formulation of a plant growth regulator, -naphthaleneacetate</i>	Emas Gold

Bil No.	Peserta Participant	Tajuk Penyelidikan Research Title	Pingat Medal
6	Zulkarnain Zainal [Prof. Madya Dr.], Lee Kong Hui, Mohd Zobir Hussein [Prof. Madya Dr.], Taufiq Yap Yun Hin [Prof. Madya Dr.] dan Irmawati Ramli [Dr.] <i>Fakulti Sains dan Pengajian Alam Sekitar</i>	<i>Photodegradation of Dyes Using TiO₂ Supported on Glass</i>	Emas
	Zulkarnain Zainal [Assoc. Prof. Dr.], Lee Kong Hui, Mohd Zobir Hussein [Assoc. Prof. Dr.], Taufiq Yap Yun Hin [Assoc. Prof. Dr.] and Irmawati Ramli [Dr.] <i>Faculty of Science and Environmental Studies</i>	<i>Photodegradation of Dyes Using TiO₂ Supported on Glass</i>	Gold
7	Elias Saion [Prof. Madya Dr.] dan Aris Doyan <i>Fakulti Sains dan Pengajian Alam Sekitar</i>	<i>Preparation and Characterization of Polymer Gel Dosimeters for Radiotherapy</i>	Perak
	Elias Saion [Assoc. Prof. Dr.] and Aris Doyan <i>Faculty of Science and Environmental Studies</i>	<i>Preparation and Characterization of Polymer Gel Dosimeters for Radiotherapy</i>	Silver
8	Fakhru'l-Razi Ahmadun [Dr.], M.A. Jahangir dan A.H. Molla <i>Fakulti Kejuruteraan</i>	<i>Biological Treatment of Domestic Wastewater Treatment Plant (DWTP) Sludge by 2-Stage Integrated Process - Liquid State Bioconversion (LSB) and Solid State Bioconversion (SSB) Process</i>	Perak
	Fakhru'l-Razi Ahmadun [Dr.], M.A. Jahangir and A.H. Molla <i>Faculty of Engineering</i>	<i>Biological Treatment of Domestic Wastewater Treatment Plant (DWTP) Sludge by 2-Stage Integrated Process - Liquid State Bioconversion (LSB) and Solid State Bioconversion (SSB) Process</i>	Silver
9	Jalaluddin Harun [Dr.], Khairul Zaman Mohd. Dahlan [Dr.], Mohamed Faiz Othman Fuad, Gloria Manaarpac, Mohd. Nor Mohd Yusof [Dr.], Mohd. Shahwahid Othman [Prof. Madya Dr.], Khalina Abdan, Tan Khim Siong dan Mohd. Ali Rani <i>Institut Teknologi Maju</i>	<i>Development of Fibre Reinforced Plastic Composites (FRPC) from Oil Palm (Elaeis guineensis, JACQ) and Kenaf (Hibiscus cannabinus) Fibres Blended in Thermoplastic Matrix for Automotive and Other Applications</i>	Perak
	Jalaluddin Harun [Dr.], Khairul Zaman Mohd. Dahlan [Dr.], Mohamed Faiz Othman Mohd. Nor Mohd Yusof [Dr.], Mohd. Shahwahid Othman [Assoc. Prof. Dr.], Khalina Abdan, Tan Khim Siong and Mohd. Ali Rani <i>Advance Technology Institute</i>	<i>Development of Fibre Reinforced Plastic Composites (FRPC) from Oil Palm (Elaeis guineensis, JACQ) and Kenaf (Hibiscus cannabinus) Fibres Blended in Thermoplastic Matrix for Automotive and Other Applications</i>	Silver

Bil No.	Peserta Participant	Tajuk Penyelidikan Research Title	Pingat Medal
10	Mohd. Khazani Abdullah [Dr.] dan Amirul Hakimi Husain <i>Fakulti Kejuruteraan</i>	<i>Fiber Optics Protection Switch</i>	Perak
	Mohd. Khazani Abdullah [Dr.] and Amirul Hakimi Husain <i>Faculty of Engineering</i>	<i>Fiber Optics Protection Switch</i>	Silver
11	Noorhana Yahya [Dr.], Mansor Hashim [Prof. Madya Dr.], Raba'ah Syahidah Abd. Azis dan Norlaily Mohd Saiden <i>Fakulti Sains dan Pengajian Alam Sekitar</i>	<i>Observation of Surface Magneto-Optics Kerr Effect (SMOKE) on Ferrites Samples Prepared Via Sol-Gel Route</i>	Perak
	Noorhana Yahya [Dr.], Mansor Hashim [Assoc. Prof. Dr.], Raba'ah Syahidah Abd. Azis and Norlaily Mohd Saiden <i>Faculty of Science and Environmental Studies</i>	<i>Observation of Surface Magneto-Optics Kerr Effect (SMOKE) on Ferrites Samples Prepared Via Sol-Gel Route</i>	Silver
12	Norhani Abdullah [Prof. Madya Dr.], Ho Yin Wan [Prof. Dr.], Lan Ganqui dan Syed Jalaludin Syed Salim [Tan Sri Professor Dr.] <i>Fakulti Sains dan Pengajian Alam Sekitar</i>	<i>Mitsuokella phytase for poultry</i>	Perak
	Norhani Abdullah [Assoc. Prof. Dr.], Ho Yin Wan [Prof. Dr.], Lan Ganqui and Syed Jalaludin Syed Salim [Tan Sri Professor Dr.] <i>Faculty of Science and Environmental Studies</i>	<i>Mitsuokella phytase for poultry</i>	Silver
13	Shamsuddin Sulaiman [Prof. Madya Dr.] <i>Fakulti Kejuruteraan</i>	<i>Thermal Network Analysis Software (TNAS)</i>	Perak
	Shamsuddin Sulaiman [Assoc. Prof. Dr.] <i>Faculty of Engineering</i>	<i>Thermal Network Analysis Software (TNAS)</i>	Silver
14	Sidek Hj. Abd. Aziz [Prof. Madya Dr.], Kamariah Abu Bakar [Prof. Dr.], Aida Suraya Md. Yunus [Prof. Madya Dr.], Mohd. Shafree Ahmad dan Hamidah Meseran <i>Institut Multimedia dan Perisian</i>	<i>Development of e-SPRINT: On-Line Lecture Notes Management System</i>	Perak
	Sidek Hj. Abd. Aziz [Assoc. Prof. Dr.], Kamariah Abu Bakar [Prof. Dr.], Aida Suraya Md. Yunus [Assoc. Prof. Dr.], Mohd. Shafree Ahmad and Hamidah Meseran <i>Institute of Multimedia and Software</i>	<i>Development of e-SPRINT: On-Line Lecture Notes Management System</i>	Silver

Bil No.	Peserta Participant	Tajuk Penyelidikan Research Title	Pingat Medal
15	Syed Omar Syed Rastan [Dr.] dan Ahmad Husni Mohd. Hanif [Prof. Madya Dr.] <i>Fakulti Pertanian</i> Syed Omar Syed Rastan [Dr.] dan Ahmad Husni Mohd. Hanif [Assoc.Prof. Dr.] <i>Faculty of Agriculture</i>	<i>Zappa-The Rice Seeds Germination Enhancer and Control of "Padi Angin" Infestation</i> <i>Zappa-The Rice Seeds Germination Enhancer and Control of "Padi Angin" Infestation</i>	Perak Silver
16	Abdul Rahman Ramli [Dr.], Koay Su Yeong dan Lew Yuan Pok <i>Fakulti Kejuruteraan</i> Abdul Rahman Ramli [Dr.], Koay Su Yeong and Lew Yuan Pok <i>Faculty of Engineering</i>	<i>Low Cost Motion Detection Using Web Camera</i> <i>Low Cost Motion Detection Using Web Camera</i>	Gangsa Bronze
17	Azizah Osman [Prof. Madya Dr.], Hasanah Mohd Ghazali [Prof. Dr.], Russly Abdul Rahman [Prof. Madya Dr.], Salmah Yusof [Prof. Madya Dr.], Liu Fanny, Hazniza Adnan dan Ali Ghanim Aziz <i>Fakulti Sains Makanan dan Bioteknologi</i> Azizah Osman [Assoc. Prof. Dr.], Hasanah Mohd Ghazali [Prof. Dr.], Russly Abdul Rahman [Assoc. Prof. Dr.], Salmah Yusof [Assoc. Prof. Dr.], Liu Fanny, Hazniza Adnan and Ali Ghanim Aziz <i>Faculty of Food Science and Biotechnology</i>	<i>Enzyme-Aided Peeling of Local Citrus Fruits</i> <i>Enzyme-Aided Peeling of Local Citrus Fruits</i>	Gangsa Bronze
18	Badlishah Sham Baharin [Prof. Madya Dr.], Quek Siew Yong [Dr.], Chu Boon Seang dan Yaakub Che Man [Prof. Dr.] <i>Fakulti Sains Makanan dan Bioteknologi</i> Badlishah Sham Baharin [Assoc. Prof. Dr.], Quek Siew Yong [Dr.], Chu Boon Seang and Yaakub Che Man [Prof. Dr.] <i>Faculty of Food Science and Biotechnology</i>	<i>Separation of Vitamin E from Palm Fatty Acid Distillate using Adsorption Chromatography</i> <i>Separation of Vitamin E from Palm Fatty Acid Distillate using Adsorption Chromatography</i>	Gangsa Bronze

Bil No.	Peserta Participant	Tajuk Penyelidikan Research Title	Pingat Medal
19	Borhanuddin Mohd. Ali [Prof. Dr.], Khalid Eltahir Mohamed Osman, V. Prakash, Ratna Kalos Zakiah Sahbudin, Nor Kamariah Noordin, dan Sabira Khatun [Dr.] <i>Fakulti Kejuruteraan</i>	<i>Design of DS-CDMA Wireless Transmitter Using FPGA</i>	Gangsa
	Borhanuddin Mohd. Ali [Prof. Dr.], Khalid Eltahir Mohamed Osman, V. Prakash, Ratna Kalos Zakiah Sahbudin, Nor Kamariah Noordin, and Sabira Khatun [Dr.] <i>Faculty of Engineering</i>	<i>Design of DS-CDMA Wireless Transmitter Using FPGA</i>	Bronze
20	Mohd Shafree Ahmad dan Makhdzir Mardan [Prof. Madya Dr.] <i>Institut Multimedia dan Perisian</i>	<i>Putranet-Virtual Office</i>	Gangsa
	Mohd Shafree Ahmad and Makhdzir Mardan [Assoc. Prof. Dr.] <i>Institute of Multimedia and Software</i>	<i>Putranet-Virtual Office</i>	Bronze
21	Mohd. Yazid Abd Manap [Prof. Madya Dr.], Shuhaimi Mustaffa, Abdul Manaf Ali [Prof.] dan Norehan Mohd Saleh <i>Fakulti Sains Makanan dan Bioteknologi</i>	<i>Bile Salt Hydrolase (BSH) from Probiotic Bifidobacterium longum for Hypercholesterolemia</i>	Gangsa
	Mohd. Yazid Abd Manap [Assoc. Prof. Dr.], Shuhaimi Mustaffa, Abdul Manaf Ali [Prof.] and Norehan Mohd Saleh <i>Faculty of Food Science and Biotechnology</i>	<i>Bile Salt Hydrolase (BSH) from Probiotic Bifidobacterium longum for Hypercholesterolemia</i>	Bronze
22	Othman Dato' Hj. Mohamed [Prof. Dr.] <i>Fakulti Pengajian Pendidikan</i>	<i>Career Indecision-A Matrix Jobs Game</i>	Gangsa
	Othman Dato' Hj. Mohamed [Prof. Dr.] <i>Faculty of Educational Studies</i>	<i>Career Indecision-A Matrix Jobs Game</i>	Bronze
23	Wan Md Zin Wan Yunus [Prof. Dr.], Dedy Suhendra, Mahiran Basri [Prof. Dr.], Md. Jelas Haron [Prof. Madya Dr.] dan Sidik Silong [Prof. Madya Dr.] <i>Fakulti Sains dan Pengajian Alam Sekitar</i>	<i>Enzymatic Synthesis of Hydroxanic Acids from Palm Oils</i>	Gangsa
	Wan Md Zin Wan Yunus [Prof. Dr.], Dedy Suhendra, Mahiran Basri [Prof. Dr.], Md. Jelas Haron [Assoc.Prof. Dr.] and Sidik Silong [Assoc. Prof. Dr.] <i>Faculty of Science and Enviromental Studies</i>	<i>Enzymatic Synthesis of Hydroxanic Acids from Palm Oils</i>	Bronze

PERINGKAT ANTARABANGSA

- 18th International Invention and New Product Exposition (INPEX) di Pittsburgh, USA pada 15-18 Mei 2002

INTERNATIONAL LEVEL

- 18th International Invention and New Product Exposition (INPEX) in Pittsburgh, USA on 15-18 May 2002

Bil Bil	Nama Pemenang Name	Fakulti/Institut Faculty/Institute	Anugerah Award
1	En. Ratnasamy Muniandy Mr. Ratnasamy Muniandy	Kejuruteraan Engineering	Anugerah Khas - <i>Award of Excellence</i> Special Award - <i>Award of Excellence</i>
2	En. Ratnasamy Muniandy Mr. Ratnasamy Muniandy	Kejuruteraan Engineering	Pingat Emas Gold Medal
3	En. Ratnasamy Muniandy Mr. Ratnasamy Muniandy	Kejuruteraan Engineering	Pingat Perak Silver Medal
4	Prof. Dr. Mohamed Shariff Mohamed Din Prof. Dr. Mohamed Shariff Mohamed Din	Perubatan Veterinar Veterinary Medicine	2 Pingat Perak 2 Silver Medals
5	Dr. Rosely Ab. Malik Dr. Roseiy Ab. Malik	Kejuruteraan Engineering	Pingat Gangsa Bronze Medal

- Geneva International Invention Exhibition di Geneva, Switzerland pada 1-5 Mei 2002

- Geneva International Invention Exhibition in Geneva, Switzerland , 1-5 May 2002

Bil Bil	Nama Pemenang Name	Fakulti/Institut Faculty/Institute	Anugerah Award
1	Dr. Rosely Ab. Malik Dr. Rosely Ab. Malik	Kejuruteraan Engineering	Pingat Emas dan Anugerah Khas Juri Gold Medal and Jury's Special Award
2	En. Ratnasamy Muniandy Mr. Ratnasamy Muniandy	Kejuruteraan Engineering	Pingat Emas dan Anugerah Khas Juri Gold Medal and Jury's Special Award
3	Prof. Madya Dr. Azmi Yahya Assoc.Prof. Dr. Azmi Yahya	Kejuruteraan Engineering	Pingat Perak Silver Medal
4	Prof. Madya Dr. Mohd. Khazani Abdullah Assoc. Prof. Dr. Mohd. Khazani Abdullah	Kejuruteraan Engineering	Pingat Perak Silver Medal
5	Dr. Ishak Aris Dr. Ishak Aris	Kejuruteraan Engineering	Pingat Perak Silver Medal

INFRASTRUKTUR PENYELIDIKAN

RESEARCH INFRASTRUCTURE



Infrastruktur Penyelidikan

Penyelidikan Dalam Bidang Komuniti dan Keamanan

Dalam menangani cabaran kehidupan dunia yang semakin kompetitif, penyelidikan dalam bidang pendidikan komuniti dan pembangunan, pengajian belia, pemajuan desa, dan pengajian keamanan adalah penting ditubuhkan supaya menjadi sebuah pusat rujukan bertaraf kebangsaan, serantau dan antarabangsa. Menepati hasrat dan cita-cita ini, maka pada 1 Januari 2002, Institut Pengajian Komuniti dan Keamanan (PEKKA) telah ditubuhkan secara rasminya.

Penubuhan PEKKA adalah sebagai sebuah pusat kecemerlangan penyelidikan dan pembangunan (R&D) dalam bidang sains sosial dan kemanusiaan. Visi PEKKA adalah menjadi peneraju penyelidikan unggul yang menyumbang kepada pembangunan mapan dan kesejahteraan sejagat. Selaras dengan penekanan terhadap bidang-bidang berkenaan, maka empat buah Laboratori telah ditubuhkan iaitu Laboratori Pendidikan Komuniti dan Pembangunan, Laboratori Pemajuan Desa, Laboratori Pengajian Belia dan Laboratori Pengajian Keamanan

Penyelidikan Matematik Bertaraf Dunia

Institut Penyelidikan Matematik (INSPERM) merupakan institut pertama yang mengkhusus dalam bidang penyelidikan ilmu matematik. Institut ini telah ditubuhkan pada tanggal 1 April 2002 dan bertujuan untuk menyediakan ruang dan pusat untuk melaksanakan kegiatan penyelidikan matematik bertaraf dunia secara bersepadu dan bertumpu di kalangan ahli-ahli sains matematik UPM juga bersama-sama dengan pakar-pakar dari luar UPM sama ada di peringkat kebangsaan atau antarabangsa.

Penyelidikan Dalam Bidang Gerontologi Dan Perubatan Geriatrik

Kepesatan bidang teknologi maklumat dan kejuruteraan di Malaysia pada masa ini sewajarnya tidak melupakan peranan warga tua yang pernah menyumbang kepada kepesatan pembangunan negara. Seajar dengan itu, penyelidik-penyelidik di Fakulti Ekologi Manusia dan Fakulti Perubatan dan Sains Kesihatan telah mengorak langkah dengan penubuhan Institut Gerontologi (IG) yang ditubuhkan dengan rasminya pada Januari 2002

Research Infrastructure

Research in the Area of Community and Peace

In overcoming the challenges of global living which are becoming more competitive, it is important for research in the field of community studies and development, youth studies, rural development and peace studies be formulated so that it becomes a reference centre at national, regional and international levels. In line with this ambition, the Institute of Community and Peace Studies (PEKKA) was officially set up on 1 January 2002.

The setting up of PEKKA is to cater for the establishment of an excellent research and development centre (R&D) in the field social of sciences and humanities. The vision of PEKKA is to become a leading research pioneer, which contributes to sustainable development and global peace. In line with the emphasis on these related areas, four laboratories were formed, namely, Community and Development Studies Laboratory, Rural Development Laboratory, Youth Studies Laboratory, and Peace Studies Laboratory.

World Class Mathematical Research

The Mathematical Research Institute (INSPERM) is the first institute specialising in the field of mathematical research. The institute was formed on 1st April 2002 with the objective of providing space and centre for undertaking an integrated, world class mathematical research activities which focused on UPM's mathematical science members along with experts from outside UPM, either at the national or international level.

Research in the Fields of Gerontology and Geriatric Medicine

It is only fair for the current rapid advancement of information technology and engineering in Malaysia not to forget the role played by senior citizens who have previously contributed towards the country's rapid development. In line with this, researchers at the Faculty of Human Ecology and Faculty of Medicine and Health Sciences have paved the way for the formation of the Gerontology Institute (IG) which was officially established in January 2002. It is hoped that the Gerontology Institute will lead a multidisciplinary research approach for increasing knowledge related to physiology aspects, psychology, social clinical, rehabilitation and the aging

Institut Gerontologi diharapkan dapat menerajui penyelidikan terapan antara pelbagai bidang untuk meningkatkan pengetahuan berhubung dengan aspek fisiologi, psikologi, sosial klinikal, pemulihan dan tingkah laku penuaan. Selain itu, ia juga diharapkan untuk menjadi pusat rujukan (*one stop referral center*) berhubung dengan penyelidikan dan maklumat mengenai bidang gerontologi dan perubatan geriatrik.

Walaupun masih setahun jagung penubuhannya, Institut Gerontologi telah mendapat kepercayaan Majlis Penasihat dan Perundingan Warga Tua Kebangsaan dan agensi bertanggungjawab untuk memberi nasihat teknikal kepada penyediaan perkhidmatan sosial dan kesihatan warga tua di Malaysia.

Menyokong Sektor Teknologi Maju

Pada tahun 2002, Institut Teknologi Maju (ITMA) telah menyusun semula enam laboratri sedia ada dan menubuhkan 1 laboratri baru untuk menerajui penyelidikan dan pembangunan dalam bidang-bidang terkehadapan dalam sains fizik, teknologi maklumat dan kejuruteraan. Pemanjangan skop penyelidikan ke bidang antara disiplin atau dari segi pemerincian bidang penyelidikan yang lebih mendalam dibuat melalui 7 laboratri iaitu Laboratri Bahan Maju (*Advanced Materials Laboratory* – AML), Laboratri Bio-Kejuruteraan (*Bio-Engineering Laboratory* – BEL), Laboratri Sistem Sepadu Berkomputer (*Computer Integrated Systems Laboratory* – CISL), Laboratri Sistem Cerdik dan Robotik (*Intelligent Systems and Robotics Laboratory* – ISRL), Laboratri Pemodelan Spatial dan Berangka (*Spatial and Numerical Modelling Laboratory* – SNML), Laboratri Pengajian Teori (*Theoretical Studies Laboratory* – TSL) dan Laboratri Teknologi Automotif Maju (*Advanced Automotive Technology Laboratory* – AATL)

Akademi Hutan Hujan (Rainforest Academy)

Akademi Hutan Hujan (*Rainforest Academy*) secara rasminya ditubuhkan pada tahun 2002 bagi menjalankan kajian dan khidmat perundingan secara integrasi dan mensintesis hasil-hasil penyelidikan Ilmu Hutan Hujan dengan menggunakan ICT. Tujuan utama penubuhan ini adalah untuk meningkatkan kebolehan dan

behaviour, as well as become a one-stop referral centre for research and information on gerontology and geriatric medicine.

Although still in its infancy of formation, the Gerontology Institute has received the trust of the Council for National Advisory and Consultancy for Senior Citizens which is the agency responsible for providing technical advice in the preparation of social services and health of senior citizens in Malaysia.

Supporting Advanced Technology Sector

In 2002, the Advanced Technology Institute (ITMA) restructured six of the existing laboratories and formed one new laboratory for pioneering research and development in the advanced fields of physics, information technology and engineering. The extension of research scope to multidisciplinary fields or via in depth fields of research was undertaken through 7 laboratories viz. Bio-Engineering Laboratory (BEL), Computer Integrated Systems Laboratory (CISL), Intelligent Systems and Robotics Laboratory (ISRL), Spatial and Numerical Modelling Laboratory (SNML), Theoretical Studies Laboratory (TSL) and Advanced Automotive Technology Laboratory (AATL).

Rainforest Academy

The Rainforest Academy was officially formed in 2002 to undertake studies and consultancy services via the integration and synthesis of research findings on rainforest using ICT. The main objective of its formation was to increase the nation's expertise and capability towards achieving Vision 2020. The formation of this Academy is expected to enable it to act as a think-tank group and reference resource centre, especially in the strategy and policy perspectives, in the efforts of development of rainforest knowledge. In fact, it will also act as a major forum for cooperation between experts and cross expertise at the UPM level as well as involving external agencies (e.g. through fellowship programmes), determining strategic directions of various activities and processes in the development and progress of rainforest knowledge, especially in handling issues on biodiversity. It also assists the nation to be prepared and be more competitive in the global arena through capability

keupayaan negara ke arah pencapaian Wawasan 2020. Penubuhan Akademi ini diharap dapat bertindak sebagai suatu kumpulan pemikir (*think-tank*) dan pusat sumber rujukan, terutama sekali dari perspektif strategi dan polisi, dalam usaha pembangunan ilmu Hutan Hujan. Malah, ia juga sebagai satu forum utama bagi usaha sama antara pakar dan antara kepakaran bersilang, sama ada di peringkat dalaman UPM atau agensi di luar UPM (contohnya melalui program *fellowship*), menentukan hala tuju strategik pelbagai aktiviti dan proses, dalam pembangunan dan kemajuan ilmu Hutan Hujan, terutama sekali dalam menangani isu biodiversiti.

Ia juga dapat membantu menyediakan negara supaya mampu bersaing dalam arena global, melalui pembangunan keupayaan dan kebolehan repositori, dalam Ilmu Hutan Hujan.

Institut Biosains

Selepas meniti usia enam tahun penubuhannya sejak 1996, Institut Biosains terus meningkatkan Penyelidikan & Pembangunan (R&D) dalam bidang-bidang sains biologi. Tumpuan lebih menjurus dalam bidang makanan, tanaman, kesihatan, akuakultur, bioperubatan, pemuliharaan dan penggunaan sumber genetik, produk semula jadi, farmaseutikal dan nutriseutikal. yang akan mengukuhkan keupayaan sains dan teknologi kebangsaan serta pembangunan sumber manusia demi menyokong Pelan Induk Perindustrian dan Pertanian Negara.

Sebagai pengurus dan penyedia kemudahan perkhidmatan pusat kecemerlangan dan penyelidikan, Institut Biosains telah menyusun semula unit-unit sedia ada kepada 4 laborator; Laboratori Fitoubatan, Laboratori Teknologi Enzim dan Mikrob, Laboratori Biologi Molekul dan Sel dan Laboratori Farmaseutikal dan Nutriseutikal bagi melicinkan dan menambah keberkesanan pentadbiran dan pengurusan sumber dan kemudahannya.

Institut Multimedia dan Perisian (IMP)

Institut Multimedia dan Perisian (IMP) telah ditubuhkan pada tahun 2001 selepas penggabungan Institut Multimedia dan Institut Pembangunan Perisian. Pada tahun 2002, Institut

development and repository capacity in rainforest knowledge.

