

H
ICM

PERPUSTAKAAN
UNIVERSITI PUTRA MALAYSIA

1998

LAPORAN TAHUNAN Annual Report



UNIVERSITI PUTRA MALAYSIA



btb
S
539
M3
U548
1998

Kompleks Baru Fakulti Kejuruteraan, UPM
New Complex of the Engineering Faculty, UPM



Notae Stellarum
Præ Magnitudinis
Secundæ
Tertiæ
Quartæ

SEX CLIMATA duorum septentrionis, tribus æquatoris, et duobus austris
quorum Primum continet altera æquatoris partem per 30. gradus
duorum. Tertium triam etc. hæc sunt hæc

OCEANUS SEPTENTRIONALIS
BOREALIS INACCESSA

INSULÆ BRITANNIÆ
L. IRIS
L. KERRY

MARE GLACIALE
et SCYTHICUM Sive TARTARICUM

INSULÆ MAGNÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE MEDITERRANEUM
L. ADRIATICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

MARE ARABICUM
L. INDICUM

INSULÆ GALLIÆ
L. BRITANNIÆ
L. HOLLANDIÆ

1998

KANDUNGAN Contents

10 DEC 2003

- 1 MISI** ■ Mission Statement
- 1 OBJEKTIF** ■ Objectives
- 3 CARTA ORGANISASI** ■ Organisational Chart
- 4 LEMBAGA PENGARAH** ■ Board of Directors
- 6 PEGAWAI UTAMA** ■ Pricipal Officials
- 9 LAPORAN NAIB CANSOLOR** ■ Vice Chancellor's Report
- 16 HAL EHWAL AKADEMIK** ■ Academic Affairs
 - Siswazah ■ Graduates
 - Pengambilan Pelajar ■ Student Intake
 - Enrolmen Pelajar ■ Student Enrolment
 - Pusat Pengajian Siswazah ■ Graduate Studies
 - Pendidikan Jarak Jauh(IDEAL) ■ Institute for Distance Education and Learning
- 22 HAL EHWAL PELAJAR** ■ Student Affairs
 - Pembangunan Pelajar ■ Student Development
 - Biasiswa ■ Scholarships and Loans

 - Aktiviti Sukan ■ Sports Activities
 - Aktiviti Kebudayaan ■ Cultural Activities
 - Kaunseling dan Kerjaya ■ Career and Counselling
 - Kesihatan ■ Health
 - Palapes ■ ROTU
 - Kolej Kediaman ■ Residential Colleges
- 27 PENYELIDIKAN** ■ Research
 - IRPA ■ IRPA
 - Penyelidikan Jangka Pendek ■ Short-term Research Funds
 - Anugerah Sainitis Muda Negara 1998 ■ National Young Scientist Award 1998
- 29 PENGURUSAN SUMBER MANUSIA** ■ Human Resources Management
 - Perjawatan ■ Staffing
 - Pelantikan dan Kenaikan Pangkat ■ Appointments and Promotions
 - Peletakan Jawatan dan Persaraan ■ Resignations and Retirements
 - Perkhidmatan Cemerlang ■ Excellent Service Awards

btb

S

539

m3

4548

1998

31 LAPORAN AKADEMIK FAKULTI/PUSAT ■ Academic Reports from Faculty/Centre

- Fakulti Ekologi Manusia ■ Faculty of Human Ecology
- Fakulti Ekonomi dan Pengurusan ■ Faculty of Economics and Management
- Fakulti Kejuruteraan ■ Faculty of Engineering
- Fakulti Pengajian Bahasa Moden ■ Faculty of Modern Language Studies
- Fakulti Pengajian Pendidikan ■ Faculty of Educational Studies
- Fakulti Perhutanan ■ Faculty of Forestry
- Fakulti Pertanian ■ Faculty of Agriculture
- Fakulti Perubatan dan Sains Kesihatan ■ Faculty of Medicine and Health Science
- Fakulti Kedokteran Perubatan dan Sains Peternakan ■ Faculty of Veterinary Medicine and Animal Science
- Fakulti Reka Bentuk dan Seni Bina ■ Faculty of Design and Architecture
- Fakulti Sains Komputer dan Teknologi Maklumat ■ Faculty of Computer Science and Information Technology
- Fakulti Sains Makanan dan Bioteknologi ■ Faculty of Food Science and Biotechnology
- Fakulti Sains dan Pengajian Alam Sekitar ■ Faculty of Science and Environmental Studies
- Pusat Pengajian Siswazah Pengurusan Malaysia ■ Malaysian Graduate School of Management
- Pusat Pengajian Matrikulasi ■ Matriculation Studies Centre
- Pusat Program Luar ■ External Programmes Centre