Bioscience Institute

After six years of its establishment since 1996, the Bioscience Institute continues to increase its research and development in the fields of biological sciences. The emphasis is on the areas on food, crop, health, aquaculture, biomedical, conservation and use of genetic resources, natural products, pharmaceuticals and neutraceuticals, which will strengthen the national science and technology capability as well as human resource development for supporting the Main National Industrial and Agricultural Plan.

As the manager and provider of service facilities for the centre of excellence and research, the Bioscience Institute has restructured all existing units into four laboratories: Phytomedical Laboratory, Enzyme and Microbial Technology Laboratory, Molecular Biology and Cell Laboratory and Pharmaceutical and Neutraceutical Laboratory, to enhance the efficiency of the administration and management of its resources and facilities.

Multimedia and Software Institute (IMP)

The Multimedia and Software Institute (IMP) was formed in 2001 after the merger of the Multimedia Institute with the Software Development Institute. In 2002, the Multimedia and Software Institute restructured all its research units into four laboratories, namely, Informatics Laboratory, Multimedia and Software Development Laboratory, Wide Computation Laboratory, and Teaching and Innovative Multimedia Laboratory.

Among the success achieved by the institute in 2002 is the setting up of the Office Automation System called 'Putranet'. It is a system that facilitates the human resource management of the institute and seven other UPM responsibility centres that utilise it. 'Putranet' facilitates human resource management because all administrative management procedures can be applied online. 'Putranet' includes various office management according to various specific functions, such as time clock, news, forum, calendar, directory, meeting minutes, and filing systems.

Multimedia dan Perisian telah menyelaraskan semula unit-unit penyelidikannya kepada 4 Laboratori iaitu Laboratori Infomatik Terapan, Laboratori Multimedia dan Pembangunan Perisian, Laboratori Komputeran Meluas dan Laboratori Pengajaran dan Inovasi Multimedia.

Antara kejayaan yang telah dicapai oleh Institut ini pada tahun 2002 ialah membangunkan Sistem Pengautomasian Pejabat yang dinamakan "Putranet". Ianya merupakan satu sistem yang memudahkan pengurusan sumber manusia IMP sendiri dan 7 pusat tanggungjawab lain di UPM yang menggunakannya. "Putranet" memudahkan pengurusan sumber manusia kerana semua kaedah pengurusan pentadbiran diaplikasikan secara *on-line*. "Putranet" memuatkan pelbagai pengurusan pejabat, mengikut fungsi tertentu seperti perakam waktu, berita, forum, kalendar, direktori, minit mesyuarat, sistem pemfailan dan sebagainya.

KEGEMILANGAN PENYELIDIKAN BERTARAF DUNIA

WORLD CLASS RESEARCH EXCELLENCE



Kegemilangan Penyelidikan Bertaraf Dunia

Kemenangan Fiber Mastic Asphalt

Dua penyelidik UPM, Encik Ratnasamy Muniandy dan Prof. Ir. Dr. Radin Umar Radin Sohadi berjaya mengharumkan nama negara apabila produk ciptaan mereka "*Use of Cellulose oil palm fiber in Fiber Mastic Asphalt paving compound*" telah memenangi pingat emas dalam pertandingan Reka Cipta Antarabangsa di Pittsburgh, Amerika Syarikat. Pameran terbesar di Amerika Syarikat ini dikenali sebagai *International Invention and New Product Exposition* (INPEX) yang ke-18.

Produk ini dicipta hasil penggunaan gentian selulosa kelapa sawit dalam turapan jalan yang mampu mengurangkan kos pembinaan jalan sehingga 20-25% di samping mempunyai ketahanan dan kestabilan yang tinggi.

Kemenangan Winskipezy

Prof. Madya Dr. Arfah Salleh menjadi penyelidik tunggal UPM memenangi Pingat emas di Pameran Antarabangsa Rekacipta, Inovasi, Reka Bentuk Industri dan Teknologi 2002. Produk ini terpilih dalam Kategori Inovasi, Rekacipta kepada Pendidikan. *Winskipezy* yang dibangun dan dikomersialkan dengan kerjasama Syarikat Acc Track21 Sdn. Bhd. merupakan satu perisian komputer bagi menyelesaikan pembelajaran dan latihan dalam bidang perakaunan kewangan.

Apa yang membanggakan, Persatuan Akauntan Awam Bertauliah Malaysia (MACPA) telah memberi pengesahan kualiti untuk digunakan dalam pembelajaran dan latihan perakaunan kewangan. Manakala Jabatan Teknikal Kementerian Pendidikan Malaysia (KPM) juga mengesahkan kesesuaian *Winskipezy* sebagai alat pengajaran dan pembelajaran Prinsip Akaun untuk Sijil Pelajaran Malaysia (SPM).

Kemenangan Komposit

Hasil penyelidikan Prof. Madya Dr. Mohd. Zobir Hussain dan kumpulan penyelidiknya telah berjaya dipilih sebagai pemenang tunggal anugerah khas "*Mars Special Award*" dalam Pertandingan Rekacipta dan Inovasi Sains 2002.

World Class Research Excellence

Fibre Mastic Asphalt – Gold Medal

Two UPM researchers, Mr. Ratnasamy Muniandy and Prof. Ir. Dr. Radin Umar Radin Sohadi have made the nation proud by winning the gold medal for their product invention, "*Use of cellulose oil palm Fibre Mastic Asphalt paving compounds*" in the International Invention competition held in Pittsburgh, USA. The exhibition, which was the largest in the USA, is known as the 18th International Invention and New Product Exposition (INPEX).

This product was invented from the use of cellulose oil palm fibre in road pavements, which could reduce road construction cost up to 20 – 25%, as well as having high resistance and stability.

Winskipezy – Win

Associate Professor Dr. Arfah Salleh became the sole UPM winner of the gold medal at the International Exhibition on Invention, Innovation, Industrial Design and Technology 2002. Her product won the Innovation, Design for Education Category. *Winskipezy*, which was developed and commercialised by UPM with the cooperation of Acc Track 21 Company Ltd., is a computer-software for solving learning and training in financial accounting.

The Malaysian Association of Certified Public Accountants (MACPA) has confirmed its quality for utilisation in the learning and training of financial accounting. The Technical Department of the Ministry of Education Malaysia (KMM) has also confirmed the suitability of *Winskipezy* as a teaching and learning tool for Accounting Principles for Malaysian Certificate of Education (SPM).

Nano-Composite – Win

The research findings of Associate Professor Dr. Mohd Zobir Hussain and his research group was successfully selected as the sole winner of the special award ("*Mars Special Award*") in the Science Invention and Innovation 2002 Competition.

The invented product concerned the preparation and characterisation of nano-composite as a controlled-release formulation of plant growth regulator - naphthalene acetate. In the study, the researchers

Produk ciptaan beliau berkisar tentang penyediaan dan pencirian nanokomposit sebagai formulasi pelepasan terkawal pengatur pembesaran tumbuhan, *a-naphthalene acetate (preparation and characterization of nanocomposite as a controlled-release formulation of a plant growth regulator, a-naphthalene acetate)*. Dalam kajian itu, para penyelidik ini telah berjaya menghasilkan formulasi baru perlepasan terkawal melalui manipulasi pada skala nano.

Maklumat terperinci mengenai formulasi ini telah diterbitkan di dalam *Journal of Controlled Release*, 82, 417-427 (2002), *Journal of Nano Science and Nano Technology*, 2, 1-4 (2002) dan *Journal of Materials Synthesis and Processing*, 10, 89-95 (200).

successfully produced a new controlled release formulation by the manipulation of the nano scale.

Detailed information of the formulation was published in the *Journal Controlled Release*, 82,417-427 (2002), *Journal of Nano Science and Nano Technology*, 2, 1-4 (2002) and *Journal of Materials Synthesis and Processing*, 10, 89-95 (2002).

Khidmat Runding Cara

Taman Pertanian Universiti (TPU)

Dalam meningkatkan keupayaan UPM sebagai pusat pengajian dan perkhidmatan pertanian dan biosumber terkemuka di peringkat antarabangsa, Taman Pertanian Universiti (TPU) menjadi salah satu entiti penting untuk merealisasikan harapan tersebut. Taman Pertanian Universiti telah membantu dan melaksanakan rancangan pembangunan fizikal dan akademik Universiti di samping memajukan kampus sebagai taman pertanian ulung yang lengkap dengan taman botani, khazanah sumber genetik pertanian (*bank genetic*), muzium pertanian (statik dan hidup), Pusat Ekuin (*Riding School*), e-Ladang dan *Agric Portal*, ladang/bidang usaha contoh (*showcase*), kawasan rekreasi, stesen penyelidikan dan program pembangunan Agroteknopreneur.

Antara komponen-komponen fizikal sedia ada dan yang akan dibangunkan di TPU ialah:

- *Educational Meadows*
- Kompleks Penyelidikan UPM (Ladang Puchong)
- Kompleks Mekanisasi
- Kompleks Penyelidikan Pertanian Terkawal
- Kompleks Biji Benih dan Pasca Tuai
- Kompleks Pengeluaran Benih
- *Putra Dairy*
- Pembangunan Pusat Latihan Kemahiran
- Pusat Ekuin (*Riding School*)
- e-Ladang dan *Agric Portal*
- Pembangunan kawasan Bukit Ekspo sebagai Pusat Pameran (*Exhibition Centre*) dan Muzium Pertanian
- Mewujudkan Bank Genetik untuk pengumpulan bahan-bahan tanaman sebagai rujukan

TPU sebagai Pusat Pembangunan Agroteknopreneur

Satu kawasan khusus juga telah dikenal pasti sebagai pusat pembangunan Agroteknopreneur. Program khusus ini dirancang untuk mengenal pasti bakal usahawan pertanian di kalangan pelajar yang berkeelayakan dan seterusnya didedahkan dengan pelbagai bentuk latihan untuk mendidik, melatih dan sebagai persediaan kepada mereka untuk menjadi usahawan yang berjaya. Peserta program

Consultancy Services

University Agriculture Park (TPU)

In increasing UPM's capability as a well-known centre for studies and services for agriculture and bioresources at the international level, the University Agriculture Park (TPU) has become one of the important entities to realise its aspiration. The University Agriculture Park has assisted in and implemented the University's physical development and academic plans, as well as developed the campus as a major agriculture park comprising botanical gardens, agriculture genetic resources bank, agriculture museum (static and living), equine centre (riding school), e-farming and agriculture portal, farm/fields of entrepreneur showcase, recreational centre, a research station and an Agrotechnopreneur development programme.

Among the existing physical components and those that will be developed by TPU are:

- Educational Meadows
- UPM Research Complex (Puchong farm)
- Mechanization Complex
- Controlled Agriculture Research Complex
- Seed and Post Harvest Complex
- Seed Production Complex
- Putra Dairy
- Development of Skill Training Centre
- Equine Centre (Riding School)
- E-farm and Agriculture Portal
- Development of the Expo Hill compound as an exhibition centre and Agriculture Museum.
- Establishing a genetic bank for collection of plant materials as a reference source.

TPU as an Agrotechnopreneur Development Centre

A specific location has been identified for establishing the Agrotechnopreneur Development Centre. A specialised programme is planned to identify future agrotechnopreneurs among students who are qualified, who will then be exposed to various forms of training, to educate and prepare them for becoming potential successful entrepreneurs. Programme participants will be provided with in-depth training, including exposure to the real world of business, with encouragement and guidance from appointed experts. This program will eventually produce successful university graduate agrotechnopreneurs who will bring benefits to the University, public and nation.

dilatih secara mendalam termasuk pendedahan kepada dunia sebenar perniagaan dengan dorongan dan bimbingan pakar-pakar yang dilantik. Program ini pada akhirnya telah dan akan melahirkan graduan universiti sebagai usahawan pertanian yang berjaya dan memberi manfaat kepada universiti, masyarakat dan negara.

Pusat Pembangunan Perniagaan (UBC)

Perubahan suasana ekonomi memberi impak kepada persaingan untuk menjana pendapatan. Universiti Putra Malaysia telah mengambil langkah bijak dalam meningkatkan sumber pendapatan dalamannya melalui Pusat Pembangunan Perniagaan (UBC) terutamanya melalui perkhidmatan Runding Cara iaitu penawaran program penyelidikan secara kontrak dan program latihan profesional.

UPM optimis untuk memberikan perkhidmatan runding cara yang terbaik kepada mana-mana institusi awam atau swasta yang berminat untuk menjalinkan kerjasama mengkomersialkan hasil-hasil penyelidikan yang berpotensi. Antara institusi tersebut ialah Pusat Inkubator UPM-MTDC, Taman Bioteknologi, Putra Infoport yang membangunkan teknologi pintar bagi membantu Koridor Raya Multimedia (MSC). Institusi dalaman UPM seperti Institut Biosains, Institut Teknologi Maju (ITMA), Institut Multimedia dan Perisian (IMP) dan fakulti-fakulti di UPM turut mengambil peluang dalam menjana pendapatan universiti melalui khidmat runding cara yang ditawarkan oleh Pusat ini. Usaha ini dapat diperkukuhkan lagi dengan penubuhan UPM Holdings Berhad yang diluluskan penubuhannya pada akhir tahun 2002.

University Business Centre (UBC)

The changes in the economic scenario have resulted in competitiveness for generating income for the University. Universiti Putra Malaysia has taken a good move to increase its source of internal income through the University Business Centre (UBC), especially through consultancy services, i.e. by offering contract research and professional training programmes.

UPM is optimistic in providing the best consultancy services to any public or private institutions, which are interested in forging cooperation for commercialisation of potential research findings. Amongst the institutions that have been established via such cooperation are the UPM Incubator Centre – MTDC, Biotechnology Park, Putra Infoport, which has developed SMART technology in assisting Multimedia Super Corridor (MSC). UPM institutions such as Bioscience Institute, Advanced Technology Institute (ITMA), Multimedia and Software Institute (IMP), and various faculties at UPM have also taken the opportunity to generate University income through consultation services offered by the Centre. The UBC's effort is further strengthened by the setting up of UPM Holdings Berhad, whose formation was approved at the end of 2002.

Pengurusan Berkualiti

Pensijilan MS ISO 9000

UPM telah memulakan usaha membentuk sistem pengurusan yang berkualiti dan diiktiraf di peringkat antarabangsa melalui Pensijilan MS ISO 9000:2000. Ini akan memastikan bahawa proses peningkatan kualiti pengurusan dilaksanakan secara berterusan selaras dengan peningkatan kualiti secara menyeluruh.

Pada tahun 2002, Fakulti Sains dan Pengajian Alam Sekitar telah berjaya mendapatkan pengiktirafan MS ISO 9001, selepas kejayaan Fakulti Perubatan Veterinar (1999) dan Fakulti Kejuruteraan (2001). Fakulti Perubatan Veterinar dan Fakulti Kejuruteraan juga mengekalkan persijilan mereka setelah melepasi *surveillance audit* masing-masing pada tahun 2002. Fakulti-fakulti lain seperti Fakulti Ekologi Manusia, Fakulti Ekonomi dan Pengurusan dan Fakulti Pertanian serta semua Pusat Tanggungjawab (PTJ) lain juga sedang giat merancang dan mengambil tindakan perlu untuk mencapai pengiktirafan yang sama. Dalam tempoh yang sama, Fakulti Kejuruteraan UPM telah berjaya memenangi tempat kedua bagi Anugerah Kualiti Y.A.B. Menteri Besar Selangor 2002.

Piagam Pelanggan dan Etika Kerja UPM

Untuk menjadi sebuah organisasi yang disegani dan berkualiti tinggi, UPM perlu melipat-gandakan usaha untuk meningkatkan mutu perkhidmatannya. Pada 20 Jun 2002, serentak dengan Majlis Pelancaran Pelan Strategi UPM 2001 – 2010, Etika Kerja UPM telah dilancarkan. Pelancaran ini bertujuan untuk menanamkan sifat positif dalam menjalankan tugas dan meningkatkan perkhidmatan yang cemerlang bagi memenuhi kehendak pelanggan dan seterusnya dapat memupuk budaya kerja yang berasaskan kepada nilai-nilai murni. Dengan berpandukan Etika Kerja ini UPM akan dapat melaksanakan Pelan Strategi dengan lebih cekap dan berkesan.

Quality Management

MS ISO 9000 Certification

UPM has embarked on the establishment of an internationally recognised quality management system through MS ISO 9000:2000 certification to ensure that the quality management improvement process is continuously implemented in line with the overall improvement of quality.

In year 2002, the Faculty of Science and Environmental Studies succeeded in achieving MS ISO 9001 certification following the success of the Faculty of Veterinary Medicine in 1999 and the Faculty of Engineering in 2001. The Faculty of Veterinary Medicine and the Faculty of Engineering have revalidated their MS ISO 9001 certification after successfully undergoing surveillance audits in 2002. In the same year, the Faculty of Engineering won second place for the 'Anugerah Kualiti Menteri Besar Selangor 2002'. Currently, other Faculties and Centres of Responsibility such as the Faculty of Human Ecology, Faculty of Economics and Management and Faculty of Agriculture are actively planning and working towards achieving similar recognition.

UPM Client Charter and Work Ethics

UPM must strive to enhance the quality of its services in order to be a high quality and respectable organisation. UPM Work Ethics was launched concurrently with the launching ceremony of UPM 2001-2010 Strategic Plan on 20th June 2002. The objectives of the Work Ethics are to instil positive attitudes toward performing one's duties and to enhance service excellence in fulfilling clients' needs, as well as to nurture a working culture based on pure values. UPM will thus be able to implement the Strategic Plan effectively and efficiently based on the guidelines provided by the Work Ethics.

Tenaga Kerja Berkualiti

Bagi membangunkan sumber manusia serta meningkatkan persekitaran profesional yang cemerlang, pada tahun 2002, seramai 286 orang telah dilantik mengisi pelbagai kekosongan jawatan. Daripada jumlah itu, seorang dari Kumpulan Pengurusan Tertinggi, 150 orang dari Kumpulan Pengurusan dan Profesional dan 135 orang dari Kumpulan Sokongan. Sementara itu, seramai 70 orang dari Pegawai Kumpulan Pengurusan dan Profesional dan 228 orang pegawai Kumpulan Sokongan telah dilantik secara kontrak bagi melancarkan perjalanan aktiviti-aktiviti Universiti.

Di samping itu, seramai 275 orang pegawai UPM telah dinaikkan pangkat, 52 orang telah bersara dan 89 orang telah diluluskan cuti belajar bagi melanjutkan pelajaran dalam bidang Sarjana (16) dan Doktor Falsafah (73) di dalam dan luar negara sepanjang tahun. Di samping itu, seramai 29 orang pegawai akademik telah diluluskan cuti sabbatical.

UPM juga telah menganugerahkan Anugerah Khidmat Cemerlang kepada 185 orang yang terdiri dari 74 orang Kumpulan Pengurusan dan Profesional dan 111 orang Kumpulan Sokongan. Selain itu, UPM juga memperkenalkan tiga Anugerah lain mulai 2002 iaitu Anugerah Setia Putra kepada 174 orang pegawai, Anugerah Jasa Putra kepada 39 orang pegawai dan Anugerah Jasamu Dikenang kepada 6 orang pegawai. Anugerah-anugerah ini diberi sebagai menghargai jasa para pegawai UPM yang telah berkhidmat lebih dari 20 tahun, meninggal dunia semasa bertugas dan yang telah bersara. Selain itu, 5 orang pegawai telah dianugerahkan Anugerah *Fellowship* Naib Canselor.

Quality Workforce

In order to develop human resource and to enhance professional environment excellence, a total of 286 people were appointed to fill up various vacancies. This includes 1 appointment for the Higher Management Group, 150 for the Management and Professional Group, and 135 for the Support Group. Meanwhile, 70 staff members from the Management and Professional Group and 228 from the Support Group were appointed on a contract basis to assist in managing the University activities.

In addition, a total of 275 UPM officers were promoted, 52 retired, and 89 were granted study leave for pursuing their studies at Master's (16) and PhD (73) levels locally and abroad throughout the year. 29 academic officers were also granted sabbatical leave.

A total of 185 staff consisting of 74 officers from the Management and Professional Group and 111 from the Support group was also given the Excellent Service Award. Besides this, UPM has also introduced and given three new Awards, namely Setia Putra Award to 174 officers, Jasa Putra Award to 39 officers and Jasamu DiKenang Award to 6 officers. The awards were given to UPM officers who have served and contributed to the University for more than 20 years, those who have died while in service, and those who have retired. 5 officers were also given the Vice Chancellor Fellowship Award.

PENGURUSAN INFRASTRUKTUR

INFRASTRUCTURE MANAGEMENT



Pengurusan Infrastruktur

Keaktifan pembangunan fizikal UPM adalah seiring dengan kepesatan penambahan populasi pelajarannya. Ini bagi mewujudkan keseimbangan supaya semua kemudahan yang disediakan memberi keselesaan dan mencukupi untuk melahirkan graduan yang berkualiti dan cemerlang. Program pembangunan yang dirancang dilaksanakan selari dengan kedudukan UPM di perjiranan Putrajaya dan Cyberjaya yang menjadikan Universiti sebagai Bandar Universiti Dalam Koridor Raya Multimedia.

Bersesuaian dengan identiti asalnya yang berasaskan pembangunan sektor pertanian, UPM menggunakan Konsep Agropolis bagi pelan induk pembangunannya. Konsep yang hanya diamalkan di Bandar-bandar seperti di Perancis dan Amerika Syarikat itu diterapkan dalam pelan induk yang dilaksanakan dalam program pembangunannya. Sistem *Cluster* yang diwujudkan akan menjadikan UPM sebagai kampus terancang yang akan mempunyai Bandar Perubatannya sendiri yang akan menempatkan Kompleks Fakulti Perubatan dan Sains Kesihatan, Fakulti Perubatan Veterinar, Institut Gerontologi, zon Penyelidikan dan Pembangunan (R&D) dan Zon Sukan dan Rekreasi.

Sehingga kini, UPM yang berkeluasan 1,200 hektar, telah menggunakan sepenuhnya kawasan tersebut dengan pelbagai projek pembangunan yang dibangunkan sejak lebih 70 tahun usia penubuhannya. Sepanjang tahun 2002, UPM telah meluluskan 34 projek pembangunan di Kampus Serdang dan Bintulu meliputi projek pembinaan baru, kerja-kerja menaik taraf, pengubahsuaian dan perolehan peralatan utama di infrastruktur sedia ada termasuk di bangunan-bangunan yang menempatkan Bangunan Pentadbiran, akademik dan 14 buah kolej kediaman.

Pencapaian cemerlang Bahagian Pembangunan telah meyakinkan kerajaan untuk memperuntukkan RM400 juta untuk projek pembangunan Universiti dalam Rancangan Malaysia Kelapan (RMK8). Peruntukan Kerajaan bagi maksud pembangunan fizikal pada tahun 2002 adalah sebanyak RM169.4 juta, manakala peruntukan selebihnya ditampung oleh Kumpulan Wang Pembangunan UPM.

Infrastructure Management

The active physical development of UPM is parallel to the continuous growth of its student population. This is to create a balance in ensuring that all facilities provided are sufficient and comfortable to produce graduates of high quality and excellence. The planned development programmes correspond with UPM's proximity to Putrajaya and Cyberjaya, transforming the University into a University Town within the Multimedia Super Corridor.

In accordance with its initial agricultural sector development-based identity, UPM utilises the Agropolis concept which is used only in France and USA for its Development Masterplan and are implemented through the development programmes. The creation of cluster system will turn UPM into a well-planned campus with its own Medical Town that locates the Faculty of Medical and Health Science complex, the Faculty for Veterinary Medicine, Institute for Gerontology, Research and Development Zone, and Sports and Recreation Zone.

To date, all 1,200 hectares of UPM land area have been fully utilised with various development projects implemented throughout its 70 years of establishment. In 2002, UPM has approved 34 development projects at Serdang and Bintulu, which includes new construction projects, upgrading work, renovation and procurement of major equipment in the present infrastructure including the Administrative building, academic building and 14 residential colleges.

The outstanding achievement of the University Development Division has convinced the Government to allocate RM400 million in the Eighth Malaysian Plan (RMK8) for the University development projects. The Government allocated RM 169.4 million for the physical development of the university in 2002, while the deficit was financed through UPM Development Fund.

SUMBER INFORMASI, KOMUNIKASI DAN TEKNOLOGI MAKLUMAT

INFORMATION, COMMUNICATION AND INFORMATION TECHNOLOGY RESOURCES



Sumber Informasi, Komunikasi Dan Teknologi Maklumat

Perpustakaan Sultan Abdul Samad

Tahun 2002 merupakan tahun bersejarah bagi Perpustakaan UPM apabila pada 23 Mei 2002, Perpustakaan telah dinamakan Perpustakaan Sultan Abdul Samad sempena Almarhum Sultan Sir Abdul Samad Ibni Raja Abdullah, Sultan Selangor Keempat. Majlis dirasmikan oleh Tuanku Canselor UPM, DYMM Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj.

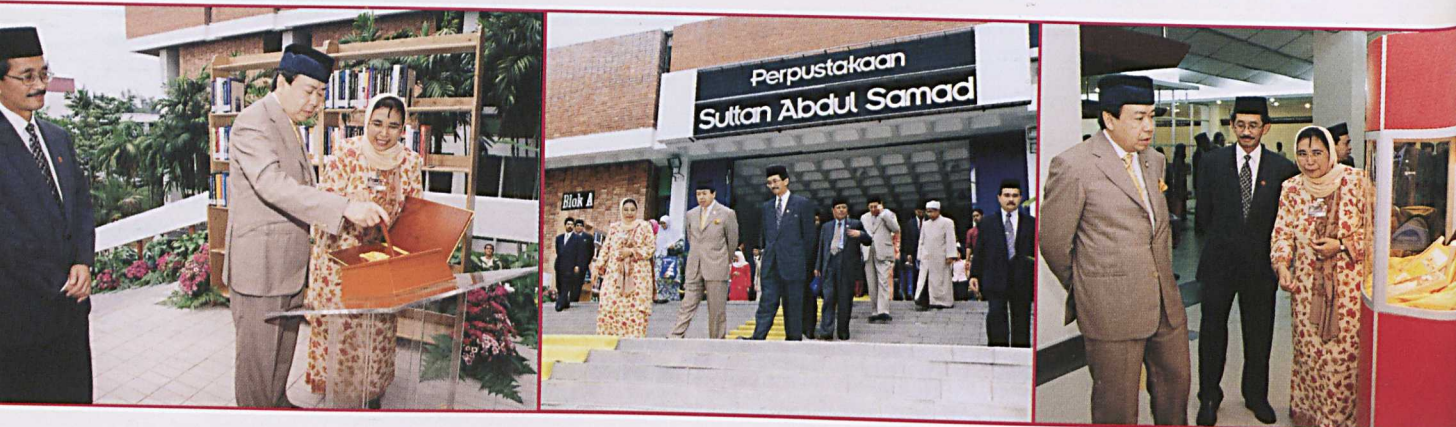
Koleksi-koleksi Perpustakaan terus berkembang dengan pertambahan bahan-bahan rujukan baru untuk menyokong program-program yang sedia ada dan juga program-program baru. Sehingga Oktober 2002, jumlah keseluruhan koleksi Perpustakaan UPM, termasuk koleksi di Perpustakaan Fakulti Perubatan dan Sains Kesihatan dan Perpustakaan Fakulti Perubatan Veterinar ialah sebanyak 445,766 naskhah. Jumlah ini meliputi semua koleksi buku dan jurnal berjilid. Dalam tempoh yang sama, koleksi bahan pandang dengar berjumlah 69,355 unit yang meliputi 37,640 judul. Bagi jurnal, Perpustakaan sentiasa berusaha untuk meningkatkan langganan kepada "e-Journals" untuk memudahkan pengguna mengakses jurnal yang mereka minati. Sepanjang tahun 2002, sebanyak 5 langganan baru telah di buat sementara 2 langganan terdahulu dibatalkan .

Information, Communication And Information Technology Resources

Sultan Abdul Samad Library

The year 2002 was a historic year for UPM Library. On 23 May 2002, the UPM Library was renamed Sultan Abdul Samad Library, after the Fourth Sultan of Selangor, Almarhum Sultan Sir Abdul Samad Ibni Raja Abdullah. The ceremony was officiated by UPM Chancellor, His Royal Highness Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj.

The Library is continuously expanding its collection with the addition of new reference materials to support the existing and new programmes at the University. As of October 2002, the total collection for UPM Library, including copies of books and bind journals from the libraries of the Faculty of Medicine and Health Sciences and the Faculty of Veterinary Medicine was 445,766. In addition, there were also 69,355 units of Audio Video material covering 37,460 topics. The Library is continuously increasing its subscription to 'e-journals' to facilitate its users in accessing their journals of interest. Throughout 2002, 5 new subscriptions were made while 2 previous subscriptions were terminated.



Dasar Komunikasi dan Teknologi Maklumat (ICT)

Sebagai sebuah universiti yang terletak dalam pembangunan Koridor Raya Multimedia (MSC), UPM tidak dapat lari dari menerima kesan limpahan kepesatan pembangunan Teknologi Maklumat dan Komunikasi (ICT). Kesan ini amat ketara terhadap pengajaran, pembelajaran, pendidikan dan penyelidikan. Selain memperkenalkan kaedah Aplikasi Kuliah *on-line* melalui e-Universiti pada tahun sebelumnya, UPM telah memperluaskan lagi e-Universiti dengan menyediakan kemudahan SMS menerusi telefon bimbit untuk pelajar mendapat maklumat mengenai kemasukan dan keputusan peperiksaan. Kemudahan seperti ini akan dapat memberi peluang kepada pelajar mendapat akses kepada maklumat berkenaan dengan lebih cepat. Kemudahan ini akan diteruskan dan diperluaskan meliputi jadual waktu kuliah, pendaftaran dan sebagainya. Pusat Kesihatan Pelajar pula telah memulakan sistem e-Klinik yang mana semua proses perawatan dijalankan secara berkomputer keseluruhannya.

Dalam menangani cabaran ICT dan e-Universiti juga, UPM telah menggubal dan memperkenalkan Dasar ICT Universiti. Ia mengandungi wawasan umum Universiti tentang peranan dan ciri-ciri ICT, yang antara lain meliputi :

- Perkhidmatan ICT yang relevan kepada Universiti;
- Tindakan yang perlu diambil untuk melaksanakan perkhidmatan tersebut;
- Prinsip infrastruktur ICT Universiti;
- Ciri-ciri utama persekitaran pengurusan ICT untuk memastikan ketahanan, kecekapan, mesra pelanggan, keselamatan operasi dan penyerahgunaan (*deployment*) semua perkhidmatan ICT.

Dari segi penggunaan ICT secara umumnya, UPM akan terus memberikan latihan secara berterusan kepada staf untuk membolehkan mereka menggunakan ICT dengan cekap dan berkesan. Di samping usaha dan komitmen Universiti menyediakan kemudahan prasarana dan latihan untuk ICT, warga UPM kini bersedia mendepani cabaran ini. Warga UPM jua telah mengambil peluang untuk mempertingkatkan kompetensi masing-masing dalam ICT kerana cara lama bekerja tidak lagi relevan jika ingin terus bersaing di peringkat antarabangsa.

Information and Communication Technology Policy

Situated within the Multimedia Supercorridor, UPM is inevitably affected by the rapid and dynamic Information and Communication Technology (ICT) development. In particular, this development has a significant impact on teaching, learning, education and research. Besides introducing an on-line lecture application via e-University in the previous year, UPM has expanded the e-University concept by providing SMS facilities for students to obtain enrolment information and examination results via mobile phones. Such facilities will enable students a quicker access to the information and will be extended to include lecture schedule, registration and other administrative matters. The Student Health Centre has implemented the e-Clinic system, whereby the whole process of consultation is computerised.

UPM has also formulated and introduced the University ICT Policy to manage the challenges posed by ICT and e-University. The policy comprises the University's general vision regarding the role and characteristics of ICT, which include among others:

- Relevant ICT services to the University
- Action required to implement the service
- The principles of University ICT infrastructure
- ICT management environment main characteristics that will ensure durability, efficiency, client friendly, security of operations and deployment of all ICT services.

In terms of the general usage of ICT, UPM will continuously train its staff to enable them to efficiently and effectively use ICT. The effort and commitment of the University in providing the facilities and training have prepared UPM community to face the ICT challenges. The UPM community has also taken the opportunity to enhance their ICT competency in order to remain competitive internationally.

Knowledge Management

The Knowledge Management Centre was established on 2 January 2002 with the approval of the University management. Its establishment was aimed at strengthening and systematically exploiting the usage of information and expertise to enhance UPM's innovation, credibility and proficiency in performing its duties. To achieve these objective, the Knowledge Management Centre has taken various steps to provide the necessary infrastructure and system as part of the knowledge management initiatives and activities at UPM.

Pengurusan Ilmu

Pusat Pengurusan Ilmu (PPI) telah ditubuhkan pada 2 Januari 2002 setelah penubuhannya diluluskan oleh Pihak Pengurusan. Pusat ini ditubuhkan untuk mengukuh serta memanfaatkan penggunaan maklumat dan kepakaran secara sistematik bagi meningkatkan tindak balas, inovasi, keterampilan dan kecekapan UPM dalam menjalankan tanggungjawabnya. Untuk mencapai matlamat tersebut, Pusat Pengurusan Ilmu telah mengorak langkah untuk menyediakan infrastruktur dan sistem yang bersesuaian sebagai sebahagian daripada inisiatif kepada kegiatan pengurusan ilmu di UPM.

PPI telah dan sedang membangunkan data pangkalan maklumat yang mengandungi ilmu pengetahuan yang telah didokumen dan ilmu pengetahuan yang tidak didokumen. Satu *platform*, berasaskan teknologi maklumat, di mana komuniti Universiti akan dapat berkongsi serta menggunakan semula ilmu-ilmu tersebut telah diwujudkan. UPM percaya pengurusan ilmu yang cekap akan dapat mengoptimumkan penggunaan semula ilmu yang telah diperolehi hasil dari penyelidikan yang telah dijalankan dan menjadi sumber rujukan dan informasi kepada warga UPM khususnya dan negara amnya.

The Knowledge Management Centre is currently developing an information database containing documented and undocumented knowledge, creating an ICT-based platform that allows UPM community to share and recycle knowledge. UPM believes that efficient knowledge management will optimise the recycling of knowledge generated from research. The Centre will be a reference and information centre, specifically, for UPM community and the nation, in general.

DIARI PERISTIWA

DIARY OF EVENTS



Lawatan Ke Universiti Putra Malaysia

Pelawat Tempatan

2 Januari 2002

Pejabat RISDA Negeri
Kementerian Pembangunan Luar Bandar
Jalan Sultan Ismail
20700 Kuala Terengganu, Terengganu

26 Januari 2002

Kolej Matrikulasi Melaka
73800 Londang, Masjid Tanah, Melaka

13 Mac 2002

Sekolah Menengah Kebangsaan Tunku Besar
73000 Tampin, Negeri Sembilan

14 Mac 2002

Sekolah Kebangsaan Parit Baharu
45100 Sungai Air Tawar
Sabak Bernam, Selangor

23 Mac 2002

Sekolah Rendah Kebangsaan
Kampung Baru Sabak Bernam, Selangor
(Program Khidmat Bakti Masyarakat Persatuan
Bulan Sabit Merah Chapter, Universiti Putra
Malaysia)

19 April 2002

Sekolah Menengah Kebangsaan Batu 4
Jalan Kuala Rui
33300 Gerik, Perak

26 April 2002

Sekolah Menengah Al Azhar
Jalan Kodiang
06000 Jitra, Kedah

27 April 2002

Sekolah Menengah Kebangsaan Meru
Pekan Meru
41050 Klang, Selangor

29 Mei 2002

Persatuan Sains & Matematik
Sekolah Menengah Kebangsaan
Syed Mohamed Al-Bukhary
Kompleks Pendidikan
Jalan Stadium
05100 Alor Setar, Kedah

30 Mei 2002

Persatuan Ekonomi dan Pengguna
Sekolah Menengah Kebangsaan Bukit Gambir
Kampung Sungai Jaya
84800 Bukit Gambir, Muar, Johor

Visits To Universiti Putra Malaysia

Local Visitors

2 January 2002

State RISDA Office
Ministry for Rural Development
Jalan Sultan Ismail
20700 Kuala Terengganu, Terengganu

26 January 2002

Melaka Matriculation College
73800 Londang, Masjid Tanah, Melaka

13 March 2002

Tunku Besar National Secondary School
73000 Tampin, Negeri Sembilan

14 March 2002

Parit Baharu National Primary School
45100 Sungai Air Tawar
Sabak Bernam, Selangor

23 March 2002

Kampung Baru Sabak Bernam
National Primary School
(Red Crescent Society,
Universiti Putra Malaysia Chapter
Community Service Programme)

19 April 2002

Batu 4 National Secondary School
Jalan Kuala Rui
33300 Gerik, Perak

26 April 2002

Al Azhar Secondary School
Jalan Kodiang
06000 Jitra, Kedah

27 April 2002

Meru National Secondary School
Pekan Meru
41050 Klang, Selangor

29 May 2002

Science and Mathematics Society
Syed Mohamad Al-Bukhary
National Secondary School
Education Complex
Jalan Stadium
05100 Alor Setar, Kedah

30 May 2002

Consumer and Economy Society
Bukit Gambir National Secondary School
Kampung Sungai Jaya
84800 Bukit Gambir, Muar, Johor

31 Mei 2002

Persatuan Tingkatan Enam
Sekolah Menengah Kebangsaan Syed Sirajuddin
02600 Jejawi, Arau, Perlis

3 Jun 2002

Kelab Prostar
Sekolah Menengah Kebangsaan Raja Jumaat
71001 Port Dickson, Negeri Sembilan

13 Jun 2002

Sekolah Menengah Kebangsaan Wataniah
Alor Keladi
22000 Jerteh, Terengganu

14 Jun 2002

Sekolah Menengah Kebangsaan Pangkal Kalong
16450 Ketereh, Kelantan

20 Jun 2002

Jabatan Pendidikan Wilayah Persekutuan
Bangunan Anjung FELDA
Jalan Maktab Off Jalan Semarak
50604 Kuala Lumpur

22 Jun 2002

Sekolah Menengah Kebangsaan Raja Mahadi
Jalan Langat
41200 Klang, Selangor

25 Jun 2002

Kolej Taj
Trolak Country Resort
35600 Sungkai, Perak

27 Jun 2002

Sekolah Menengah Kebangsaan Dong
27400 Dong, Raub, Pahang

29 Jun 2002

Sekolah Menengah Kebangsaan Jengka 18
Bandar Jengka
28030 Temerloh, Pahang

2 Julai 2002

Persatuan Mahasiswa
Universiti Brunei Darussalam Sesi 2001/2002
Jalan Tungku Link, Gadong, B.S.B BE1410
Negara Brunei Darussalam

30 Julai 2002

Persatuan Geografi
Sekolah Menengah Kebangsaan
Dato' Mohd. Taha
73200 Gemencheh, Negeri Sembilan

31 May 2002

Sixth Former Society
Syed Sirajuddin National Secondary School
02600 Jejawi, Arau, Perlis

3 June 2002

Prostar Club
Raja Jumaat National Secondary School
71001 Port Dickson, Negeri Sembilan

13 June 2002

Wataniah National Secondary School
Alor Keladi
22000 Jerteh, Terengganu

14 June 2002

Pangkal Kalong National Secondary School
16450 Ketereh, Kelantan

20 June 2002

Federal Territory Education Department
Bangunan Anjung Felda
Jalan Maktab off Jalan Semarak
50604 Kuala Lumpur

22 June 2002

Raja Mahadi National Secondary School
Jalan Langat
41200 Klang, Selangor

25 June 2002

TAJ College
Trolak Country Resort
35600 Sungkai, Perak

27 June 2002

Dong National Secondary School
27400 Dong, Raub, Pahang

29 June 2002

Jengka 18 National Secondary School
Bandar Jengka
28030 Temerloh, Pahang

2 July 2002

Brunei Darussalam University Student Association
2001/2002 session
Jalan Tungku Link, Gadong, BSB BE1410
Negara Brunei Darussalam

30 July 2002

Geography Society
Dato' Mohd Taha National Secondary School
73200 Gemencheh, Negeri Sembilan

4 Ogos 2002 ●●●●●

Sekolah Menengah Chaah
Labis, Johor

9 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Merchang
21610 Merchang, Terengganu

10 Ogos 2002 ●●●●●

Kelab Sains Pertanian
Sekolah Menengah Kebangsaan Saint Andrew
Jalan Hashim
84000 Muar, Johor

10 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Mersing
KM 3, Jalan Endau
86800 Mersing, Johor

15 Ogos 2002 ●●●●●

Politeknik Kota Bharu
KM. 24, Pangkal Kalong
16450 Ketereh, Kelantan

23 Ogos 2002 ●●●●●

Maktab Rendah Sains Mara Kuala Krai
Kg. Padang Sembilan,
KM 4, Lebuhraya Kuala Krai - Gua Musang
18000 Kuala Krai, Kelantan

24 Ogos 2002 ●●●●●

Buddhist Tzu-Chi Merits Society Malaysia
18-1, Jalan Haji Jaib
84000 Muar, Johor

24 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Taman Molek
Jalan Permas 1/34, Taman Molek
81100 Johor Bahru, Johor

29 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Seri Serdang
43300 Serdang, Selangor

29 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan
La Salle Petaling Jaya
Jalan Chantek
46000 Petaling Jaya, Selangor

29 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan (P) Sri Aman
Jalan 14/49
46100 Petaling Jaya, Selangor

4 August 2002 ●●●●●

Chaah Secondary School
Labis, Johor

9 August 2002 ●●●●●

Merchang National Secondary School
21610 Merchang, Terengganu

10 August 2002 ●●●●●

Agricultural Science Club
Saint Andrew National Secondary School
Jalan Hashim
84000 Muar, Johor

10 August 2002 ●●●●●

Mersing National Secondary School
Km 3, Jalan Endau
86800 Mersing, Johor

15 August 2002 ●●●●●

Kota Bharu Polytechnic
Km24, Pangkal Kalong
16450 Ketereh, Kelantan

23 August 2002 ●●●●●

MARA Junior Science College, Kuala Krai
Kampung Padang Sembilan, Km4
Lebuhraya Kuala Krai-Gua Musang
18000 Kuala Krai, Kelantan

24 August 2002 ●●●●●

Buddhist Tzu-Chi Merits Society Malaysia
18-1 Jalan Haji Jaib
84000 Muar, Johor

24 August 2002 ●●●●●

Taman Molek National Secondary School
Jalan Permas 1/34, Taman Molek
81100 Johor Bahru

29 August 2002 ●●●●●

Seri Serdang National Secondary School
43300 Serdang, Selangor

29 August 2002 ●●●●●

La Salle National Secondary School
Petaling Jaya
Jalan Chantek
46000 Petaling Jaya

29 August 2002 ●●●●●

Sri Aman (Girls) National Secondary School
Jalan 14/49
46100 Petaling Jaya, Selangor

29 Ogos 2002 ●●●●●

Kelab Kemahiran Hidup dan Rekacipta
Sekolah Menengah Kebangsaan Engku Husain
43500 Semenyih, Selangor

29 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Abdul Jalil
43100 Hulu Langat, Selangor

29 Ogos 2002 ●●●●●

Kolej Teknologi Timur
Bandar Baru Salak Tinggi
Batu 30, Jalan Jenderam Hulu
83800 Dengkil, Selangor

29 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Jalan Reko
43000 Kajang, Selangor

30 Ogos 2002 ●●●●●

Sekolah Menengah Alam Shah
Jalan Yaakob Latif
Bandar Tun Razak
56000 Kuala Lumpur

30 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan
Convent Bukit Nanas
Jalan Bukit Nanas
50250 Kuala Lumpur

30 Ogos 2002 ●●●●●

Sekolah Menengah Kebangsaan Tun Sri Lanang
Bukit Serampang
85210 Jementah, Johor

30 Ogos 2002 ●●●●●

Sekolah Menengah Seri Puteri
Jalan Kolam Air
51200 Kuala Lumpur

30 Ogos 2002 ●●●●●

Kolej Tunku Kurshiah
70400 Seremban, Negeri Sembilan

2 September 2002 ●●●●●

Sekolah Model Khas Baling
09100 Baling, Kedah

4 September 2002 ●●●●●

Sekolah Menengah Kebangsaan Mersing
Km 3, Jalan Endau
86800 Mersing, Johor

29 August 2002 ●●●●●

Invention and Living Skill Club
Engku Husain National Secondary School
43500 Semenyih, Selangor

29 August 2002 ●●●●●

Abdul Jalil National Secondary School
43100 Hulu Langat, Selangor

29 August 2002 ●●●●●

East Technology College
Salak Tinggi New Town
Batu 30 Jalan Jenderam Hulu
83800 Dengkil, Selangor

29 August 2002 ●●●●●

Jalan Reko National Secondary School
43000 Kajang, Selangor

30 August 2002 ●●●●●

Alam Shah Secondary School
Jalan Yaakob Latif
Bandar Tun Razak
56000 Kuala Lumpur

30 August 2002 ●●●●●

Bukit Nanas Convent National Secondary School
Jalan Bukit Nanas
50250 Kuala Lumpur

30 August 2002 ●●●●●

Tun Sri Lanang National Secondary School
Bukit Serampang
85210 Jementah, Johor

30 August 2002 ●●●●●

Seri Puteri Secondary School
Jalan Kolam Air
51200 Kuala Lumpur

30 August 2002 ●●●●●

Tunku Khursiah College
70400 Seremban, Negeri Sembilan

2 September 2002 ●●●●●

Baling Special Model School
09100 Baling, Kedah

4 September 2002 ●●●●●

Mersing National Secondary School
Km 3, Jalan Endau
86800 Mersing, Johor

6 September 2002 ●●●●●

Sekolah Menengah Kebangsaan Ibrahim Fikri
21300 Kuala Terengganu, Terengganu

12 September 2002 ●●●●●

Persatuan Sains Pertanian
Sekolah Menengah Kebangsaan Tun Ismail
86400 Parit Raja
Batu Pahat, Johor

14 September 2002 ●●●●●

Sekolah Menengah Kebangsaan Dato' Syed Omar
Jalan Sultanah
05350 Alor Setar, Kedah

23 September 2002 ●●●●●

Unit Bimbingan dan Kaunseling
Kursus Sijil Perguruan Khas
Maktab Perguruan Perempuan Melayu Durian
Daun
75400 Melaka

3 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Syed Kayang
01000 Kangar, Perlis

15 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Bukit Payong
22010 Jerteh, Terengganu

22 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan (Agama)
Sharifah Rodziah
Teluk Mas
75460 Melaka

22 Oktober 2002 ●●●●●

Pejabat Penerangan Daerah
21600 Marang, Terengganu

23 Oktober 2002 ●●●●●

Sekolah Menengah Teknik Bachok
63000 Bachok, Kelantan

23 Oktober 2002 ●●●●●

Sekolah Kebangsaan Dato' Maharaja Lela
45800 Jeram, Selangor

23 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Pelagat
22000 Jerteh, Terengganu

23 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Seri Perkasa
Hutan Melintang, Perak

6 September 2002 ●●●●●

Ibrahim Fikri National Secondary School
21300 Kuala Terengganu, Terengganu

12 September 2002 ●●●●●

Agricultural Science Society
Tun Ismail National Secondary School
86400 Parit Raja
Batu Pahat, Johor

14 September 2002 ●●●●●

Dato' Syed Omar National Secondary School
Jalan Sultanah
05350 Alor Setar, Kedah

23 September 2002 ●●●●●

Counselling and Guidance Unit
Special Teaching Certificate Course
Maktab Perguruan Perempuan Melayu
Durian Daun
75400 Melaka

3 Oktober 2002 ●●●●●

Syed Kayang National Secondary School
01000 Kangar, Perlis

15 Oktober 2002 ●●●●●

Bukit Payong National Secondary School
22010 Jerteh, Terengganu

22 Oktober 2002 ●●●●●

Syarifah Rodziah (Religious)
National Secondary School
Teluk Mas
75460 Melaka

23 Oktober 2002 ●●●●●

District Information Office
21600 Marang, Terengganu

23 Oktober 2002 ●●●●●

Bachok Technical Secondary School
63000 Bachok, Kelantan

23 Oktober 2002 ●●●●●

Datuk Maharajalela National Primary School
45800 Jeram, Selangor

23 Oktober 2002 ●●●●●

Pelagat National Secondary School
22000 Jerteh, Terengganu

23 Oktober 2002 ●●●●●

Seri Perkasa National Secondary School
Hutan Melintang, Perak

23 Oktober 2002 ●●●●●

Unit Bimbingan dan Kaunseling
(Kursus Sijil Perguruan Khas)
Maktab Perguruan Perempuan Melayu Durian
Daun,
75400 Melaka

25 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan (P)
Temenggong Ibrahim
35 Jalan Tasek
83000 Batu Pahat, Johor

25 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Palong 7 (F)
73470 Gemas, Negeri Sembilan

31 Oktober 2002 ●●●●●

Pejabat Penerangan Daerah
21600 Marang, Terengganu

31 Oktober 2002 ●●●●●

Sekolah Menengah Kebangsaan Pandan Jaya
55100 Cheras, Selangor

1 November 2002 ●●●●●

Sekolah Kebangsaan Labong
86900 Endau, Johor

9 November 2002 ●●●●●

Sekolah Menengah Jenis Kebangsaan Dinding
32200 Pundut, Lumut, Perak

17 Disember 2002 ●●●●●

Sekolah Menengah Jenis Kebangsaan Jit Sin
Jalan Binjai, Taman Sri Rambai
14000 Bukit Mertajam
Seberang Perai Tengah, Pulau Pinang

17 Disember 2002 ●●●●●

Sekolah Menengah Kebangsaan
Dato' Jaafar Hassan
02450 Bukit Keteri, Perlis

17 Disember 2002 ●●●●●

Pejabat Daerah Sik
Kedah

23 Disember 2002 ●●●●●

Maktab Perguruan Batu Pahat
KM 7.75, Jalan Kluang
Karung Berkunci 524
83009 Batu Pahat, Johor

23 October 2002 ●●●●●

Counselling and Guidance Unit
Special Teaching Certificate Course
Maktab Perguruan Perempuan Melayu
Durian Daun
75400 Melaka

25 October 2002 ●●●●●

Temenggong Ibrahim (girl)
National Secondary School
35 Jalan Tasek
83000 Batu Pahat, Johor

25 October 2002 ●●●●●

Palong 7 (F) National Secondary School
73470 Gemas, Negeri Sembilan

31 October 2002 ●●●●●

District Information Office
21600 Marang, Terengganu

31 October 2002 ●●●●●

Pandan Jaya National Secondary School
55100 Cheras, Selangor

1 November 2002 ●●●●●

Labong National Primary School
86900 Endau, Johor

9 November 2002 ●●●●●

Dinding National Type Secondary School
32200 Pundut, Lumut, Perak

17 December 2002 ●●●●●

Jit Sin National Type Secondary School
Jalan Binjai, Taman Sri Rambai
14000 Bukit Mertajam
Seberang Prai Tengah, Pulau Pinang

17 December 2002 ●●●●●

Dato' Jaafar Hassan National Secondary School
02450 Bukit Keteri, Perlis

17 December 2002 ●●●●●

Sik District Office
Kedah

23 December 2002 ●●●●●

Batu Pahat Teacher College
Km 7.75 Jalan Kluang
Karung Berkunci 524
83009 Batu Pahat, Johor

Lawatan Ke Universiti Putra Malaysia

Pelawat Luar Negara

24 Januari 2002 ●●●●●

Zanzibar, Tanzania

Haroon A. Suleiman, Minister of Education

29 Januari 2002 ●●●●●

University of Hawaii, USA

4 Februari 2002 ●●●●●

Kyushu Institute Technology, Japan

21 Februari 2002 ●●●●●

National University of Vietnam

Hanoi Pham Quang Zong

Nguyan Van Nha

Tran Huy Ho

21 Mei 2002 ●●●●●

National Pingtung University, Taiwan

Dr. Shan Da Liu

25 Jun 2002 ●●●●●

Universiti Muhamaadid Yogyakarta

Indonesia

2 Julai 2002 ●●●●●

Universiti Brunei Darussalam

25 Julai 2002 ●●●●●

The Islamic Republic of Iran

29 Julai 2002 ●●●●●

Miike Senior High School, Japan

19 Ogos 2002 ●●●●●

National Pingtung

University of Science and Technology, Taiwan Prof.

Dr. Mike Guu

21 Ogos 2002 ●●●●●

King Abdul Aziz University, Saudi Arabia

22 Ogos 2002 ●●●●●

University of Birmingham

Visits To Universiti Putra Malaysia

International Visitors

24 January 2002 ●●●●●

Haroon A. Suleiman, Minister of Education

Zanzibar, Tanzania

29 January 2002 ●●●●●

University of Hawaii, USA

4 February 2002 ●●●●●

Kyushu Institute Technology, Japan

21 February 2002 ●●●●●

National University of Vietnam, Hanoi

Pham Quang Zong

Nguyan Van Nha

Tran Huy Ho

21 May 2002 ●●●●●

National Pingtung University, Taiwan

Dr. Shan Da Liu

25 June 2002 ●●●●●

Muhamaadid Yogyakarta University,

Indonesia

2 July 2002 ●●●●●

Brunei Darussalam University

25 July 2002 ●●●●●

The Islamic Republic Of Iran

29 July 2002 ●●●●●

Miike Senior High School Japan

19 August 2002 ●●●●●

National Pingtung

University of Science and Technology Taiwan

Prof. Dr Mike Guu

21 August 2002 ●●●●●

King Abdul Aziz University, Saudi Arabia

22 August 2002 ●●●●●

University of Birmingham

19 September 2002 ●●●●●

Imam Khomeini International University
 Dr. Mohsen Beheshti, Chancellor
 Dr. Imanieh, Vice Chancellor
 Dr. Majid Bozorg Mehri, Head of International Affairs
 Dr. Farhodi, Rep. of Ministry of Higher Education
 Mr. Kamali, 1st Secretary of Embassy of The Islamic Republic of Iran

20 September 2002 ●●●●●

University of Sheffield, United Kingdom
 Prof. Bob Boucher, Vice Chancellor
 Prof. Geof Tamilnson, Pro Vice Chancellor
 Ms. Tina Yeung, Assoc. Director, South East Asian Region

16 Oktober 2002 ●●●●●

Shaghayegh R. Cultural & Artistic Institute Tehran, Iran
 Fazaneh Mafi. Mrs., Minister Advisor and General Director Rural Women Affairs
 Zahra Khedmati. Mrs., Rep. of Deputy Minister in Women Affairs
 Ashraf Sharifi Joo. Mrs., Rep. of Deputy Minister in Women Affairs
 Azar Shojaei. Mrs., Advisor Organization Head of Ministry of Jihad-e-Agriculture. (Provincial) and 10 other Delegation Members.

17 Oktober 2002 ●●●●●

King Abdul Aziz City For Science And Technology (KACST), Institute of Atomic Energy Research, Riyadh, Kingdom of Saudi Arabia.
 H.E. Dr. Saleh Abdulrahman Al-Athel, President of KACST
 Dr. Mohammed Ibrahim Al-Suwayed, Vice President of KACST
 Dr. Ahmad Basfar, Director, Institute of Atomic Energy Research, KACST and 2 other Delegation Members

21 Oktober 2002 ●●●●●

Hodeidah University, The Republic Of Yemen Prof. Dr. Abdul Samed Hazah (Dean of Sana'a Community College)

19 September 2002 ●●●●●

Imam Khomeini International University
 Dr. Mohsein Beheshti, Chancellor
 Dr. Imanieh, Vice Chancellor
 Dr. Majid Bozorg Mehri, Head of International Affairs
 Dr. Farhodi, Rep. of Ministry of Higher Education
 Mr. Kamali, 1st Secretary of Embassy of the Islamic Republic of Iran

20 September 2002 ●●●●●

University of Sheffield, United Kingdom
 Prof. Bob Boucher, Vice Chancellor
 Prof. Geof Tamilnson, Pro Vice Chancellor
 Ms. Tina Yeung, Assoc. Director, South East Asian Region

16 October 2002 ●●●●●

Shaghayegh R. Cultural and Artistic Institute, Tehran Iran
 Mrs. Fazaneh Mafi, Minister Advisor and General Director Rural Women Affairs
 Mrs. Ashraf Sharifi Joo, Rep. of Deputy Minister in Woman Affair
 Mrs. Zahra Khedmati Rep. of Deputy Minister in Woman Affair
 Mrs. Azar Shojaei, Advisor Organisation Head of Ministry of Jihad-e-Agriculture. (Provincial) and 10 other delegation members.

17 October 2002 ●●●●●

King Abdul Aziz City for Science and Technology (KACST) Institute of Atomic Energy Research, Riyadh, Kingdom of Saudi Arabia
 H.E. Dr. Saleh Abdulrahman Al-Athel, President of KACST
 Dr. Mohammed Ibrahim Al-Suwayed, Vice President of KACST
 Dr. Ahmad Basfar, Director, KACST and 2 other members of the delegation

21 October 2002 ●●●●●

Hodeidah University, The Republic of Yemen
 Prof. Dr. Abdul Samad Hazah (Dean of Sana'a Community College)

Pameran Dan Ceramah

4 Januari 2002 ●●●●●

Kolej Yayasan Pelajaran Mara Bangi
Seksyen 14, Bandar Baru Bangi, Selangor

28 - 31 Jan 2002 ●●●●●

Education Fair 2002 (MEF 2002)
Negara Brunei Darussalam
(di Bumiputera Commercial Centre, Jalan Cator,
Bandar Seri Begawan, Negara Brunei Darussalam)

7 - 10 Feb 2002 ●●●●●

Ekspo Pertanian dan Pesta Konvokesyen Ke-26 UPM
(di Bukit Ekspo, UPM, Serdang, Selangor)

1 - 3 Mac 2002 ●●●●●

Pameran Ekspo Kerjaya Peringkat Negeri Johor
(di Waterfront City, Johor Bahru, Johor)

7 - 10 Mac 2002 ●●●●●

Pameran Ekspo Pendidikan dan Latihan Pantai
Timur 2002
(di Pusat Dagangan Terengganu,
Kuala Terengganu, Terengganu)

4 - 6 Mei 2002 ●●●●●

Malaysia Education Fair 2002 (MEF 2002) – Indonesia
(di Hotel Atlet Century Park, Jakarta, Indonesia)

10 - 11 Mei 2002 ●●●●●

Karnival Pendidikan MARA Peringkat Zon Sarawak
(di Dewan Suarah, Kuching, Sarawak)

14 - 15 Mei 2002 ●●●●●

Karnival Pendidikan MARA Peringkat Zon Sabah
(di Dewan Tun Fuad Stephen, Karamuning, Kota
Kinabalu, Sabah)

22 - 24 Mei 2002 ●●●●●

Pameran Minggu Teknik, Vokasional dan Kerjaya
(di SMK Tunku Muhammad, Kuala Pilah, Negeri
Sembilan)

15 - 16 Jun 2002 ●●●●●

Sibu Education Fair 2002
(di Sibu Dewan Suarah, Sibu, Sarawak)

18 Jun 2002 ●●●●●

Pameran Minggu Kerjaya
Peringkat Sekolah Tahun 2002
(di Sekolah Menengah Kebangsaan Desa Tun
Hussein Onn, Jalan Jelatek, Keramat, Kuala Lumpur)

Exhibition And Talks

4 January 2002 ●●●●●

Yayasan Pelajaran Mara College, Bangi
Section 14, Bandar Baru Bangi, Selangor

28-31 Jan 2002 ●●●●●

Education Fair 2002 (MEF 2002)
Negara Brunei Darussalam
(at Bumiputera Commercial Centre, Jalan Cator,
Bandar Seri Begawan, Negara Brunei Darussalam)

7-10 Feb 2002 ●●●●●

Agriculture Expo and UPM 26th Convocation Ceremony
(at Bukit Ekspo, UPM, Serdang, Selangor)

1-3 March 2002 ●●●●●

Johor State Career Expo Exhibition
(at Waterfront City, Johor Bahru, Johor)

7-10 March 2002 ●●●●●

Education Expo and the East Coast Training Exhibition
2002
(at Pusat Dagangan Terengganu,
Kuala Terengganu, Terengganu)

4-6 May 2002 ●●●●●

Malaysia Education Fair 2002 (MEF 2002) – Indonesia
(at Hotel Atlet Century Park, Jakarta, Indonesia)

10-11 May 2002 ●●●●●

MARA Education Carnival, Sarawak Zone Level
(at Dewan Suarah, Kuching, Sarawak)

14-15 May 2002 ●●●●●

MARA Education Carnival, Sabah Zone
(at Tun Fuad Stephen Hall, Karamuning,
Kota Kinabalu, Sabah)

22-24 May 2002 ●●●●●

Technical, Vocational and Career Week Exhibition
(at SMK Tunku Muhammad, Kuala Pilah,
Negeri Sembilan)

15-16 June 2002 ●●●●●

Sibu Education Fair 2002
(at Suarah Hall, Sibu, Sarawak)

18 June 2002 ●●●●●

Career Week Exhibition, School Level 2002
(at Desa Tun Hussein Onn National Secondary School,
Jalan Jelatek, Keramat, Kuala Lumpur)

29 Jun 2002 ●●●●●

Pameran Perayaan Jubli Emas
(di Sekolah Menengah Kebangsaan
Bagan Serai, Bagan Serai, Perak)

11 – 14 Julai 2002 ●●●●●

Pesta Konvokesyen Ke 26 UPM
(di Bukit Ekspo, Universiti Putra Malaysia)

19 – 21 Julai 2002 ●●●●●

Pameran Sempena Sambutan Ulang Tahun Ke-20
Penubuhan Sekolah Menengah Agama
Persekutuan Labu, Negeri Sembilan
(di Sekolah Menengah Agama Persekutuan, Labu,
Negeri Sembilan)

27 – 30 Julai 2002 ●●●●●

Pameran dan Memberi Ceramah
(di Maktab Rendah Sains MARA Serting, Bahau,
Negeri Sembilan)

17 - 18 Ogos 2002 ●●●●●

Pameran Pendidikan Tinggi Sempena Sambutan
Perayaan Jubli Perak
Kolej MARA Kulim
(di Kolej MARA Kulim, Jalan Junjong,
Kulim, Kedah)

29 – 30 Ogos 2002 ●●●●●

Pameran Rekapipta dan Penyelidikan (PRP2002)
(di Pusat Kebudayaan dan Kesenian Sultan
Salahuddin Abdul Aziz Shah, Universiti Putra
Malaysia)

5 – 8 Sept 2002 ●●●●●

Pesta Konvokesyen Ke 26 Sidang III, UPM
(di Bukit Ekspo, Universiti Putra Malaysia)

24 Sept 2002 ●●●●●

Pameran Kerja Sempena Hari Anugerah
Kecemerlangan SMK Tunku Kurshiah Tahun 2002
(di Sekolah Menengah Kebangsaan Tunku
Kurshiah, Kuala Pilah, Negeri Sembilan)

1 – 6 Okt 2002 ●●●●●

Pameran MAHA 2002
(di MINES, Seri Kembangan, Selangor)

10 - 12 Okt 2002 ●●●●●

Pameran Perdana Bagi Menjayakan Projek
Perkampungan Dan Kekeluargaan (OPKIM 02')
(di Kampung Pamah Kulat, Dong, Raub, Pahang)

29 June 2002 ●●●●●

Golden Jubilee Festival Exhibition
(at Bagan Serai National Secondary School,
Bagan Serai, Perak)

11-14 July 2002 ●●●●●

UPM 26th Convocation Ceremony
(at Bukit Ekspo, Universiti Putra Malaysia)

19-21 July 2002 ●●●●●

Exhibition, in conjunction with the 20th Anniversary
Celebration of the establishment of Sekolah Menengah
Agama Persekutuan Labu, Negeri Sembilan
(at Sekolah Menengah Agama Persekutuan Labu,
Negeri Sembilan)

27-30 July 2002 ●●●●●

Exhibition and Talks
(at Serting MARA Science Junior College, Bahau,
Negeri Sembilan)

17-18 August 2002 ●●●●●

Higher Education Exhibition commemorating Kulim
MARCA College Golden Jubilee Festival
(at Kulim MARA College, Jalan Junjong, Kulim, Kedah)

29-30 August 2002 ●●●●●

Invention and Research Exhibition (PRP2002)
(at Sultan Salahuddin Abdul Aziz Shah Culture and
Arts Centre, Universiti Putra Malaysia)

5-8 September 2002 ●●●●●

UPM 26th Convocation Ceremony, Session III
(at Bukit Ekspo, Universiti Putra Malaysia)

24 September 2002 ●●●●●

Work Exhibition, SMK Tunku Kurshiah Excellence
Award Day
(at Tunku Kurshiah National Secondary School, Kuala
Pilah, Negeri Sembilan)

1-6 October 2002 ●●●●●

MAHA Exhibition 2002
(at the MINES, Seri Kembangan, Selangor)

10-12 October 2002 ●●●●●

Family and Rural Community Project Premier Exhibition
(at Pamah Kulat Village, Dong, Raub, Pahang)

11 Oktober 2002 ●●●●●

Taklimat dan Pameran UPM untuk pelajar-pelajar Kolej MARA Seremban
(di Kolej MARA Seremban, Negeri Sembilan)

17 Oktober 2002 ●●●●●

Ekspo Kerjaya dan Akademik Sempena Hari Pendidikan Sekolah Menengah Teknik Muadzam Shah 2002
(di Sekolah Menengah Teknik, Bandar Muadzam Shah, Pahang)

17 – 19 Okt 2002 ●●●●●

Pameran Promosi Program Pendidikan IPTA Anjuran Kolej Yayasan Pelajaran MARA, Kota Bharu
(di Dewan Pengakap, Kem Kijang, Kota Bharu, Kelantan)

18-19 Okt 2002 ●●●●●

Pameran IPT/Badan Berkanun/Kerjaya, Sempena Hari Kerjaya, Kolej Matrikulasi Labuan, KPM, 2002
(di Kolej Matrikulasi Labuan (KPM) Kompleks Universiti Malaysia Sabah, Kampus Antarabangsa Labuan, Wilayah Persekutuan Labuan, Sabah)

26 Oktober 2002 ●●●●●

Ekspo Pendidikan Tinggi & Kerjaya Daerah Hilir Perak 2002
(di Dewan Besar, Sekolah Menengah Kebangsaan St. Anthony, Teluk Intan, Perak)

26 Oktober 2002 ●●●●●

Pameran & Taklimat bidang-bidang pengajian yang ditawarkan oleh Universiti
(di Kolej Matrikulasi Melaka (KPM), Londang, Masjid Tanah, Melaka)

28 Oktober 2002 ●●●●●

Pameran Hari Kerjaya 2002 Kolej Teknologi Timur (KTT), Sepang
(di Kolej Teknologi Timur [KTT], Sepang, Selangor)

21 Disember 2002 ●●●●●

Pameran dan Memberi Ceramah Sempena Minggu Bimbingan Kerjaya
(di Kolej Chermai, Bandar Baru Serting, Negeri Sembilan)

11 October 2002 ●●●●●

Briefing and UPM Exhibition for Seremban MARA College Students
(at Seremban MARA College, Negeri Sembilan)

17 October 2002 ●●●●●

Career and Academic Expo, in conjunction with Muadzam Shah Technical School Education Day, Bandar Muadzam Shah, Pahang)

17-19 October 2002 ●●●●●

IPTA Education Programme Promotion Exhibition, organised by Yayasan Pelajaran MARA College, Kota Bharu
(at Scouts Hall, Kem Kijang, Kota Bharu, Kelantan)

18-19 Oct 2002 ●●●●●

IPT/Autonomous Body/Career Exhibition, in conjunction with Career Day, Labuan Matriculation College, KPM, 2002
(at Labuan Matriculation College (KPM), Universiti Malaysia Sabah Complex, Labuan International Campus, Labuan Federal Territory, Sabah)

26 October 2002 ●●●●●

Hilir Perak District Higher Education & Career Expo 2002
(at the Hall of St. Anthony National Secondary School, Teluk Intan, Perak)

26 October 2002 ●●●●●

Exhibition and Briefing of Study Areas Offered by University
(at Melaka Matriculation College, Londang, Masjid Tanah, Melaka)

28 October 2002 ●●●●●

Teknologi Timur College (KTT) Career Day Exhibition 2002, Sepang
(at Teknologi Timur College [KTT], Sepang, Selangor)

21 Disember 2002 ●●●●●

Exhibition and Talks, in conjunction with Career Guidance Week
(at Chermai College, Bandar Baru Serting, Negeri Sembilan)

Memorandum Persefahaman

Dalam Negeri

18 Februari 2002 ●●●●●

Lembaga Getah Malaysia

23 April 2002 ●●●●●

Majlis Paralimpik Malaysia

7 Mei 2002 ●●●●●

Lembaga Pemasaran Pertanian Persekutuan

9 September 2002 ●●●●●

Lembaga Pembangunan Industri Pembinaan Malaysia

Luar Negeri

4 Februari 2002 ●●●●●

Kyushu Institute of Technology, Japan

24 Mei 2002 ●●●●●

Universitas Sriwijaya Inderalaya, Indonesia

Memorandum Of Understanding

With Malaysian Organisations

18 February 2002 ●●●●●

Malaysian Rubber Board

23 April 2002 ●●●●●

Malaysia Paralympics Council

7 May 2002 ●●●●●

Federal Agriculture Marketing Authority

9 September 2002 ●●●●●

Malaysia Construction Industry Development Board

With Overseas Organisations

4 February 2002 ●●●●●

Kyushu Institute of Technology, Japan

24 May 2002 ●●●●●

Universitas Sriwijaya Inderalaya, Indonesia

Aktiviti Sepanjang 2002

Activities In 2002

JANUARI

- 11 Jan** Hi-Tea Meraikan Kejayaan Atlet UPM di Sukan SEA 2001 bersama Naib Canselor
- 12 Jan** Seminar Perubatan : *Traditional & Complementary Medicine*
- 12 Jan** Syarahan Inaugural oleh Prof. Dr. Mohd Ghazali Mohayidin
- 15 Jan** Majlis Penyerahan Jalur Gemilang Kepada Kontinjen Majlis Sukan Universiti Malaysia
- 16 Jan** Majlis Ramah Mesra Bersama Y.A.B Perdana Menteri Malaysia
- 19 & 20 Jan** Kejohanan Ragbi Antara Institusi Pengajian Tinggi Tujuh Sepasukan – XYBase Sevens 2002
- 31 Jan - 3 Feb** Program Pidato Sains Dan Teknologi Peringkat Kebangsaan 2002

FEBRUARI

- 2 Feb** Majlis Penutup Bengkel Kecemerlangan Pelajar III, Fakulti Ekologi Manusia
- 4 Feb** Majlis menandatangani memorandum persefahaman antara UPM dan Institut Teknologi Kyushu, Jepun
- 7 - 10 Feb** Ekspo Pertanian 2002 dan Pesta Konvokesyen ke-26
- 16 Feb** Majlis Anugerah Sukan UPM kali ke-21
- 9 Feb** Majlis Malam SPS Keluarga Graduan Ideal
- 9 - 10 Feb** Majlis Konvokesyen UPM ke-26 (Sidang I)
- 20 Feb** Majlis Anugerah Naib Canselor

MAC

- 12 Mac** Pelancaran Eksplorasi Rakan Rekreasi Antara Benua; Malaysia-Australia (ERMA 2002)
- 16 Mac** Malam Persatuan Wira Muda UPM
- 18 Mac** Majlis Perasmian *National Seminar on Integrated Farming Systems : Maximizing Bioresource Utilization*

JANUARY

- 11 Jan** Hi-Tea With The Vice Chancellor To Celebrate UPM's Athletes Achievements in the SEA Games 2001 Meet
- 12 Jan** Medical Seminar: Traditional and Complementary Medicine
- 12 Jan** Inaugural Lecture by Prof. Mohd. Ghazali Mohayidin
- 15 Jan** Handing Over the Jalur Gemilang to the Malaysian Universities Sports Contingent Ceremony
- 16 Jan** A Day with Y.A.B. The Prime Minister of Malaysia
- 19 & 20 Jan** Inter Higher Institution of Learning Seven Aside Rugby Tournament –XYBase Sevens 2002
- 31 Jan - 3 Feb** National Level Science and Technology 2002

FEBRUARY

- 2 Feb** Closing Ceremony of the Third Student Excellence Workshop, Faculty of Human Ecology
- 4 Feb** The Signing of Memorandum of Understanding between UPM and Kyushu Technology Institute, Japan
- 7 - 10 Feb** 2002 Agriculture Expo and 26th Convocation Ceremony
- 16 Feb** 21st UPM Sports Awards Ceremony
- 9 Feb** IDEAL SPS Graduates Family Night
- 9 - 10 Feb** 26th UPM Convocation Ceremony (1st Session)
- 20 Feb** Vice Chancellor's Award Ceremony

MARCH

- 12 March** Launching of the Inter Continent Exploration of Recreation Friends; Malaysia-Australia (ERMA 2002)
- 16 March** UPM Young Heroes Association Night
- 18 March** Opening Ceremony of the National Seminar on Intergrated Farming Systems: Maximizing Bioresource Utilization

23 Mac	Majlis Syarahan Inaugural oleh Prof. Dr. Gulam Rusul Rahmat Ali
25 Mac	Pameran Hasil Penyelidikan dan Pembangunan UPM 2002
26 Mac	Majlis Lawatan Menteri Penerangan Malaysia ke Stesen Putra FM, UPM
29 Mac	Majlis Menandatangani Surat Aku Janji Semua Kakitangan UPM
APRIL	
1 April	Sambutan Ulang Tahun ke-10 Fakulti Ekologi Manusia
13 April	Majlis Syarahan Inaugural oleh Prof. Dr. Zaharah A. Rahman
23 April	Majlis MoU Antara UPM dan Majlis Paralimpik Malaysia (MPM)
27 April	Majlis Syarahan Inaugural oleh Prof. Dr. Maisom Abdullah
MEI	
7 - 8 Mei	Persidangan Antarabangsa
11 Mei	Majlis Makan Malam Regimental Ke-21 PALAPES UPM
21 Mei	Forum Kerjasama Saintifik Malaysia, Antartika dan Rusia
22 Mei	Upacara Pelancaran Program 'Seorang Pelajar Sebatang Pokok' Sempena Minggu Suaikenal Sesi Mei 2002/2003
23 Mei	Majlis Pemasyhuran Perpustakaan Sultan Abdul Samad
24 Mei	Majlis Bacaan Ikrar dan Aku Janji Pelajar Baru Sesi Mei 2002/2003
24 Mei	Persidangan Kebangsaan Penjagaan Primer Pertama
29 Mei	Majlis Meraikan Kejayaan Penyelidik UPM di Pittsburgh, USA
30 Mei	Pameran Kebudayaan dan Makanan Antarabangsa
31 Mei	Malam Kebudayaan Pelajar Antarabangsa

23 March	Inaugural Lecture by Prof. Dr. Gulam Rusul Rahmat Ali
25 March	UPM 2002 Research Output and Development Exhibition
26 March	Visit by the Minister of Information to UPM Putra FM Station
29 March	Signing Ceremony of the Letter of Undertaking by UPM Staff
APRIL	
1 April	10 th Anniversary Celebration of the Faculty of Human Ecology
13 April	Inaugural Lecture by Prof. Dr. Zaharah A. Rahman
23 April	MoU between UPM and Malaysian Paralympics Council (MPM)
27 April	Inaugural Lecture by Prof. Dr. Maisom Abdullah
MAY	
7-8 May	International Conference
11 May	UPM PALAPES 21 st Regiment Banquet
21 May	Malaysia, Antarctica and Russia Forum on Scientific Collaboration
22 May	Launching of 'One Student One Tree' Program in conjunction with Orientation Week May 2002/2003 Session
23 May	Announcement of Sultan Abdul Samad Library Ceremony
24 May	Oath Taking Ceremony of New Students May 2002/2003 Session
24 May	1 st National Conference on Primary Care
29 May	Celebration
30 May	International Exhibition of Food and Culture
31 May	International Students' Cultural Night

JUN

- 6 Jun** Majlis Syarahan Inaugural oleh Prof. Dr. Wan Omar Abdullah
- 11 Jun** Majlis Penyampaian Anugerah Perkhidmatan Cemerlang Tahun 2001
- 20 Jun** Majlis Pelancaran Pelan Strategi UPM 2001-2010
- 22 Jun** Majlis Syarahan Inaugural oleh Prof. Dr. Syed Tajuddin Syed Hasan
- 29 Jun** Hari Terbuka Jabatan Pengurusan Sumber dan Pengajian Pengguna

JULAI

- 5 Julai** Majlis Penyerahan Watikah Pelantikan Canselor UPM
- 10 Julai** Majlis Makan Durian dan Buah-Buahan UPM bersama pihak Media
- 12 - 13 Julai** Sambutan Ulang Tahun ke 25 Fakulti Sains Makanan dan Bioteknologi
- 12 - 13 Julai** Persidangan Antarabangsa Pengajian Bahasa Asing (COFLAS 2002)
- 13 - 14 Julai** Majlis Konvokesyen UPM ke-26 Sidang II
- 16 Julai** Majlis Pelancaran Pelan Strategi Fakulti Pertanian
- 27 Julai** Majlis Perasmian Pusat Pelajar UPM
- 27 Julai** Program Hari Kerjaya Dalam Sektor Pertanian Antara Kementerian Pertanian Malaysia dan Fakulti Pertanian, UPM
- 27 - 28 Julai** Majlis Perasmian Kejohanan Trek dan Padang UPM kali ke 22 sesi 2002/2003
- 30 Julai** Pameran R&D Fakulti Kejuruteraan UPM

OGOS

- 1 Ogos** Syarahan Umum oleh Prof. Eann Patterson dari University of Sheffield
- 6 Ogos** Syarahan Umum oleh Tan Sri Mustafa Babjee

JUNE

- 6 June** Inaugural Lecture by Prof. Dr. Wan Omar Abdullah
- 11 June** 2001 Excellent Service Award Ceremony
- 20 June** Launching of UPM 2001-2010 Strategic Plan
- 22 June** Inaugural Lecture by Prof. Dr. Syed Tajuddin Syed Hasan
- 29 June** Resource Management and Consumer Management Department Open Day

JULY

- 5 July** Handing of UPM's Chancellor Letter of Appointment Ceremony
- 10 July** UPM Fruit Tasting Day with the Media
- 12 - 13 July** 25th Anniversary Celebration of the Food Science and Biotechnology Faculty
- 12 - 13 July** 2002 Foreign Language Studies International Conference(COFLAS 2002)
- 13 - 14 July** 26th UPM Convocation Ceremony (2nd Session)
- 16 July** Launching of Faculty of Agriculture Strategic Plan
- 27 July** Opening Ceremony of UPM Student Centre
- 27 July** Career Day in the Agriculture Sector Program between the Ministry of Agriculture and UPM
- 27 - 28 July** Opening Ceremony of the 22nd UPM Track and Field Meet 2002/2003 Session
- 30 July** Faculty of Engineering R&D Exhibition

AUGUST

- 1 August** Public Lecture by Prof. Eann Patterson, University of Sheffield
- 6 August** Public Lecture by Tan Sri Mustafa Babjee

8 Ogos	Sembang Seni Filem Embun
7 Ogos	Majlis Penyerahan Cek Penajaan dan Sidang Akhbar Kejohanan Ragbi UPM Xybase Sevens 2002
10 Ogos	Majlis Perasmian Perayaan Bulan Kemerdekaan Peringkat UPM 2002
10 - 11 Ogos	Kejohanan Ragbi UPM Xybase Sevens
12 - 13 Ogos	<i>Seminar On New Techniques in Disk Replacement Surgery</i>
17 Ogos	Program Jalinan Kasih, PERMATA UPM
17 - 18 Ogos	Majlis Konvokesyen Program Kerjasama UPM-IPTS 2002
24 Ogos	Larian Kemerdekaan Sempena Perayaan Bulan Kemerdekaan Ke-45 UPM
25 Ogos	Majlis Pengijazahan Ko-Kurikulum 2002 UPM
26 Ogos	Majlis Pengedaran Jalur Gemilang Sempena Kempen Kibarkan Jalur Gemilang oleh YB Dato' Hishamuddin Tun Hussein, Menteri Belia dan Sukan
29 - 30 Ogos	Majlis Anugerah Reka Cipta dan Penyelidikan (MARP 2002) UPM
30 Ogos	Majlis Pelancaran MS ISO 9001:2000, Perasmian Kaunter dan Pengisytiharan Hari Bahasa Inggeris Bahagian Keselamatan UPM
30 Ogos	Program Malam Gapura Patriotisme Putra

SEPTEMBER

6 Sept	Majlis Perasmian Pesta Konvokesyen ke 26 Sidang III
6 Sept	Majlis Santapan Bersama Tuanku Canselor
7 - 8 Sept	Majlis Konvokesyen UPM ke 26 Sidang III
18 Sept	Perbincangan Permohonan Baru Bagi Program CICHE/ Higher Education Link dengan Pihak British Council

8 August	Talk on the film "Embun"
7 August	Sponsorship Cheque Presentation Ceremony and Press Conference for the UPM Rugby Xybase Sevens 2002 Tournament
10 August	Opening Ceremony of UPM Merdeka Month 2002 Celebration
10 - 11 August	UPM Rugby Xybase Sevens Tournament
12 - 13 August	Seminar On New Techniques in Disk Replacement Surgery
17 August	"Jalanan Kasih" Program organized by UPM PERMATA
17 - 18 August	UPM-IPTS Cooperative Program 2002 Convocation Ceremony
24 August	UPM Merdeka Run in conjunction with 45 th Merdeka Celebration Month
25 August	UPM Co-curriculum 2002 Graduation Ceremony
26 August	Distribution of the "Jalur Gemilang" Ceremony in conjunction with the Flag Raising Campaign by YB Dato' Hishamuddin Tun Hussein, Minister of Youth and Sports
29 - 30 August	UPM Design and Research Award 2002 Ceremony
30 August	Launching of MS ISO 9001:2000, Opening of Counter and Announcement of English Speaking Day of UPM Security Division
30 August	Gapura Putra Patriotism Night

SEPTEMBER

6 Sept	Opening Ceremony of the 26 th Convocation Ceremony (3 rd Session)
6 Sept	Royal Dinner with HRH Tuanku Chancellor
7 - 8 Sept	UPM 26 th Convocation Ceremony (3 rd Session)
18 Sept	Discussion of New Application for the CICHE/Higher Education Link Program with British Council

24 - 26 Sept Seminar *Polymerase Chain Reaction*

OKTOBER

- 9 Okt** Sidang Akhbar Perkhidmatan SMS UPM
- 11 Okt** Majlis Perasmian Pameran Lukisan Batik Lukis Jalinan Lilin UPM 2002
- 25 Okt** Majlis Ceramah dan Demonstrasi 'Etika Dalam Berpakaian Melayu'
- 26 Okt** Majlis Syarahan Inaugural oleh Prof. Dr. Ahmad Zubaidi Baharumshah
- 31 Okt** Majlis Syarahan Inaugural oleh Prof. Dr. Shaik Md. Noor Alam S.M. Hussain

NOVEMBER

- 1 Nov** Majlis Perasmian Jubli Perak Penerbit UPM dan Anugerah Penerbitan 2002
- 7 Nov** Pendaftaran Pelajar Baru Sesi Nov 2002/2003
- 9 Nov** Majlis Syarahan Inaugural oleh Prof Dr. Wan Md Zin Wan Yunus
- 15 - 16 Nov** Program Gema Aidilfitri

DISEMBER

- 16 Dis** Kursus Tumbuhan Ubatan 2002 Anjuran UPM
- 18 Dis** Majlis Makan Malam Tahunan dan Pelancaran *Nanotube* Fakulti Kejuruteraan
- 21 Dis** Majlis Penganugerahan Sijil dan Perlantikan 2002/2003 Pertubuhan *Golden Key International Honour Chapter* UPM
- 23 Dis** Majlis Syarahan Inaugural oleh Prof Dr Annuar Md. Nassir

24 - 26 Sept Seminar on Polymerase Chain Reaction

OCTOBER

- 9 Oct** UPM SMS Facility Press Conference
- 11 Oct** Opening Ceremony of UPM 2002 Wax Batik Painting
- 25 Oct** Demonstration and Talk on Ethics of Malay Traditional Dressing
- 26 Oct** Inaugural Lecture by Prof. Dr. Ahmad Zubaidi Baharumshah
- 31 Oct** Inaugural Lecture by Prof. Dr. Shaik Md. Noor Alam S.M. Hussain

NOVEMBER

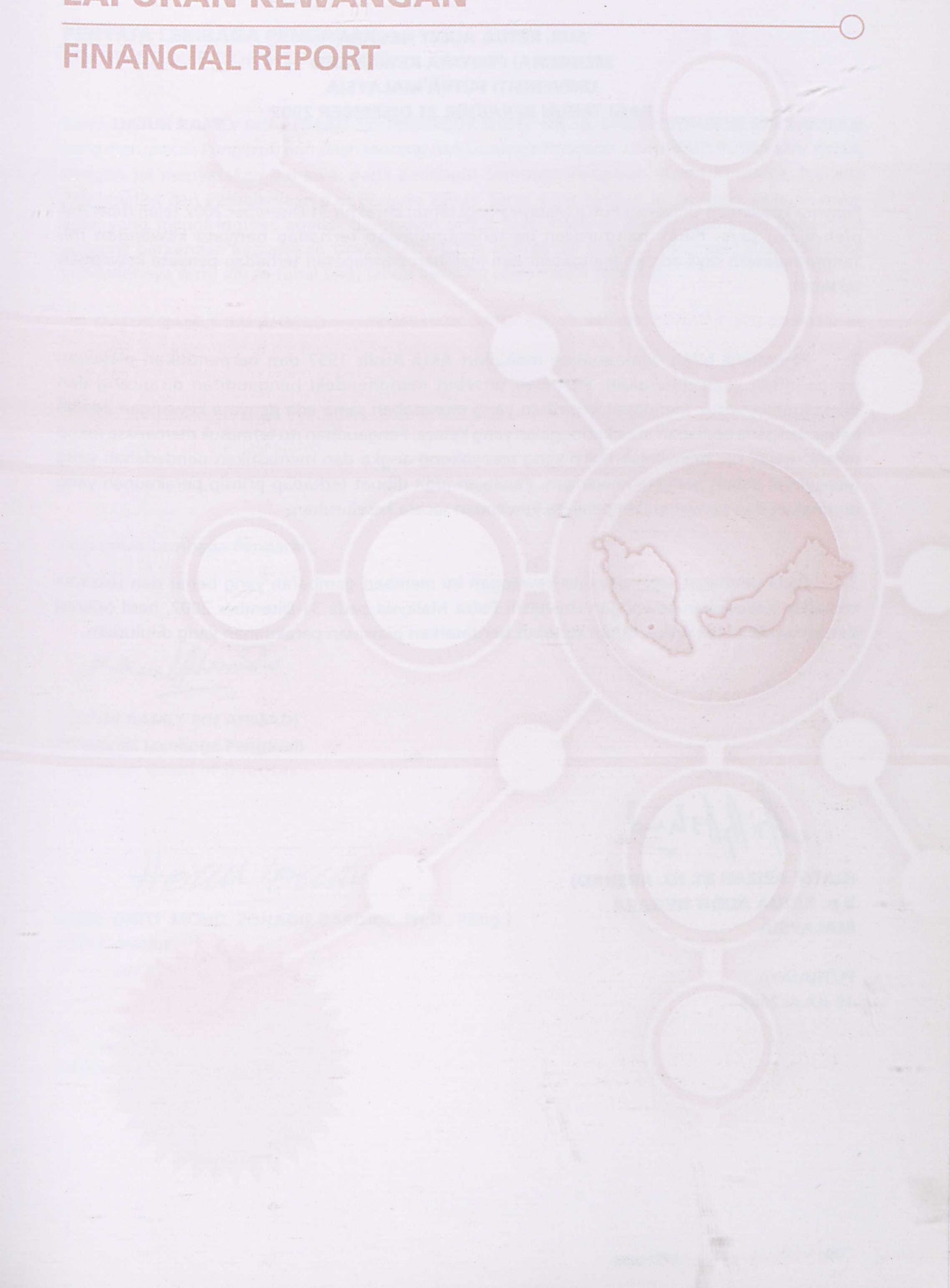
- 1 Nov** UPM Publisher's Silver Jubilee and Publisher Award 2002 Opening Ceremony
- 7 Nov** Registration of New Students Nov. 2002/2003 Session
- 9 Nov** Inaugural Lecture by Prof. Dr. Wan Md. Zin Wan Yunus
- 15 - 16 Nov** "Gema Aidilfitri" Program

DECEMBER

- 16 Dec** 2002 Medicinal Plants Course Organised by UPM
- 18 Dec** Faculty of Engineering Annual Dinner and Launching of the Nanotube
- 21 Dec** Certificate Presentation Ceremony and Appointment of 2002/2003 Members of Golden Key International Honour Chapter UPM Association
- 23 Dec** Inaugural Lecture by Prof. Dr. Annuar Md. Nassir

LAPORAN KEWANGAN

FINANCIAL REPORT

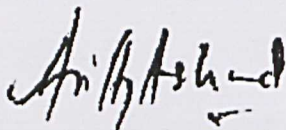


**SIJIL KETUA AUDIT NEGARA
MENGENAI PENYATA KEWANGAN
UNIVERSITI PUTRA MALAYSIA
BAGI TAHUN BERAKHIR 31 DISEMBER 2002**

Penyata kewangan Universiti Putra Malaysia bagi tahun berakhir 31 Disember 2002 telah diperiksa oleh wakil saya. Pihak pengurusan bertanggungjawab terhadap penyata kewangan ini. Tanggungjawab saya adalah mengaudit dan memberi pendapatan terhadap penyata kewangan tersebut.

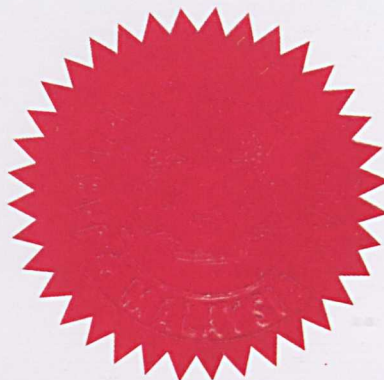
2. Pengaudit telah dilaksanakan mengikut Akta Audit 1957 dan berpandukan piawaian pengauditan yang diluluskan. Piawaian tersebut menghendaki pengauditan dirancang dan dilaksanakan untuk mendapat kepastian yang munasabah sama ada penyata kewangan adalah bebas daripada kesilapan atau ketinggalan yang ketara. 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 2002, hasil operasi dan aliran tunai untuk tahun tersebut berdasarkan piawaian perakaunan yang diluluskan.



(DATO' AZIZAH BT. HJ. ARSHAD)
b.p. KETUA AUDIT NEGARA
MALAYSIA

PUTRAJAYA
18 JULAI 2003

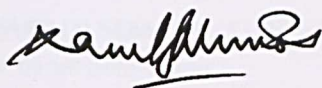


PENYATA LEMBAGA PENGARAH **BOARD OF DIRECTOR'S STATEMENT**

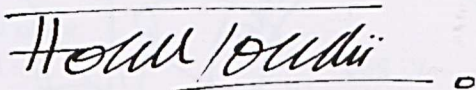
Kami, **DATUK RAMLY BIN AHMAD** dan **PROFESOR DATO' DR. IR. MOHD. ZOHADIE BIN BARDAIE** yang merupakan Pengerusi dan salah seorang Ahli Lembaga Pengarah UNIVERSITI PUTRA MALAYSIA, dengan ini menyatakan bahawa, pada pendapat Lembaga Pengarah, Kunci Kira-Kira, Penyata Pendapatan dan Perbelanjaan dan Penyata Aliran Tunai yang berikut ini berserta dengan nota-nota yang mengiringinya adalah disediakan untuk menunjukkan pandangan yang benar dan saksama berkenaan kedudukan UNIVERSITI PUTRA MALAYSIA pada 31 Disember 2002 dan hasil kendaliannya serta aliran tunai bagi tahun berakhir pada tarikh tersebut.

We, **DATUK RAMLY BIN AHMAD** and **PROFESSOR DATO' DR. IR. MOHD. ZOHADIE BIN BARDAIE** as Chairman and a member of the Board of the Directors respectively, of UNIVERSITI PUTRA MALAYSIA, hereby state that in the view of the Board of Directors, the Balance Sheet, the Statement of Income and Expenditure and Cash Flow Statement taken together with the notes represent a true and fair view of the financial position of UNIVERSITI PUTRA MALAYSIA as at 31 December 2002 and reflect the changes in cash flow for the year ending on the date stated.

Bagi pihak Lembaga Pengarah,
On behalf of the Board of Directors,



(DATUK RAMLY BIN AHMAD)
Pengerusi Lembaga Pengarah
Chairman, Board of Directors



(PROF. DATO' MOHD. ZOHADIE BARDAIE, Ph.D., P.Eng.)
Naib Canselor
Vice-Chancellor

UPM Serdang
Tarikh / Date: 28 April 2003

AKUAN BERKANUN STATUTORY DECLARATION

Saya, **NOORMAH BTE HAJI MOHAMED**, pegawai utama yang bertanggungjawab ke atas pengurusan kewangan UNIVERSITI PUTRA MALAYSIA, dengan ikhlasnya mengakui bahawa Kunci Kira-Kira, Penyata Pendapatan dan Perbelanjaan dan Penyata Aliran Tunai yang berikut ini berserta dengan nota-nota yang mengiringinya, 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, **NOORMAH BTE HAJI MOHAMED**, the principal officer responsible for the financial management of UNIVERSITI PUTRA MALAYSIA, sincerely declare that the accompanying Balance Sheet, Statement of Income and Expenditure and Cash Flow Statement that are presented here as well as the notes included, to the best of my knowledge and belief, are accurate and I make this 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 Kuala Lumpur pada 28 April 2003

) 
) **NOORMAH BTE HAJI MOHAMED**
) **Bendahari / Bursar**

Subscribed and solemnly declared
by the above named at Kuala Lumpur
this 28 April 2003

)
) Di hadapan saya:/
) **Before me:**



Balai Permodalan Nasional Berhad
201A, Jalan Tun Razak,
50400 Kuala Lumpur.

Kunci Kira-Kira Pada 31 Disember 2002
Balance Sheet As At 31 December 2002

	NOTA	2002 RM	2001 RM
ASET TETAP	1(e),2	464,754,574	423,435,199
FIXED ASSETS			
PEMBINAAN DALAM KEMAJUAN	1(f),3	57,283,004	40,644,564
WORK IN PROGRESS			
PELABURAN	1(g),4	12,443,079	12,342,401
INVESTMENTS			
ASET SEMASA / CURRENT ASSETS			
Pelbagai penghutang	5	61,488,246	55,144,863
Sundry debtors			
Simpanan tetap	6	427,000,000	426,000,000
Fixed Deposits			
Wang di tangan dan di bank	7	63,994,622	24,272,565
Cash in hand and bank			
		552,482,868	505,417,428
LIABILITI SEMASA / CURRENT LIABILITIES			
Pelbagai pemiutang	8	51,282,650	77,664,222
Sundry creditors			
		51,282,650	77,664,222
ASET SEMASA BERSIH / NET CURRENT ASSETS			
		501,200,218	427,753,206
		1,035,680,875	904,175,370
Dibiayai oleh:			
Financed by:			
Kumpulanwang Am	9	229,974,684	222,375,339
General Accumulated Fund			
Kumpulanwang Kolej Kediaman	10	18,747,899	18,987,739
Residential College Fund			
Kumpulanwang Pembangunan	11	160,392,850	119,417,621
Development Fund			
Kumpulanwang Tabung Penyelidikan	12	115,757,300	48,668,043
Research Fund			

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

Kumpulanwang Tabung Pusingan Revolving Fund	13	5,148,743	4,980,297
Kumpulanwang Amanah Lain Other Trusts Fund	14	77,243,467	93,819,167
Kumpulanwang Penginapan & Rekreasi Accommodation & Recreation Fund	15	5,161,572	5,411,256
Kumpulanwang Pelaburan Investment Fund	16	67,102,347	73,074,203
Kumpulanwang Kursus, Seminar, Konferensi & Lawatan Sambil Belajar Course, Seminar, Conference & Study Visit Fund	17	79,730,982	64,338,366
Kumpulanwang Pinjaman Komputer dan Pinjaman Kenderaan Computer and Vehicle Loans Fund	18	25,000,000	15,700,000
		784,259,844	666,772,031
Pemberian Modal Capital Grants	1(h), 19	251,421,031	237,403,339
		1,035,680,875	904,175,370

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

Penyata Pendapatan dan Pembelanjaan Bagi Tahun Berakhir 31 Disember 2002
Statement of Income and Expenditure For The Year Ended 31 December 2002

	NOTA	2002 RM	2001 RM
PENDAPATAN / INCOME			
Pemberian kerajaan	20	460,055,529	329,069,011
Government grants			
Pelbagai yuran		109,262,937	101,559,748
Miscellaneous fees			
Sumbangan luar		10,135,211	12,236,128
External contributions			
Pemberian modal direalisasi	1(h), 19	24,857,489	22,460,474
Realisation of capital grants			
Faedah dan keuntungan saham		15,671,855	16,760,954
Interest and share proceeds			
Jualan aset tetap		44,901	91,630
Sales of fixed assets			
Hasil Ladang		410,454	305,601
Plantation revenue			
Pengurangan peruntukan rosotnilai saham		831,986	1,146,101
Less provision for diminution of shares			
Pelbagai sewa		479,299	1,532,469
Sundry rentals			
Pendapatan lain	21	38,543,511	33,637,161
Other income			
		660,293,172	518,799,277
Tolak: PERBELANJAAN / Less: EXPENDITURE			
Emolumen		174,054,499	158,591,974
Emoluments			
Bekalan dan bahan-bahan		92,590,089	77,761,067
Supplies and materials			
Penyelenggaraan dan pembaikan		44,988,170	33,916,444
Maintenance and repair			
Perkhidmatan iktisas dan hospitaliti		115,945,832	79,665,194
Professional and hospitality services			
Susutnilai	2	65,237,948	50,673,302
Depreciation			

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

Pelunasan tanah	2	74,401	87,498
Land amortisation			
Pelupusan aset tetap		22,610,935	5,967
Disposal of fixed assets			
Hutang lapuk	5.1	6,049,507	6,260,371
Bad debts			
		521,551,381	406,961,817
LEBIHAN PENDAPATAN		138,741,791	111,837,460
SURPLUS INCOME			
KUMPULAN WANG TERKUMPUL			
DIBAWA KE HADAPAN			
ACCUMULATED FUNDS			
BROUGHT FOWARD			
- Seperti yang dinyatakan terdahulu		666,772,031	672,091,372
- As previously stated			
- Pelarasan tahun lalu	1(h),22	1,324,790	(117,156,801)
- Prior year adjustment			
- Pindahan ke KUSTEM		(22,578,768)	-
- Transfer to KUSTEM			
- Seperti yang dinyatakan semula		645,518,053	554,934,571
- As restated			
Pindahan dari/(ke):			
Transfer from/(to):			
KUMPULANWANG TERKUMPUL			
DIHANTAR KE HADAPAN			
ACCUMULATED FUNDS		784,259,844	666,772,031
CARRIED FORWARD			

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

Penyata Perubahan Ekuiti Bagi Tahun Berakhir 31 Disember 2002 Statement Of Changes In Equity For The Year Ended 31 December 2002

AM / GENERAL	KOLEJ KEDJAMAN / RESIDENTIAL COLLEGE	PEMBANGUNAN / DEVELOPMENT	PENYELIDIKAN / RESEARCH	TABUNG PUSINGAN / REVOLVING FUND	AMANAHAH LAIN / OTHER TRUSTS	PENGINAPAN & REKREASI / ACCOMODATION & RECREATION	PELABURAN / INVESTMENT	KURSUS, SEMINAR, LSB / COURSE, SEMINAR, & COMPUTER / STUDY TRIP	PINJAMAN KENDERAAN & COMPUTER / VEHICLE & COMPUTER LOANS	JUMLAH / TOTAL
RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
2002										
Pada 1 Januari	222,375,339	18,987,739	119,417,621	48,668,043	4,980,297	93,819,167	5,411,256	73,074,203	15,700,000	666,772,031
As at 1 January										
Pelaksanaan tahun lalu	1,558,949	-	(88,659)	-	-	(66,714)	(12,046)	-	(145,500)	1,324,790
Prior year adjustment										
Pindahan ke KUSTEM	(16,539,711)	(551,687)	(2,291,196)			(2,015,611)	(247,305)	(34,043)	(554,500)	(22,576,768)
Transfer to KUSTEM										
Seperti yang dinyatakan semula	207,394,577	18,436,052	119,328,962	48,376,847	4,980,297	91,736,842	5,151,905	73,040,160	15,000,000	645,518,053
As restated										
Lebihan/(kurangan) pendapatan	50,113,107	311,847	(20,107,051)	69,433,453	168,446	8,279,125	9,667	13,927,626	-	138,741,791
Surplus/(deficit) income										
Pindahan (dari) :	257,507,684	18,747,899	99,221,911	115,810,300	5,148,743	100,015,967	5,161,572	86,967,786	15,000,000	784,259,844
Transfer (from):										
Pembangunan ke Am	(17,933,000)	-	17,933,000	-	-	-	-	-	-	-
Development to General										
Pelaburan ke Am	400,000	-	-	-	-	-	-	(400,000)	-	-
Investment to General										
Amanah lain ke Pembangunan	-	-	22,772,500	-	-	(22,772,500)	-	-	-	-
Other Trust to Development										
Pelaburan ke Pembangunan	-	-	19,465,439	-	-	-	-	(19,465,439)	-	-
Investment to Development										
Kursus,Konferensi & LSB ke	-	-	1,000,000	-	-	-	-	(1,000,000)	-	-
Pembangunan										
Course, Conference & S/Trip										
to Development										
T/ Penyelidikan ke Kursus,Seminar	-	-	-	(53,000)	-	-	-	53,000	-	-
dan Lawatan sambil belajar										
Research to Course, Seminar										
& Study Trip										
Am ke Pinjaman Kenderaan	(10,000,000)	-	-	-	-	-	-	-	10,000,000	-
General to Vehicle Loan										
	229,974,684	18,747,899	160,392,850	115,757,300	5,148,743	77,243,467	5,161,572	67,102,347	25,000,000	784,259,844

Penyata Perubahan Ekuiti Bagi Tahun Berakhir 31 Disember 2001 **Statement Of Changes In Equity For The Year Ended 31 December 2001**

AM / GENERAL	KOLEJ KEDIAMAN / RESIDENTIAL COLLEGE	PEMBANGUNAN / DEVELOPMENT	PENYELIDIKAN / RESEARCH	TABUNG PUSINGAN / REVOLVING FUND	AMANAH LAIN / OTHER TRUST	PENGINAPAN & REKREASI / ACCOMMODATION & RECREATION	PELABURAN / INVESTMENT	KURSUS, SEMINAR, LSB / COURSE, SEMINAR, STUDY TRIP	PINJAMAN KENDERAAN & KOMPUTER / VEHICLE & COMPUTER LOANS	JUMLAH / TOTAL
RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
304,045,123	17,692,826	79,263,629	43,189,411	4,568,660	79,506,645	2,448,860	84,571,247	41,804,971	15,000,000	672,091,372
-	-	(117,156,801)	-	-	-	-	-	-	-	(117,156,801)
(135,774,813)	-	135,774,813	-	-	-	-	-	-	-	-
(11,254,034)	-	-	11,254,034	-	-	-	-	-	-	-
(11,824,615)	-	-	-	338,595	3,653,148	3,644,292	1,180,080	3,008,500	-	-
-	17,692,826	97,881,641	54,443,445	4,907,255	83,159,793	6,093,152	85,751,327	44,813,471	15,000,000	554,934,571
69,167,678	1,294,913	227,980	(5,775,402)	73,042	12,369,374	(874,396)	16,829,376	18,524,895	-	111,837,460
214,359,339	18,987,739	98,109,621	48,668,043	4,980,297	95,529,167	5,218,756	102,580,703	63,338,366	15,000,000	666,772,031
(1,635,000)	-	1,635,000	-	-	-	-	-	-	-	-
(700,000)	-	-	-	-	-	-	-	-	700,000	-
10,351,000	-	-	-	-	-	-	(10,351,000)	-	-	-
-	-	17,963,000	-	-	-	-	(17,963,000)	-	-	-
-	-	1,710,000	-	-	(1,710,000)	-	-	-	-	-
-	-	-	-	-	-	-	(1,000,000)	1,000,000	-	-
-	-	-	-	-	-	192,500	(192,500)	-	-	-
222,375,339	18,987,739	119,417,621	48,668,043	4,980,297	93,819,167	5,411,256	73,074,203	64,338,366	15,700,000	666,772,031

- Seperti yang dinyatakan semula

- As restated

Lebihan/(kurangan) pendapatan
Surplus/(deficit) income

Pindahan (dari) :

Transfer (from):

Am ke Pembangunan
General to Development

Am ke Kenderaan/Komputer
General to Vehicle/Computer

Pelaburan ke Am

Investment to General

Pelaburan ke Pembangunan
Investment to Development

Amanah lain ke Pembangunan

Other Funds to Development

Pelaburan ke Kursus, Seminar
Investment to Course, Seminar

Pelaburan ke Peng. & Rekreasi

Investment to Accommodation/Recreation

Penyata Aliran Tunai Bagi Tahun Berakhir 31 Disember 2002
Cash Flow Statement For The Year Ended 31 December 2002

	NOTA	2002 RM	2001 RM
TUNAI DARI AKTIVITI OPERASI			
CASH FROM OPERATING ACTIVITIES			
Lebih pendapatan	m/s 2	138,741,791	111,837,460
Surplus income			
Pelarasan ke atas:			
Adjustments to:			
Susutnilai	2	65,237,948	50,673,301
Depreciation			
Pelunasan tanah	2	74,401	87,498
Land Amortisation			
Pindahan tunai/simpanan tetap ke KUSTEM	25 (a)	(13,845,930)	-
Transfer of cash / fixed deposits to KUSTEM			
Untung atas jualan aset tetap		22,566,034	(85,663)
Profit incurred from sales of fixed assets			
Pemberian modal direalisasi	1(h),19	(24,857,489)	(22,460,474)
Realisation capital grants			
(Untung)/Rugi atas jualan saham		1,028,273	627,568
(Profit)/ Loss incurred from sales of shares			
Peruntukan rosotnilai saham	4.1	(831,986)	(1,146,101)
Provision for diminution of shares			
Pelarasan tahun lalu	1(h),22	1,324,790	(117,156,801)
Prior year adjustment			
Pemberian modal	1(h),19	38,875,181	253,941,038
Capital Grants			
Lebih pendapatan sebelum perubahan modal kerja		228,313,013	276,317,826
Operating profits prior to working capital adjustments			
(Penambahan)/Pengurangan penghutang		(9,659,989)	(14,774,620)
(Increase)/ Decrease in debtors			
Penambahan/(pengurangan) pemiutang		(22,919,034)	10,917,154
Increase/ (Decrease) in creditors			
Tunai bersih dihasilkan dari aktiviti operasi		195,733,990	272,460,360
Cash generated from operating activities			

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

TUNAI DARI AKTIVITI PELABURAN**CASH GENERATED FROM INVESTMENT ACTIVITIES**

Pembelian aset tetap Purchase of fixed assets	2	(137,504,868)	(253,002,086)
Pembinaan dalam kemajuan Works in Progress		(17,255,002)	22,177,297
Jualan aset tetap Sale of fixed assets		44,901	91,630
Jualan saham Sale of shares		3,077,893	838,964
Pembelian saham Purchase of shares		(4,220,930)	(1,328,585)
Simpanan dengan pengurus portfolio Deposits with portfolio managers	4	846,073	79,988

Tunai bersih dihasilkan dari aktiviti pelaburan**Cash generated from investment activities**

Penambahan bersih dalam jumlah tunai dan kesetaraan tunai Net increase in cash and cash equivalent		40,722,057	85,348,905
Jumlah tunai dan kesetaraan pada awal tahun Cash and cash equivalents at the beginning of year		450,272,565	364,923,660
Jumlah tunai dan kesetaraan pada akhir tahun Cash and cash equivalents at the end of year		490,994,622	450,272,565

Tunai dan kesetaraan tunai diwakili oleh:**Cash and cash equivalents represented by:**

Simpanan tetap Fixed deposits	6	427,000,000	426,000,000
Wang di tangan dan di bank Cash in hand and bank	7	63,994,622	24,272,565
		490,994,622	450,272,565

Sila lihat nota-nota yang mengiringi penyata kewangan ini
The accounts are to be read with the accompanying notes

Nota Kepada Penyata Kewangan 31 Disember 2002

Notes To The Financial Statements 31 December 2002

1. DASAR PERAKAUNAN PENTING / IMPORTANT ACCOUNTING POLICIES

a) Kenyataan am / General statements

Aktiviti utama Universiti Putra Malaysia ialah untuk menjalankan program-program pengajaran dan penyelidikan.

The main activities of Universiti Putra Malaysia are to perform teaching and research programmes.

Jumlah staf pada tahun berakhir 2002 ialah seramai 3,983 orang dan jumlah enrolmen pelajar ialah seramai 32,075 orang yang terdiri daripada 5,943 pelajar ijazah lanjutan, 22,810 pelajar ijazah pertama dan 3,321 pelajar diploma.

Total number of staff in the year ended 2002 was 3,983 and total students enrolment was 32,075, which consisted of 5,943 postgraduate students, 22,810 degree students and 3,321 diploma students.

Universiti Putra Malaysia mempunyai kampus cawangan di Bintulu, Sarawak.

Universiti Putra Malaysia has a branch campus in Bintulu, Sarawak.

Semua dasar perakaunan adalah bersamaan dengan dasar-dasar yang digunakan pada tahun lalu.

All accounting policies are similar to the policies used in the previous year.

b) Asas Perakaunan / Basis of Accounting

Penyediaan akaun-akaun adalah mengikut konvensyen kos sejarah.

The accounts were prepared according to the historical cost convention.

c) Pengiktirafan Pendapatan / Recognition of Income

Pendapatan diiktiraf atas dasar akruan.

Income is recognised on accrual basis.

d) Hutang Lapuk dan Hutang Ragu / Bad Debts and Doubtful Debts

Peruntukan dibuat bagi hutang lapuk yang dikenali berdasarkan kepada penyemakan akhir tahun ke atas hutang yang belum dapat dipungut.

Provision is made for bad debts based on a year-end appraisal of debts that have not been recovered.

e) Aset tetap dan Susutnilai / Fixed Assets and Depreciation

Aset tetap dinyatakan pada kos setelah ditolak susutnilai dan didifinisikan sebagai barang-barang takluak yang mempunyai tempoh penggunaan ekonomik yang lebih daripada 12 bulan yang bernilai RM3,000 atau lebih setiap satu.

Fixed assets are quoted at cost after deduction depreciation and are defined as tangible assets that have an economic usage of more than 12 months and are valued at or more than RM3,000 each.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

Tanah dipermodalkan mulai tahun 1993. Susutnilai tidak diperuntukkan bagi tanah milik bebas manakala tanah pajakan dilunaskan mengikut jangka masa pajakan.
Land has been capitalised from the year 1993. Depreciation is not allocated for freehold land whereas leasehold is amortised according to the mortgaged period.

Bagi kesemua aset yang lain, susutnilai dikira berasaskan kaedah garis lurus ke atas anggaran hayat kegunaan aset berkenaan. Kadar susutnilai tahunan utama adalah seperti berikut:
For all other assets, depreciation is calculated based on straight-line method over their estimated useful lives. The main annual depreciation rates are as follows:

	(%)
Bangunan / Buildings	2
Bangunan tidak kekal / Temporary buildings	10
Infrastruktur dan kemudahan / Infrastructure and facilities	5
Kenderaan dan jentera / Vehicles and machinery	20
Perabot dan kelengkapan / Furniture and fittings	20
Mesin dan komputer / Machines and computers	20

Mulai tahun kewangan 2001, semua bangunan yang dibina sebelum tahun 1984 telah dipermodalkan dan buku-buku perpustakaan direkod sebagai inventori.
As from the financial year of 2001, all buildings built before 1984 have been capitalised and library books have been recorded as inventories.

f) Pembinaan Dalam Kemajuan / Works in Progress

Pembinaan dalam kemajuan adalah kerja-kerja yang masih belum disempurnakan pada akhir tahun kewangan. Jumlah yang diambil kira adalah semua perbelanjaan yang terlibat dengan projek berkaitan. Kos pembinaan akan dipindahkan ke aset tetap yang berkenaan apabila Sijil Perakuan Siap Kerja dikeluarkan.
Works in progress are works that have not been completed at the end of financial year. Amount considered are all expenditures related to the projects. Construction costs will be transferred to the concerned fixed assets when Work Completion Certificate of Acknowledgment is produced.

g) Pelaburan / Investments

Pelaburan dinyatakan pada kos ditolak rosotan nilai pelaburan berkenaan yang kekal.
Investments are stated at cost less the depreciation values of the permanent investments.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

- h) **Pemberian Kerajaan Bagi Projek Pembangunan / Government Grants for Development Projects**
Mulai tahun 2001, Universiti telah mengubah polisi perakaunan berkenaan dengan Pemberian Kerajaan bagi projek pembangunan bersesuaian dengan kehendak IAS 20. Pemberian Kerajaan untuk projek pembangunan diiktiraf sebagai Pemberian Modal dan akan dilunas mengikut susutnilai projek yang telah siap dan aset yang dibeli serta belanja operasi projek yang tidak dimodalkan.

As from 2001, the University has changed its accounting policy concerning Government Grants for development projects that fit the IAS 20 requirements. Government Grant for development project is recognised as Capital Grant and will be settled according to the depreciation values of the completed project and assets purchased as well as the project's non-capitalised operating expenditure.

- i) **Pertukaran Matawang Asing / Foreign Currency Exchange**

Urusniaga dalam matawang asing sepanjang tahun ditukar kepada Ringgit Malaysia pada kadar pertukaran yang berkuatkuasa pada tarikh urusan tersebut.

Transactions in foreign currencies throughout the year have been converted to Ringgit Malaysia at the exchange rates prevailed on the dates of transactions.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.) **Notes To The Financial Statements 31 December 2002 (cont.)**

2. ASET TETAP / FIXED ASSETS **a. Kumpulanwang Mengurus** **Managing Fund**

2002	KOS / COSTS				SUSUT NILAI / DEPRECIATION				Nilai Buku Bersih Net Book Value	
	1 Januari RM	Tambahan Addition RM	Pelupusan Disposal RM	31.12.2002 RM	1 Januari RM	Tambahan Addition RM	Pelupusan Disposal RM	31.12.2002 RM	2002 RM	2001 RM
Tanah pajak Leased lands	8,000,128	-	(1,197,392)	6,802,736	2,245,410	74,401	(215,205)	2,104,606	4,698,130	5,754,718
Tanah milik kekal Freehold lands	9,238,151	-	(276,000)	8,962,151	-	-	-	-	8,962,151	9,238,151
Bangunan Buildings	14,921,298	27,197,963	(2,622,058)	39,497,203	2,470,234	2,944,970	(103,972)	5,311,232	34,185,971	12,451,064
Infrastruktur & kemudahan Infrastructure & facilities	12,924,281	2,799,262	(871,880)	14,851,663	942,030	592,630	(87,469)	1,447,191	13,404,472	11,982,251
Kenderaan dan jentera Vehicles & machinery	11,755,095	4,353,005	(1,346,768)	14,761,332	6,349,735	1,382,976	(742,902)	6,989,809	7,772,123	5,405,360
Perabot dan kelengkapan Furniture & fittings	10,073,386	2,502,831	(3,881,737)	8,694,480	6,262,814	1,056,512	(1,682,523)	5,636,803	3,051,677	3,810,572
Mesin dan komputer Machines & computers	119,634,736	48,813,675	(10,795,997)	157,652,414	72,582,475	24,948,241	(9,504,568)	88,026,148	69,626,266	47,052,261
	186,547,075	85,667,336	(20,991,832)	251,222,579	90,852,698	30,999,730	(12,336,639)	109,515,789	141,706,790	95,694,377

b. Kumpulanwang Pembangunan **Development Fund**

Tanah pajak Leased lands	231,887	-	(231,887)	-	18,738	-	(18,738)	-	-	213,149
Bangunan Buildings	233,172,612	15,301,676	(13,483,815)	234,990,473	21,178,458	5,630,979	(2,006,721)	24,802,716	210,187,757	211,594,154
Infrastruktur & kemudahan Infrastructure & facilities	46,061,373	4,288,239	(581,441)	49,768,171	7,253,211	2,505,484	(246,526)	9,512,169	40,256,002	38,808,162
Kenderaan dan jentera Vehicles & machinery	2,959,804	96,696	(1,165,482)	1,891,018	2,766,016	28,881	(1,162,201)	1,632,696	258,322	193,788
Perabot dan kelengkapan Furniture & fittings	1,726,289	168,287	(118,391)	1,776,185	1,467,278	104,268	(100,033)	1,471,513	304,672	259,011
Mesin dan komputer Machines & computers	138,278,922	14,050,336	(19,558,948)	132,870,310	86,930,672	16,809,423	(11,491,769)	92,248,326	40,621,984	51,448,250
	422,530,887	33,905,234	(35,139,964)	421,296,157	119,614,373	25,079,035	(15,025,988)	129,667,420	291,628,737	302,916,514

c. Kumpulanwang Penyelidikan **Research Fund**

Bangunan Buildings	698,893	-	(71,899)	626,994	179,145	14,138	(2,876)	190,407	436,587	519,748
Infrastruktur & kemudahan Infrastructure & facilities	1,636,625	-	(11,730)	1,624,895	1,299,620	324,243	(1,174)	1,622,689	2,206	337,005
Kenderaan dan jentera Vehicles & machinery	179,765	221,887	(11,425)	390,227	144,838	60,576	(7,580)	197,834	192,393	34,927
Perabot & kelengkapan Furniture & fittings	857,197	26,640	(419,627)	464,210	558,291	75,596	(241,501)	392,386	71,824	298,906
Mesin dan komputer Machines & computers	51,451,608	3,011,326	(2,259,712)	52,203,222	41,241,406	4,276,544	(2,046,227)	43,471,723	8,731,499	10,210,202
Anak Pokok dan benih Seedlings and seeds	-	-	-	-	-	-	-	-	-	-
	54,824,088	3,259,853	(2,774,393)	55,309,548	43,423,300	4,751,097	(2,299,358)	45,875,039	9,434,509	11,400,788

2. ASET TETAP (SAMBUNGAN) / FIXED ASSETS (CONTINUATION)

d. Kumpulanwang Amanah Lain
Other Trust Funds

	KOS / COSTS				SUSUTNILAI / DEPRECIATION				Nilai Buku Bersih Net Book Value	
	1 Januari	Tambahan Addition	Pelupusan Disposal	31.12.2002	1 Januari	Tambahan Addition	Pelupusan Disposal	31.12.2002	2002 RM	2001 RM
Bangunan Buildings	RM 5,545,733	-	RM (1,365,496)	4,180,237	RM 453,118	101,659	RM (188,519)	366,258	3,813,979	5,092,615
Infrastruktur & kemudahan Infrastructure & facilities	4,109,829	90,510	(1)	4,200,338	598,460	225,517	-	823,977	3,376,361	3,511,369
Kenderaan dan jentera Vehicles & machinery	1,679,440	739,689	(82,414)	2,336,715	1,249,223	257,751	(66,126)	1,440,848	895,867	430,217
Perabot & kelengkapan Furniture & fittings	1,085,015	191,995	(405,131)	871,879	670,462	126,195	(185,462)	611,195	260,684	414,553
Mesin dan komputer Machines & computers	7,106,640	1,651,456	(157,710)	8,600,386	4,459,023	1,302,937	(122,991)	5,638,969	2,961,417	2,647,617
	19,526,657	2,673,650	(2,010,752)	20,189,555	7,430,286	2,014,059	(563,098)	8,881,247	11,308,308	12,096,371
e. Kumpulanwang Sarawak Sarawak Fund										
Kenderaan dan jentera Vehicles & machinery	158,126	-	-	158,126	158,111	-	-	158,111	15	15
Perabot dan kelengkapan Furniture & fittings	242,270	-	-	242,270	242,248	-	-	242,248	22	22
Mesin dan komputer Machines & computers	1,135,655	-	-	1,135,655	1,135,580	-	-	1,135,580	75	75
	1,536,051	-	-	1,536,051	1,535,939	-	-	1,535,939	112	112
f. Kumpulanwang Kolej Kediaman Residential College Fund										
Bangunan Buildings	398,990	1,405,445	(7,700)	1,796,735	352,516	119,798	(617)	471,697	1,325,038	46,474
Infrastruktur & kemudahan Infrastructure & facilities	339,122	36,500	(86,100)	289,522	145,260	16,352	(4,305)	157,307	132,215	193,862
Kenderaan dan jentera Vehicles & machinery	212,859	5,450	(80,573)	137,736	154,659	9,112	(32,230)	131,541	6,195	58,200
Perabot & kelengkapan Furniture & fittings	821,493	71,577	(114,196)	778,874	553,275	97,452	(75,021)	575,706	203,168	268,218
Mesin dan komputer Machines & computers	1,947,534	461,816	(60,894)	2,348,466	1,263,291	328,351	(55,995)	1,535,647	812,819	684,243
	3,719,998	1,980,788	(349,453)	5,351,333	2,469,001	571,065	(168,168)	2,871,898	2,479,435	1,250,997
	688,684,756	127,486,861	(61,266,394)	754,905,223	265,325,597	63,414,986	(30,393,251)	298,347,332	456,557,891	423,359,159

2. ASET TETAP (SAMBUNGAN) / FIXED ASSETS (CONTINUATION)
2.2 UPM KAMPUS BINTULU
UPM BINTULU CAMPUS
a. Kumpulanwang Mengurus
Managing Fund

	KOS / COSTS				SUSUTNILAI / DEPRECIATION				Nilai Buku Bersih Net Book Value	
	1 Januari RM	Tambahan Addition RM	Pelupusan Disposal RM	31.12.2002 RM	1 Januari RM	Tambahan Addition RM	Pelupusan Disposal RM	31.12.2002 RM	2002 RM	2001 RM
Bangunan Building	-	269,577	-	269,577	-	5,392	-	5,392	264,185	-
Kemudahan lain Other facilities	-	511,492	-	511,492	-	25,575	-	25,575	485,917	-
Kenderaan dan jentera Vehicles & machinery	-	1,154,698	-	1,154,698	-	230,939	-	230,939	923,759	-
Perabot & kelengkapan Furniture & equipment	-	3,507,538	-	3,507,538	-	711,598	-	711,598	2,795,940	-
Mesin dan komputer Machines & computers	95,050	4,574,702	-	4,669,752	19,010	923,860	-	942,870	3,726,882	76,040
	95,050	10,018,007	-	10,113,057	19,010	1,897,364	-	1,916,374	8,196,683	76,040
	95,050	10,018,007	-	10,113,057	19,010	1,897,364	-	1,916,374	8,196,683	76,040
Jumlah keseluruhan Total amount	688,779,806	137,504,868	(61,266,394)	765,018,280	265,344,607	65,312,350	(30,393,251)	300,263,706	464,754,574	423,435,199

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

3.
PEMBINAAN DALAM KEMAJUAN / WORK IN PROGRESS

	Pada awal Tahun Beginning of year	Tambahan Increase	Pindahan ke inventori/ penyelenggaraan Transfer to inventory/ maintenance	Pindahan ke Aset Tetap Transfer to Fixed Assets	DISEMBER 2002 December 2002
2002	RM	RM	RM	RM	RM
Bangunan Buildings	15,484,688	28,773,110	-	15,984,287	28,273,511
Kemudahan Riadah Recreational Facilities	18,506,412	38,899,161	-	29,990,377	27,415,196
Perabot dan Kelengkapan Lain Other Furniture and Fittings	6,036,902	3,947,981	-	8,390,586	1,594,297
	40,028,002	71,620,252	-	54,365,250	57,283,004
2001					
Bangunan Buildings	47,405,334	34,246,498	189,620	65,880,441	15,581,771
Kemudahan Riadah Recreational Facilities	14,579,789	35,799,317	1,933,449	29,509,295	18,936,362
Perabot dan Kelengkapan Lain Other Furniture and Fittings	836,738	6,279,684	566,401	423,590	6,126,431
	62,821,861	76,325,499	2,689,470	95,813,326	40,644,564

Pada tahun semasa pembinaan dalam kemajuan sebanyak RM54,365,250 (2001: RM95,813,326) telah dipindahkan ke aset tetap dan RM616,562 telah dipindahkan ke KUSTEM.
During the present financial year, work in progress totalling of RM54, 365, 350 (2001: RM95,813,326) has been transferred to fixed assets and RM616,562 has been transferred to KUSTEM.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

4. PELABURAN / INVESTMENTS

Pelaburan tersiarharga - di Malaysia, pada kos

Quoted price of investment - in Malaysia at cost

Tolak:

Less:

Peruntukan rosotnilai pelaburan

Provision for diminution of investments

Nilai pasaran pelaburan tersiarharga - di Malaysia

Market value of quoted price of investment - in Malaysia

Campur:

Plus:

Pelaburan tidak tersiarharga - di Malaysia

Simpanan dengan Pengurus Portfolio

Non-quoted price of investment - in Malaysia

Deposits with Portfolio Manager

2002 RM	2001 RM
12,802,644	12,687,879
(1,749,283)	(2,581,269)
11,053,361	10,106,610
500,000	500,000
889,718	1,735,791
12,443,079	12,342,401
2002 RM	2001 RM
2,581,269	3,727,370
(831,986)	(1,146,101)
1,749,283	2,581,269

4.1 Peruntukan Rosotnilai Pelaburan

Provision for Diminution of Investments

Baki awal tahun

Balance at beginning of year

(Kurangan)/ tambahan dalam tahun

(Decrease)/Increase in the year

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

2. PELBAGAI PENGHUTANG / SUNDRY DEBTORS

PERKARA ITEM	AM GENERAL	KOMPUTER COMPUTER	K'DERAAN VEHICLE	P'BURAN INVESTMENT	P'NGUNAN DEVELOPMENT	TABUNG PUSINGAN REVOLVING FUND	AKAUN AMANAH TRUST FUND	PROJEK PROJECT	P'NGINAPAN REKREASI ACCM. RECR. COURSE/SEMINAR RESID. COLLEGE	KURSUS/ SEMINAR	KOLEJ KEDAMIAN	JUMLAH 2002 TOTAL	JUMLAH 2001 TOTAL
	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)	(RM)
Siberhutang	21,323,489	1,106,457	13,750,381	-	-	-	328,915	-	-	-	579,569	37,088,811	27,489,370
Debtors													
Yuran Tertunggak	3,411,412	-	-	-	-	-	4,022,974	-	-	24,155,273	10,366,443	41,956,102	46,508,690
Arrears Fee													
Faedah Sretap Terakru	4,609,983	-	-	24,014	-	-	-	-	-	-	82,411	4,716,408	5,742,297
Interest on Fixed Deposits Accrued													
Pel Pendapatan Terakru	1,815,458	-	-	-	-	-	-	-	-	-	1,200	1,816,658	92,750
Misc. Accrued Income													
Bantuan Pendahuluan	-	-	-	-	-	-	-	-	-	-	-	-	737,269
Projek (Pembangunan)													
Advances to Projects Development													
Pengurus Portfolio	-	-	-	(98,310)	-	-	-	-	-	-	-	(98,310)	7,960
Portfolio Manager													
Pendahuluan Pegawai	439,253	-	-	-	-	1,267,929	226,559	233,051	32,365	154,390	15,475	2,369,022	1,706,449
UPM													
Advances to UPM Staff													
Cagaran	389,271	-	-	-	20,000	-	1,000	28,728	-	-	104,900	543,899	544,199
Deposits													
Pelbagai	152,138	-	-	-	-	-	-	-	-	-	-	152,138	152,138
Miscellaneous													
Jumlah	32,141,004	1,106,457	13,750,381	(74,296)	20,000	1,267,929	4,579,448	261,779	32,365	24,309,663	11,149,998	88,544,728	82,981,122
Total													
Tolak:													
Less:													
Peruntukan Hutang Lapuk	15,737,406	-	-	-	-	-	988,369	-	-	9,645,137	685,570	27,056,482	27,836,259
Provision for Bad Debts													
	16,403,598	1,106,457	13,750,381	(74,296)	20,000	1,267,929	3,591,079	261,779	32,365	14,664,526	10,464,428	61,488,246	55,144,863

Angka-angka pelbagai penghutang adalah nilai bersih setelah diselaraskan dalam proses penyatuan item-item kontra antara akaun-penghutang dan penituitang.
The figures for sundry debtors represent net values adjusted for reconciliation of contra items between debtor and creditor accounts.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

5.1 HUTANG LAPUK / BAD DEBTS

Tambahan dalam tahun
Addition in year
Pengurangan dalam tahun
Decrease in year
Peruntukan dalam tahun
Provision in year
Baki awal tahun
Balance at beginning of year

2002 RM	2001 RM
6,049,507	6,260,371
(6,829,284)	(2,653,690)
(779,777)	3,606,681
27,836,259	24,229,578
27,056,482	27,836,259

Pengurangan peruntukan hutang lapuk sebanyak RM6,829,284 telah diambilkira sebagai pendapatan.
A decrease in the provision for bad debts totalling RM6, 829, 284 was considered as income

6. SIMPANAN TETAP / FIXED DEPOSITS

Simpanan dengan institusi kewangan berlesen:
Deposits with licensed financial institutions:
Bank
Banks
Syarikat Kewangan
Finance companies

2002 RM	2001 RM
323,500,000	320,500,000
103,500,000	105,500,000
427,000,000	426,000,000

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

**7. WANG DI TANGAN, DI BANK DAN / CASH IN HAND, BANK AND TRANSIT
DALAM PERJALANAN**

Wang di tangan: / Cash in hand:

Kumpulanwang Am / General Fund
 Kumpulanwang Kolej Kediaman / Residential College Fund

Wang di bank: / Cash in bank:

Kumpulanwang Am / General Fund
 Kumpulanwang Kolej Kediaman / Residential College Fund

Wang dalam perjalanan : / Cash in transit:

Kumpulanwang Am / General Fund
 Kumpulanwang Kolej Kediaman / Residential College Fund

Jumlah wang di tangan dan di bank

Total cash in hand and at bank

2002 RM	2001 RM
91,632	58,534
6,400	6,213
98,032	64,747
60,259,608	20,325,793
2,700,491	1,035,469
62,960,099	21,361,262
363,935	1,773,423
572,556	1,073,133
936,491	2,846,556
63,994,622	24,272,565

8. PELBAGAI PEMIUTANG / SUNDRY CREDITORS

Kumpulanwang Am / General Fund
 Kumpulanwang Kolej Kediaman / Residential College Fund

2002 RM	2001 RM
47,128,335	76,800,944
4,154,315	863,278
51,282,650	77,664,222

Angka-angka pelbagai pemiutang adalah nilai bersih setelah diselaraskan dalam proses penyatuan item-item kontra antara akaun-akaun penghutang dan pemiutang.

The figure in various creditors represent the net values less adjustments to the contra items between debtor and creditor accounts.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

9. KUMPULANWANG AM / GENERAL FUND

PENDAPATAN / INCOME

Pemberian kerajaan / Government Grants	346,554,700	302,333,200
Pemberian Modal direalisasi / Realised capital grants	572,736	598,272
Pelbagai yuran / Other fees	54,679,206	46,276,286
Pelbagai sewa / Sundry rentals	282,967	579,204
Hasil Ladang / Income from Farm	410,454	-
Jualan aset tetap / Sales of fixed assets	44,901	91,630
Pendapatan lain / Other income	4,523,804	3,204,999
	407,068,768	353,083,591

Tolak: PERBELANJAAN / Less: EXPENDITURE

Emolumen / Emolument	174,054,499	158,525,647
Bekalan dan bahan-bahan / Supplies and materials	67,044,603	48,605,817
Penyelenggaraan dan pembaikan / Maintenance and repairs	33,568,492	24,559,434
Perkhidmatan iktisas dan perbelanjaan lain	42,221,800	26,521,122
Profesional services and other expenses		
Susutnilai / Depreciation	32,822,693	20,149,006
Pelunasan tanah / Land amortisation	74,401	85,156
Hutang lapuk / Bad debts	5,834,138	5,466,847
Pelupusan aset tetap / Disposal of fixed assets	1,335,035	2,884
	356,955,661	283,915,913

LEBIHAN PENDAPATAN / SURPLUS INCOME

BAKI KUMPULANWANG DIBAWA KE HADAPAN

FUND BALANCE BROUGHT FORWARD

- Seperti yang dinyatakan terdahulu / As previously stated	205,835,628	304,045,123
- Pelarasan tahun lalu / Prior year adjustment	1,558,949	-
- Pindahan aset tetap / Transfer of fixed assets	-	(158,853,462)

- Seperti yang dinyatakan semula / As restated

Pindahan dari/(ke): / Transfers from/(to):

Kumpulanwang Pembangunan / Development Fund	(17,933,000)	(1,635,000)
Kumpulanwang Pelaburan / Investment Fund	400,000	10,351,000
Kumpulanwang Kenderaan & Komputer	(10,000,000)	(700,000)
Vehicles and Computer Fund		

BAKI KUMPULANWANG DIHANTAR KEHADAPAN

FUND BALANCE CARRIED FORWARD

	229,974,684	222,375,339
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Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

10. KUMPULANWANG KOLEJ KEDIAMAN / RESIDENTIAL COLLEGE FUND

PENDAPATAN / INCOME

Yuran Kolej Kediaman / Residential College Fees	
Yuran-yuran lain / Other fees	
Faedah / Interest	
Sewa / Rentals	
Pendapatan lain / Other income	

**2002
RM**

**2001
RM**

13,262,082	11,863,243
711,319	1,295,816
376,929	581,700
49,743	116,466
2,410,668	1,594,312
16,810,741	15,451,537

Tolak: PERBELANJAAN / Less: EXPENDITURE

Bekalan dan bahan-bahan / Supplies and materials	
Penyelenggaraan dan pembaikan / Maintenance and repairs	
Perkhidmatan iktisas dan perbelanjaan lain	
Profesional services and other expenses	
Susutnilai / Depreciation	
Pelupusan aset tetap / Disposal of fixed assets	
Hutang lapok / Bad debts	
Aset Tetap / Fixed assets	

6,020,356	7,159,713
5,715,025	3,358,534
4,148,860	3,029,936
571,064	460,476
17	-
43,572	
-	147,965
16,498,894	14,156,624

LEBIHAN/(KURANGAN) PENDAPATAN

SURPLUS/(DEFICIT) INCOME

**BAKI KUMPULANWANG DIBAWA
KE HADAPAN**

FUND BALANCE BROUGHT FORWARD

- Seperti yang dinyatakan terdahulu / As previously stated	
- Pelarasan tahun lalu / Prior year adjustment	

18,436,052	17,692,826
-	-

- Seperti yang dinyatakan semula / As restated

Pindahan dari/(ke): / Tarnsfer from/(to):

Kumpulanwang Am / General Fund

18,436,052	17,692,826
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-	-
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BAKI KUMPULANWANG DIHANTAR

KE HADAPAN

FUND BALANCE CARRIED FORWARD

18,747,899	18,987,739
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Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

11. KUMPULANWANG PEMBANGUNAN / RESIDENTIAL COLLEGE FUND

	2002 RM	2001 RM
PENDAPATAN / INCOME		
Pemberian kerajaan / Government grants	4,835,781	5,804,994
Pemberian modal direalisasi / Realised capital grants	24,284,753	21,862,202
Sumbangan Universiti / University contribution	200,000	-
Pendapatan lain / Other income	601,207	890,794
	29,921,741	28,557,990
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Bekalan dan bahan-bahan / Supplies and materials	1,629,701	2,037,502
Penyelenggaraan dan pembaikan / Maintenance and repair	3,066,593	3,514,703
Perkhidmatan iktisas dan perbelanjaan lain Professional services and other expenses	139,487	252,789
Susutnilai / Depreciation	25,079,036	22,522,654
Pelunasan tanah / Land amortisation	-	2,342
Pelupusan aset tetap / Disposal of fixed assets	20,113,975	20
	50,028,792	28,330,010
LEBIHAN PENDAPATAN / SURPLUS/(DEFICIT) INCOME	(20,107,051)	227,980
BAKI KUMPULANWANG DIBAWA KE HADAPAN FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / As previously stated	119,417,621	79,263,629
- Pelarasan tahun lalu / Prior year adjustment	(88,659)	(117,156,801)
- Pindahan aset tetap / Transfer of fixed assets	-	135,774,813
- Seperti yang dinyatakan semula / As restated	119,328,962	97,881,641
Pindahan dari/(ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	17,933,000	1,635,000
Kumpulanwang Amanah Lain / Other Trust Fund	22,772,500	1,710,000
Kumpulaanwang Seminar,Kursus & LSB Seminar, Course & Study Visit Fund	1,000,000	-
Kumpulanwang Pelaburan / Investment Fund	19,465,439	17,963,000
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	160,392,850	119,417,621

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

12. KUMPULANWANG TABUNG PENYELIDIKAN / RESEARCH FUND

	2002 RM	2001 RM
PENDAPATAN / INCOME		
Pemberian kerajaan / Government grants	96,911,948	15,757,743
Pelbagai yuran / Miscellaneous fees	181,419	222,083
Sumbangan / Contribution	7,666,787	5,593,135
Sumbangan Universiti / University contribution	579,000	140,000
Faedah simpanan tetap / Interest from fixed deposits	4,775	3,357
Pelbagai sewa / Sundry rentals	41,655	537,560
Pendapatan lain / Other income	5,443,386	2,522,114
	110,828,970	24,775,992
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Emolumen / Emoluments	-	3,170
Bekalan dan bahan-bahan / Supplies and materials	10,272,075	10,494,816
Penyelenggaraan dan pembaikan / Maintenance and repairs	540,269	836,557
Perkhidmatan iktisas dan hospitaliti	25,823,431	13,694,091
Profesional and hospitality services		
Susutnilai / Depreciation	4,751,097	5,519,698
Pelupusan aset tetap / Disposal of fixed assets	8,645	3,062
	41,395,517	30,551,394
(KURANGAN)/LEBIHAN PENDAPATAN SURPLUS/(DEFICIT) INCOME	69,433,453	(5,775,402)
BAKI KUMPULANWANG DIBAWA KE HADAPAN FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / As previously stated	46,376,847	43,189,411
- Pelarasan tahun lalu / Prior year adjustment	-	-
- Pindahan aset tetap / Transfer of fixed assets	-	11,254,034
- Seperti yang dinyatakan semula / As restated	46,376,847	54,443,445
Pindahan dari/(ke): / Transfer from/(to):		
Pindahan aset - Kumpulanwang Am	-	-
Transfer of assets - General Fund		
Kumpulanwang Pelaburan / Investment Fund	-	-
Kumpulanwang Amanah Lain / Other Trust Fund	-	-
Kumpulanwang Seminar & Konferensi	(53,000)	-
Seminar & Conference Fund		
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	115,757,300	48,668,043

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

13. KUMPULANWANG TABUNG PUSINGAN / REVOLVING FUND

	2002 RM	2001 RM
PENDAPATAN / INCOME		
Pelbagai yuran / Miscellaneous fees	17,320	32,030
Sumbangan Luar / External Contribution	-	67,000
Sumbangan Universiti / University Contribution	-	94,010
Faedah simpanan tetap / Interest from fixed deposits	155,469	142,005
Pelbagai sewa / Sundry rentals	14,040	39,747
Pendapatan lain / Other income	168,013	102,314
	354,842	477,106
Tolak: PERBELANJAAN / Less EXPENDITURE		
Bekalan dan bahan-bahan / Supplies and materials	29,255	151,583
Penyelenggaraan dan pembaikan / Maintenance and repairs	3,027	32,973
Perkhidmatan iktisas dan hospitaliti Professional and hospitality services	65,370	85,289
Perbelanjaan lain / Other expenditure	2,993	2,489
Susutnilai / Depreciation	85,751	131,730
	186,396	404,064
LEBIHAN/(KURANGAN) PENDAPATAN SURPLUS/(DEFICIT) INCOME	168,446	73,042
BAKI KUMPULANWANG DIBAWA KE HADAPAN FUND BALANCE BROUGHT FORWARD	4,980,297	4,568,660
Pindah dari/(ke): / Transfers from/(To):		
Kumpulanwang Am / General Fund	-	338,595
Kumpulanwang Pelaburan / Investment Fund	-	-
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	5,148,743	4,980,297

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

14. KUMPULANWANG AMANAH LAIN / OTHER TRUSTS FUND

	2002 RM	2001 RM
PENDAPATAN / INCOME		
Pemberian kerajaan / Government grants	11,753,100	5,065,234
Pelbagai yuran / Miscellaneous fees	18,101,174	12,280,767
Sumbangan / Contributions	1,606,372	4,474,057
Faedah simpanan tetap / Interest from fixed deposits	592,295	111,291
Pelbagai sewa / Sundry rentals	68,594	117,282
Pendapatan lain / Other income	11,489,480	18,859,072
	43,611,015	40,907,703
Tolak: PERBELANJAAN / Less: EXPENDITURE		
Emolumen / Emoluments	-	2,400
Bekalan dan bahan-bahan / Supplies and materials	4,288,383	4,270,265
Penyelenggaraan dan pembaikan / Maintenance and repairs	1,012,954	289,986
Perkhidmatan iktisad dan hospitaliti Professional and hospitality services	28,830,447	22,405,237
Susutnilai / Depreciation	1,028,309	961,602
Hutang lapok / Bad debts	171,797	608,839
	35,331,890	28,538,329
LEBIHAN PENDAPATAN / SURPLUS/(DEFICIT) INCOME	8,279,125	12,369,374
BAKI KUMPULANWANG DIBAWA KE HADAPAN FUND BALANCE BROUGHT FORWARD		
- Seperti yang dinyatakan terdahulu / As previously stated	91,803,556	79,506,645
- Pelarasan tahun lalu / Prior year adjustment	(66,714)	-
- Pindahan aset tetap / Transfer of fixed assets		3,653,148
- Seperti yang dinyatakan semula / As restated	91,736,842	83,159,793
Pindahan dari/(ke): / Transfer from/(to):		
Kumpulanwang Pembangunan / Development Fund	(22,772,500)	(1,710,000)
Kumpulanwang Kenderaan & Komputer Vehicle & Computer Fund	-	-
BAKI KUMPULANWANG DIHANTAR KE HADAPAN FUND BALANCE CARRIED FORWARD	77,243,467	93,819,167

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

15. KUMPULANWANG PENGINAPAN DAN REKREASI / ACCOMODATION AN DRECREATION FUND

PENDAPATAN / INCOME

Sumbangan / Contributions	
Sumbangan Universiti / University Contribution	
Pelbagai sewa / Sundry rentals	
Pendapatan lain / Other income	

**2002
RM**

**2001
RM**

9,885	9,309
100,000	50,000
-	36,274
1,226,281	1,080,376

1,336,166	1,175,959
-----------	-----------

Tolak: PERBELANJAAN / Less: EXPENDITURE

Emolumen / Emoluments	
Bekalan dan bahan-bahan / Supplies and materials	
Penyelenggaraan dan pembaikan / Maintenance and repairs	
Perkhidmatan iktisas dan hospitaliti	
Profesional and hospitality services	
Pelupusan aset tetap / Disposal of fixed assets	
Susutnilai / Depreciation	

-	11,234
530,979	566,428
433,199	985,792
129,129	155,005
1	-
233,191	331,896

1,326,499	2,050,355
-----------	-----------

(KURANGAN)/LEBIHAN PENDAPATAN

SURPLUS/(DEFICIT) INCOME

BAKI KUMPULANWANG DIBAWA KE HADAPAN

FUND BALANCE BROUGHT FORWARD

- Seperti yang dinyatakan terdahulu / As previously stated
- Pelarasan tahun lalu / Prior year adjustment

5,163,951	2,448,860
(12,046)	-

- Seperti yang dinyatakan semula / As restated

5,151,905	2,448,860
-----------	-----------

Pindahan dari/(ke): / Transfer from/(to):

Kumpulanwang Am (Pindahan aset tetap)

General Fund (Transfer of assets)

Kumpulanwang Pelaburan / Investment Fund

-	3,644,292
-	192,500

BAKI KUMPULANWANG DIHANTAR KE HADAPAN

FUND BALANCE CARRIED FORWARD

5,161,572	5,411,256
-----------	-----------

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

16. KUMPULANWANG PELABURAN / INVESTMENT FUND

PENDAPATAN / INCOME

Faedah, dividen dan keuntungan saham
Interest, dividends and profits from shares
Pengurangan peruntukan rosotnilai saham
Less provision for diminution in value of shares
Pendapatan lain / Other income

**2002
RM**

**2001
RM**

14,276,887

15,726,327

831,986

1,146,101

-

15,276

15,108,873

16,887,704

Tolak: PERBELANJAAN / Less: EXPENDITURE

Perkhidmatan iktisas dan hospitaliti
Profesional and hospitality services
Perbelanjaan lain / Other expenditure
Pelupusan aset / Disposal of fixed assets
Susutnilai / Depreciation

18,684

18,610

9,303

12,898

1,153,260

-

-

26,820

1,181,247

58,328

LEBIHAN PENDAPATAN / SURPLUS INCOME

**BAKI KUMPULANWANG DIBAWA KE HADAPAN
FUND BALANCE BROUGHT FORWARD**

- Seperti yang dinyatakan terdahulu / As previously stated
- Pelarasan tahun lalu / Prior year adjustment
- Pindahan aset tetap / Transfer of fixed assets
- Seperti yang dinyatakan semula / As restated

13,927,626

16,829,376

73,040,160

84,571,247

-

-

-

1,180,080

73,040,160

85,751,327

Pindah (dari)/ke : / Transfer from/(to):

Kumpulanwang Am / General Fund
Kumpulanwang Pembangunan / Development Fund
Kumpulanwang Penginapan & Rekreasi
Accommodation & Recreation Fund
Kumpulanwang Seminar dan Konferensi
Seminar & Conference Fund

(400,000)

(10,351,000)

(19,465,439)

(17,963,000)

-

(192,500)

-

(1,000,000)

67,102,347

73,074,203

**BAKI KUMPULANWANG DIHANTAR KE HADAPAN
FUND BALANCE CARRIED FORWARD**

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

17. KUMPULANWANG KURSUS, SEMINAR, KONFERENSI DAN LAWATAN SAMBIL BELAJAR
COURSE, SEMINAR, CONFERENCE & STUDY FUND

PENDAPATAN / INCOME

Pemberian kerajaan / Government grants	-	107,840
Pelbagai yuran / Miscellaneous fees	22,310,417	29,589,523
Sumbangan Luar / External Contribution	852,167	2,092,627
Faedah simpanan tetap / Interest from fixed deposits	265,500	196,274
Pelbagai sewa / Sundry rentals	22,300	105,936
Pendapatan lain / Other income	11,801,672	5,389,495

2002
RM

2001
RM

-
22,310,417
852,167
265,500
22,300
11,801,672

107,840
29,589,523
2,092,627
196,274
105,936
5,389,495

35,252,056

37,481,695

Tolak: PERBELANJAAN / Less: EXPENDITURE

Emolumen / Emoluments	-	49,523
Bekalan dan bahan-bahan / Supplies and materials	2,774,737	4,474,943
Penyelenggaraan dan pembaikan / Maintenance and repairs	648,611	338,465
Perkhidmatan iktisas dan hospitaliti	14,556,328	13,487,728
Profesional and hospitality services		
Susutnilai aset tetap / Depreciation of fixed assets	666,807	569,420
Pelupusan aset tetap / Disposal of fixed assets	2	1
Hutang lapok / Bad debts	-	36,720

-
2,774,737
648,611
14,556,328

49,523
4,474,943
338,465
13,487,728

666,807
2
-

569,420
1
36,720

18,646,485

18,956,800

16,605,571

18,524,895

LEBIHAN PENDAPATAN / SURPLUS/(DEFICIT) INCOME

BAKI KUMPULANWANG DIBAWA KE HADAPAN

FUND BALANCE BROUGHT FORWARD

- Seperti yang dinyatakan terdahulu / As previously stated
- Pelarasan tahun lalu / Prior year adjustment
- Pindahan aset - kumpulanwang Am
- Transfer of assets - General Fund
- Seperti yang dinyatakan semula / As restated

63,993,651
78,760
-

41,804,971
-
3,008,500

64,072,411

44,813,471

Pindahan Kumpulanwang (dari): / Transfer from/(to):

Tabung Penyelidikan ke Kursus, Seminar & LSB / Research Fund	53,000	-
Pembangunan ke Kursus, Seminar & LSB / Development Fund	(1,000,000)	1,000,000

53,000
(1,000,000)

-
1,000,000

79,730,982

64,338,366

BAKI KUMPULANWANG DIHANTAR KE HADAPAN

FUND BALANCE CARRIED FORWARD

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
 Notes To The Financial Statements 31 December 2002 (cont.)

18. KUMPULANWANG PINJAMAN KENDERAAN DAN PINJAMAN KOMPUTER
 VEHICLE AND COMPUTER LOANS FUND

Kumpulanwang Pinjaman Kenderaan / Vehicle Loan Fund

Baki awal tahun / Balance at beginning of year
 Campur: Tambahan Dari Kumpulanwang Am
 Add: Addition from General Fund
 Tolak: Pindahan ke KUSTEM
 Less: Transfer to KUSTEM

Kumpulanwang Pinjaman Komputer
 Computer Loan Fund

BAKI KUMPULANWANG DIBAWA DAN
 DIHANTAR KE HADAPAN
 FUND BALANCE BROUGHT AND CARRIED FORWARD

2002 RM	2001 RM
13,700,000	13,000,000
10,000,000	700,000
(700,000)	-
23,000,000	13,700,000
2,000,000	2,000,000
25,000,000	15,700,000

19. PEMBERIAN MODAL / CAPITAL GRANT

Terimaan pemberian dari kerajaan tahun semasa
 untuk projek Pembangunan
 Receipt of government grant in current year for
 Development projects
 Tolak: Belanja operasi projek yang tidak dimodalkan
 Less: Non-capitalised projects operational expenditure

Campur: / Plus:
 - Pelarasan pemberian kerajaan yang telah dibelanjakan
 untuk projek yang dimodalkan dalam tahun 1984
 hingga tahun 2000 berdasarkan nilai bersih aset
 Adjustment for government grant spent on projects capitalised
 from 1984 until 2000 based upon net value of assets

2002 RM	2001 RM
43,536,990	92,000,000
(4,835,781)	(5,804,994)
38,701,209	86,195,006
-	117,156,801

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

- Aset bagi tahun sebelum 1984 dipermodalkan
Assets prior to 1984 capitalised
- Majlis Sukan Negara / National Sports Council

Baki awal tahun / Balance at beginning of year

Tolak : pemberian modal yang dilunaskan:

Less: Capital grant amortised

- Belanja susutnilai
Depreciation

Baki akhir tahun

Balance at year end

-	50,589,231
173,972	-
38,875,181	253,941,038
237,403,339	5,922,775
276,278,520	259,863,813
(24,857,489)	(22,460,474)
251,421,031	237,403,339

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

20. PEMBERIAN KERAJAAN / GOVERNMENT GRANTS

Pemberian adalah untuk belanja berikut :-
 Grants were for the following expenses:-

Pembangunan / Development
 Mengurus - Sedia Ada / Operating - Existing
 Mengurus - Dasar Baru / Operating - New Policy
 Mengurus - One-off / Operating - One-off
 Skim Latihan Akademik dan Biasiswa
 Academic Training and Scholarships Scheme
 Skim Pasca Siswazah / Post-graduate Scheme
 Pembangunan makmal Interim dan penyelidikan
 konsep pembangunan inst.farmaseukal
 Development of Interim labs and pharmaceutical inst.
 concept research
 IRPA/Penyelidikan / IRPA/Research
 Pembangunan Sumber Manusia (HRD)
 Human Resource Development
 Biasiswa National Science Fellowship
 National Science Fellowship Scholarship

2002 RM	2001 RM
4,835,781	5,804,994
232,916,700	196,543,200
28,138,000	36,260,000
85,500,000	69,530,000
-	2,579,074
800,000	-
4,500,000	-
96,911,948	15,757,743
5,640,000	1,067,840
813,100	1,526,160
460,055,529	329,069,011

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

21. PENDAPATAN LAIN / OTHER INCOME

	2002 RM	2001 RM
Sumbangan Universiti / <i>University Contribution</i>	879,000	284,110
Pendapatan mengikut klasifikasi kumpulanwang: <i>Income as per funding classification:</i>		
(i) Tabung Pusingan / <i>Revolving Fund</i>	168,013	454,341
(ii) Amanah Lain / <i>Other Trusts</i>	11,489,480	18,507,045
(iii) Penyelidikan / <i>Research</i>	5,443,386	2,522,114
(iv) Kursus, Seminar, Konferensi & Lawatan <i>Course, Seminar, Conference & Study Visit</i>	11,801,672	5,389,395
(v) Pelaburan dan Pembangunan <i>Investment and Development</i>	601,207	906,070
(vi) Penginapan dan Rekreasi / <i>Accommodation and Recreation</i>	1,226,281	1,080,376
(vii) Am / <i>General</i>	4,523,804	2,592,747
(viii) Kolej Kediaman / <i>Residential College</i>	2,410,668	1,900,963
	38,543,511	33,637,161

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

22. PELARASAN TAHUN LALU / PRIOR YEAR ADJUSTMENTS

	2002 RM	2001 RM
a) Pelarasan Pemberian Modal bagi Aset Tetap tahun 1984 hingga tahun 2000 pada nilai bersih. Adjustment of Capital Grants for Fixed Assests between 1984 and 2000 at net value	-	117,156,801
(b) Kontra perbelanjaan pembangunan telah didahulukan oleh KUSTEM Contra to development expenditure advanced by KUSTEM	1,738,279	-
(c) selaras baki kredit/defisit pelbagai akaun amanah Adjustment credit/deficit balances of various trusts fund	(284,189)	-
(d) Pindah baki kumpulanwang kenderaan dan komputer Transfer the balance of vehicle and computer loans fund	(129,300)	-
	1,324,790	117,156,801

23. PENGLIBATAN MODAL / CAPITAL INVOLEMENT

	2002 RM	2001 RM
Perbelanjaan modal diluluskan tetapi tidak diperuntukan di dalam akaun :- Capital expenditure approved but not provided in accounts:-		
Dikontrakkan Contracted	55,491,582	11,600,881
Belum dikontrakkan Yet to be contracted	612,968,085	395,626,702
	668,459,667	407,227,583

Jumlah penglibatan modal telah meningkat dari RM407,227,583 kepada RM668,459,667 di sebabkan oleh pertambahan kelulusan bagi projek-projek khas di Kampus UPM Bintulu dan peruntukan tambahan Bangunan Fakulti Perubatan dan Sains Kesihatan.
 Total capital involement rose from RM407, 227, 573 to RM668, 459, 667 as a result from increased approvals of special projects at UPM's Bintulu Campus and a provision for additional Faculty of Medicine and Health Sciences Buildings.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

24. LIABILITI KONTINGENSI / CONTINGENCY LIABILITIES

- (i) Tindakan undang-undang diambil oleh Syarikat Juta Yakin terhadap UPM dengan mengemukakan tuntutan saman berkaitan Projek Membina dan Menyiapkan Bangunan Markas Palapes.
Legal action taken by Syarikat Juta Yakin against UPM with summon claim related to the construction of PALAPES Headquarters.
- (ii) Letter of Demand IBM melalui peguam, menuntut bayaran bagi projek Satu Pelajar Satu Komputer, bayaran telah dibuat dalam tahun 2002.
Legal Letter of Demand by IBM through lawyers, for the payment of the One Student One Computer Project, payment made in 2002.
- (iii) Bayaran terakhir Projek Pembinaan Lubang Kedua Padang Golf, UPM tertangguh sehingga mendapat keputusan mahkamah tinggi.
Final payment for the construction of Second Nine-Hole of UPM Golf Course referred pending High Court decision.
- (iv) Star Fleet Sdn. Bhd.Telah mengemukakan saman berkaitan penginapan pelajar di Padang Hiliran, Kuala Terengganu.
A summon by Star Fleet Sdn. Bhd. pertaining to student accommodation in Padang Hiliran, Kuala Terengganu.
- (v) Mercury Network Sdn Bhd telah mengemukakan tuntutan saman berkaitan Projek Pembinaan Dewan Kuliah Fakulti Pendidikan
A summon by Mercury Network Sdn. Bhd. pertaining to the Faculty of Education's Lecture Theatre Construction Project.

2002 RM	2001 RM
-	240,000
-	2,000,000
631,679	631,679
-	522,900
220,000	-
851,679	3,394,579

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

25. PERPISAHAN DI ANTARA UPM DENGAN KUSTEM
THE SEPARATION OF UPM AND KUSTEM

- (a) Perpisahan Universiti Putra Malaysia dan Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) berdasarkan pada baki-baki akaun seperti berikut:-

The separation of Universiti Putra Malaysia and Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) is according to the following account balances:-

	(RM)
Aset Tetap / Fixed Assets	8,262,207
Pembinaan Dalam Kemajuan / Work in Progress	616,562
Aset Semasa / Current Assets	
Simpanan Tetap / Fixed Deposits	11,000,000
Tunai dan baki di bank / Cash and balance at bank	2,845,930
Pelbagai hutang / Sundry debts	3,316,606
	26,041,305
Tolak: Pelbagai piutang / Less: Sundry credits	3,462,537
	22,578,768
Dibiayai oleh:- / Finance by:-	
Kumpulanwang Pelbagai / Various Funds	22,578,768

- (b) Pembinaan dalam kemajuan sebanyak RM4,755,438 adalah untuk projek Kompleks Dewan kuliah dan Makmal Komputer akan dipindahkan apabila siap.
Construction in progress totalling RM4, 755, 438 for the Lecture Theatre Complex and Computer Labs Projects will be transferred when completed.
- (c) Tanah dinegeri Terengganu berjumlah RM1,429,279 yang diambil kira pada harga kos telah dipindahkan ke KUSTEM dan proses pindahan hak milik masih diperingkat pelaksanaan.
Land in Terengganu totalling RM1, 429, 279 which are considered at cost, has been transferred to KUSTEM and ownership transfer process is still at settlement stage.
- (d) Sebanyak RM38.5 juta aset tetap yang diperolehi di UPM telah dipindahkan pada harga kos.
A total of RM38.5 million fixed assets acquired in UPM has been transferred at cost prices.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

26. HUTANG PECAH KONTRAK (BREACH OF CONTRACTS)

BREACH OF CONTRACTS

Sebanyak RM2.049 juta telah diakaunkan sebagai hutang pecah kontrak yang melibatkan staf UPM yang melanggar perjanjian cuti belajar dan pelajar-pelajar Pasca Siswazah yang dibiayai oleh Kementerian Sains dan Teknologi Alam Sekitar, tetapi tidak menamatkan pengajian.

A total of RM2.049 million has been accounted as breach of contracts involving members of UPM staff who breached study leave agreements and Post-graduate students financed by the Ministry of Science, Technology and Environment, but failed to complete their studies.

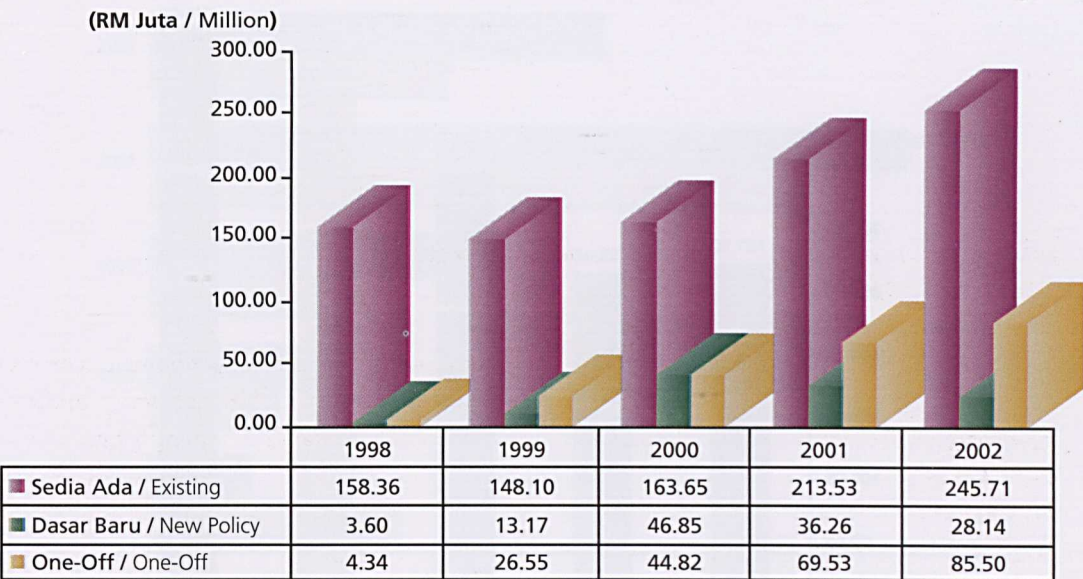
27. ANGKA-ANGKA PERBANDINGAN

COMPARATIVE FIGURES

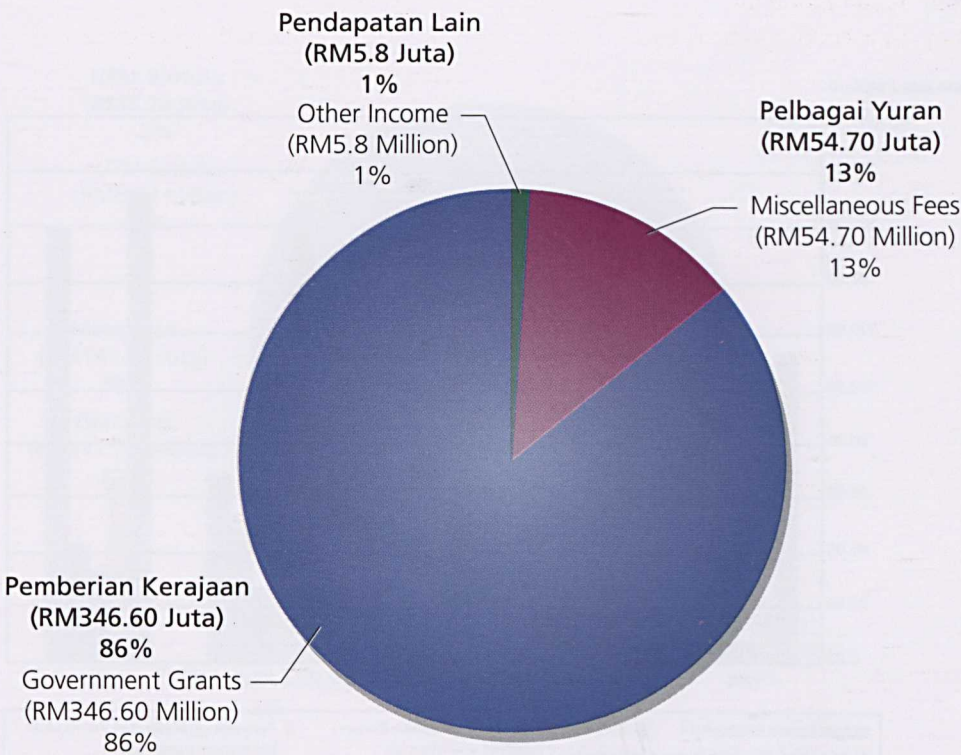
Sebahagian dari angka-angka bandingan tahun lalu telah dipinda untuk disesuaikan dengan persembahan tahun ini.

Part of last year's comparative figures have been amended so as to suit this year's presentation.

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

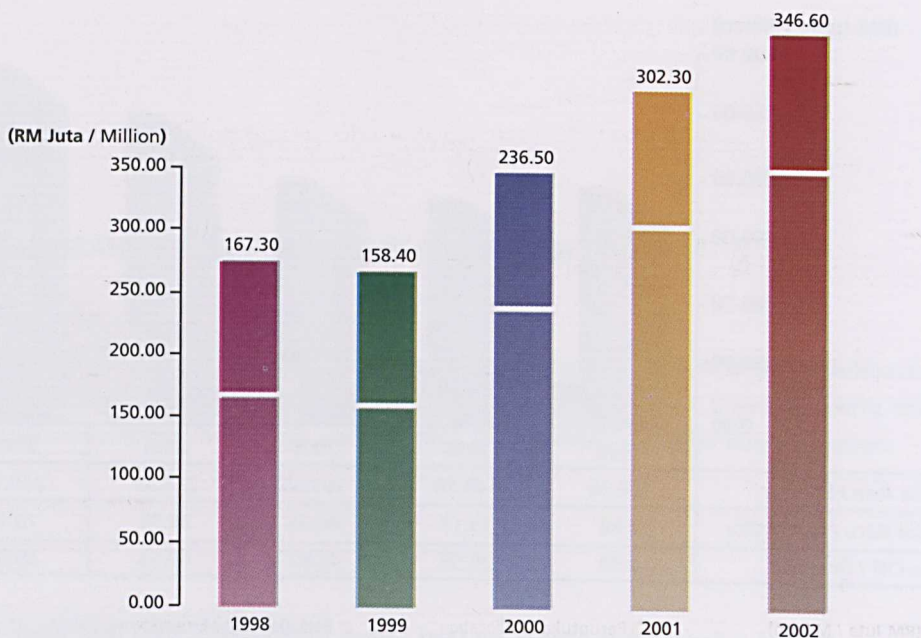


Carta 1 :- Peruntukan Mengurus Dari Tahun 1998 Hingga 2002 (RM Juta)
Chart 1 :- Operating Allocation From 1998 Until 2002 (RM Million)

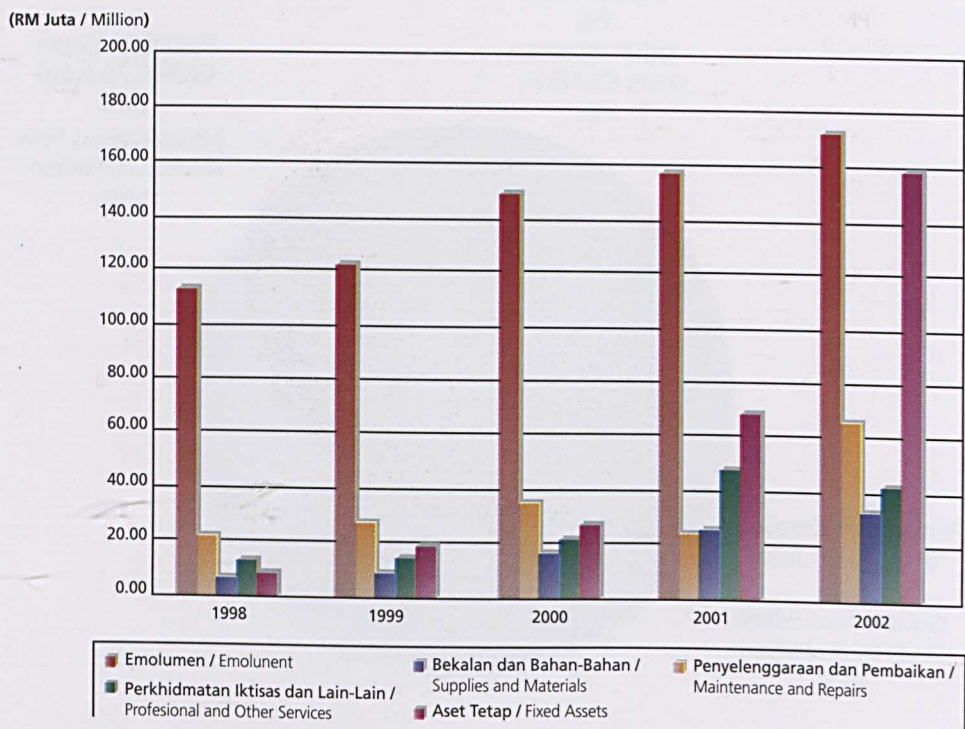


Carta 2 :- Pecahan Peruntukan Mengurus Tahun 2002 (RM Juta)
Chart 2 :- Breakdown Of Operating Allocation For Year 2002 (RM Million)

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

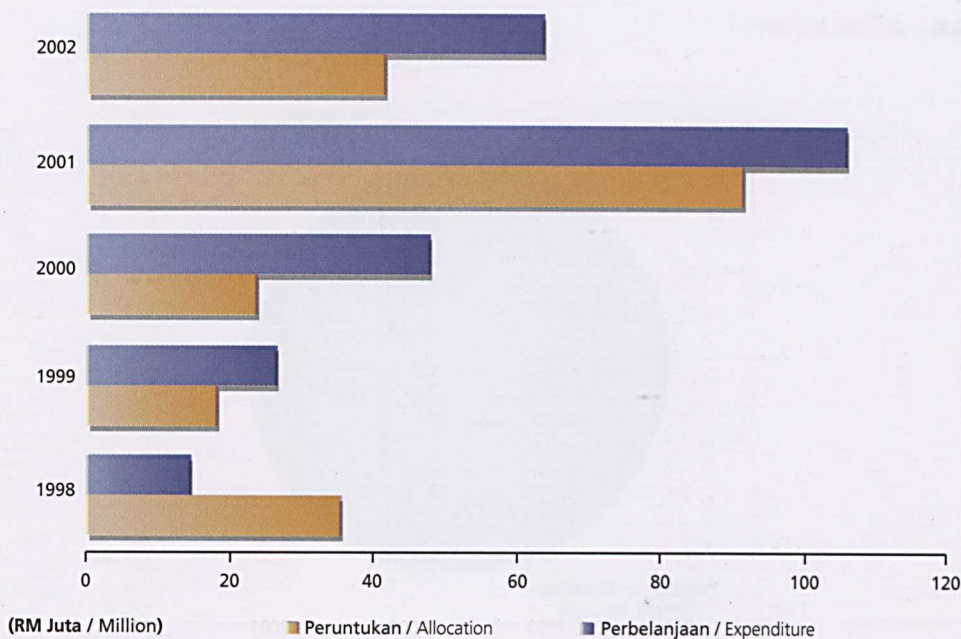


Carta 3 :- Pemberian Kerajaan Akaun Dari Tahun 1998 Hingga 2002 (RM Juta)
Chart 3 :- Government Grants For Operating Expenses From 1998 Until 2002 (RM Million)

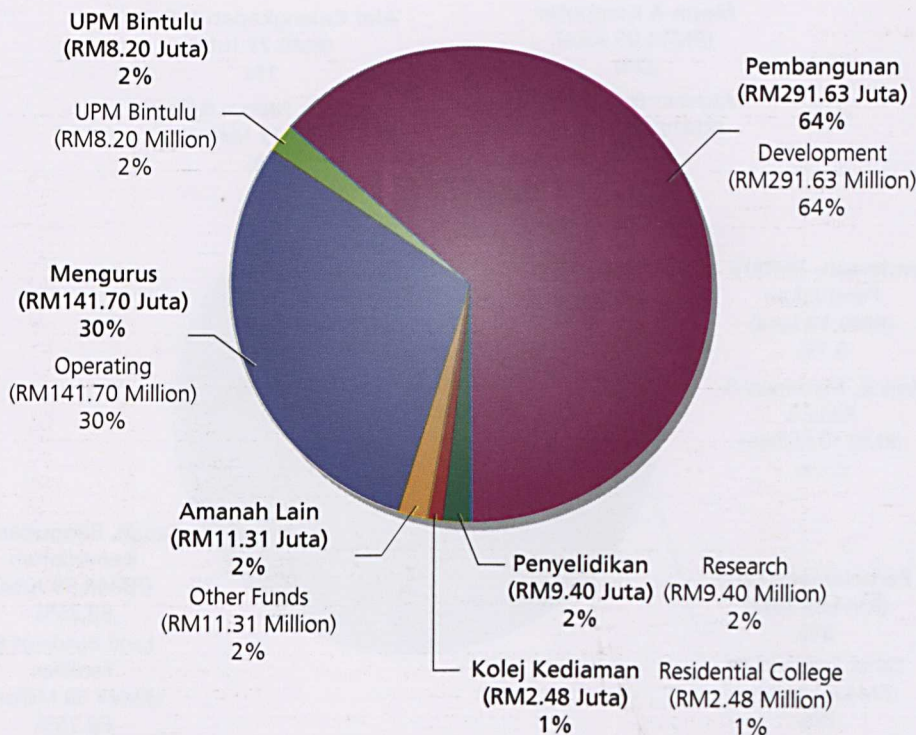


Carta 4 :- Perbelanjaan Akaun Mengurus Dari Tahun 1998 Hingga 2002 (RM Juta)
Chart 4 :- Operating Account Expenditure From 1998 Until 2002 (RM Million)

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)



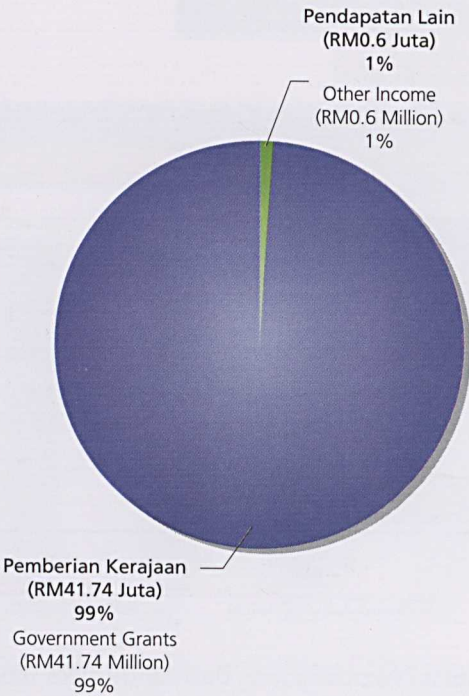
Carta 5 :- Peruntukan Pembangunan Dari Tahun 1998 Hingga 2002 (RM Juta)
Chart 5 :- Development Allocation From 1998 Until 2002 (RM Million)



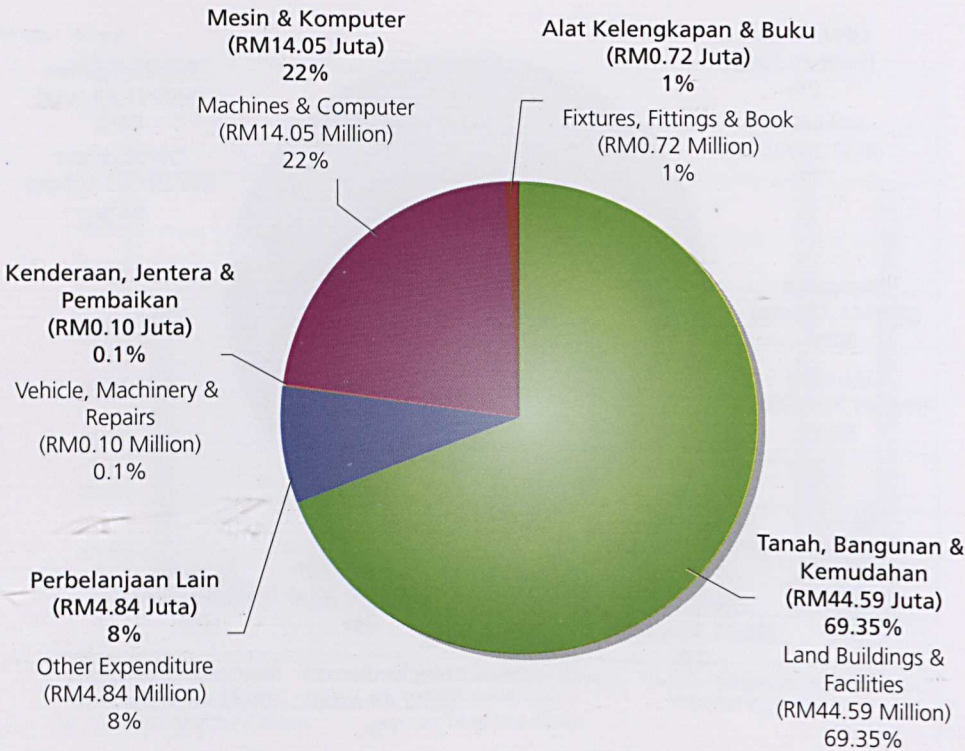
Carta 6 :- Nilai Aset Bersih Mengikut Kumpulanwang Tahun 2002 (RM Juta)
Chart 5 :- Net Assets Value According To Funds For Year 2002 (RM Million)

Nota Kepada Penyata Kewangan 31 Disember 2002 (samb.)
Notes To The Financial Statements 31 December 2002 (cont.)

PERUNTUKAN / ALLOCATION



PERBELANJAAN / EXPENDITURE



Carta 7 :- Peruntukan dan Perbelanjaan Pembangunan Tahun 2002 (RM Juta)
 Chart 7 :- Development Allocation and Expenditure For Year 2002 (RM Million)

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