49 KHIDMAT SOKONGAN ■ Support Services

- Institut Biosains ■ The Bioscience Institute
- Bahagian Pembangunan ■ Development Division
- Perpustakaan ■ Library
- Pembangunan Perniagaan ■ Business Development
- Taman Penyelidikan Universiti ■ University Research Park
- Uniputra Production ■ Uniputra Production
- Pusat Komputer ■ Computer Centre
- Pusat Kebudayaan dan Kesenian SSAAS UPM ■ The SSAAS Arts and Culture Centre
- Pusat Islam ■ Islamic Centre
- Penerbit Universiti Putra Malaysia ■ Universiti Putra Malaysia Press

60 UNIVERSITI PUTRA MALAYSIA TERENGGANU ■ Universiti Putra Malaysia Terengganu (UPMT)

65 AKTIVITI SEPANJANG TAHUN ■ Major Activities and Events

70 MEMORANDUM SEFAHAMAN ■ Memorandum of Understanding

73 LAWATAN RASMI ■ Official Visits

78 PRESTASI KEWANGAN ■ Financial Performance

1998

MISI

10 DEC

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

OBJEKTIF

Untuk mengukuhkan lagi daya saing dan keupayaan UPM dalam menangani arus perubahan dengan jayanya, beberapa objektif telah dirangka berteraskan kepada misi UPM. Antaranya ialah:

- Menyediakan prasarana yang menggalakkan penggunaan teknologi terkini kepada pelanggan-pelanggan di universiti.
- UPM berada di barisan hadapan menerajui perkembangan Koridor Raya Multimedia (Multi-media Super Corridor).
- Menawarkan program-program yang mampu bersaing.
- Mengadakan pakatan strategik dengan institusi-institusi awam dan swasta sama ada dari dalam atau luar negara bagi kebaikan bersama.
- Menawarkan program-program untuk pasaran antarabangsa.
- Menawarkan pendidikan tinggi kepada pelanggan-pelanggan seramai mungkin.
- Meningkatkan bilangan pengambilan pelajar.
- UPM menjadi universiti unggul menerima anugerah kewangan seperti IRPA dan lain-lain lagi.

1998

Mission

The University's mission is to be a leading centre of learning and research, contributing not only towards human advancement and creation of knowledge but also to wealth creation and nation building.

Objective

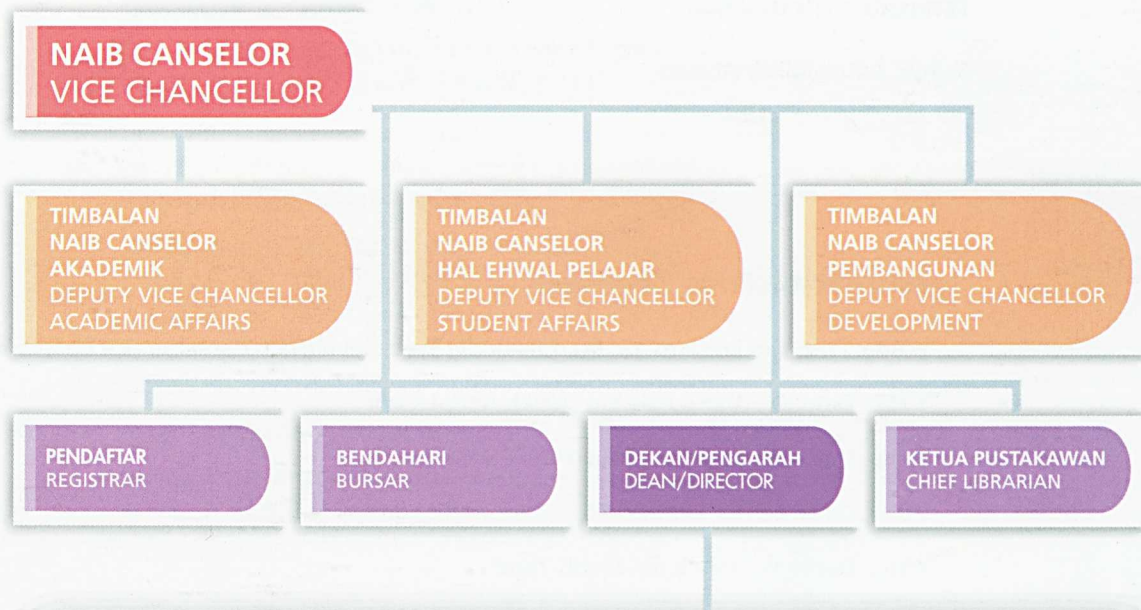
To strengthen the competitive ability of UPM to successfully manage change in its myriad forms, several objectives have been formulated to realise the stated mission:

- To provide infrastructure that encourages the use and application of state-of-the-art technology for the University's clients
- To be in the forefront of efforts to develop the Multimedia Super Corridor
- To offer competitive programmes of learning and training
- To forge and strengthen mutually beneficial strategic linkages with private and public sector institutions, both national and international
- To offer programmes of international acclaim
- To offer tertiary education to a maximum number of clients
- To gradually increase student enrolment through a steady increase in intake
- To establish UPM as the University of first choice for research awards and grants from IRPA and other such similar bodies



1998

CARTA ORGANISASI
Organisational Chart



FAKULTI EKOLOGI MANUSIA FACULTY OF HUMAN ECOLOGY	PUSAT PENGAJIAN SISWAZAH GRADUATE STUDIES CENTRE
FAKULTI EKONOMI DAN PENGURUSAN FACULTY OF ECONOMICS AND MANAGEMENT	PUSAT KOMPUTER COMPUTER CENTRE
FAKULTI KEDOKTORAN VETERINAR DAN SAINS PETERNAKAN FACULTY OF VETERINARY MEDICINE AND ANIMAL SCIENCE	PUSAT PENGAJIAN MATRIKULASI MATRICULATION STUDIES CENTRE
FAKULTI KEJURUTERAAN FACULTY OF ENGINEERING	PUSAT ISLAM ISLAMIC CENTRE
FAKULTI PENGAJIAN PENDIDIKAN FACULTY OF EDUCATIONAL STUDIES	PUSAT PEMBANGUNAN PERNIAGAAN UNIVERSITI UNIVERSITY BUSINESS DEVELOPMENT CENTRE
FAKULTI PENGAJIAN BAHASA MODEN FACULTY OF MODERN LANGUAGE STUDIES	PUSAT KEBUDAYAAN DAN KESENIAN SSAAS SSAAS ARTS AND CULTURE CENTRE
FAKULTI PERTANIAN FACULTY OF AGRICULTURE	PUSAT PROGRAM LUAR EXTERNAL PROGRAMMES CENTRE
FAKULTI PERHUTANAN FACULTY OF FORESTRY	INSTITUT BIOSAINS BIOSCIENCE INSTITUTE
FAKULTI PERUBATAN DAN SAINS KESIHATAN FACULTY OF MEDICINE AND HEALTH SCIENCE	PUSAT PENGAJIAN SISWAZAH PENGURUSAN MALAYSIA MALAYSIAN GRADUATE SCHOOL OF MANAGEMENT
FAKULTI REKA BENTUK DAN SENI BINA FACULTY OF DESIGN AND ARCHITECTURE	TAMAN PENYELIDIKAN UNIVERSITI UNIVERSITY RESEARCH PARK
FAKULTI SAINS DAN PENGAJIAN ALAM SEKITAR FACULTY OF SCIENCE AND ENVIRONMENTAL STUDIES	UPM TERENGGANU TERENGGANU UNIVERSITY COLLEGE
FAKULTI SAINS MAKANAN DAN BIOTEKNOLOGI FACULTY OF FOOD SCIENCE AND BIOTECHNOLOGY	PENERBIT UPM UPM PRESS
INSTITUT PENDIDIKAN DAN PEMBELAJARAN JARAK JAUH INSTITUTE FOR DISTANCE EDUCATION AND LEARNING	

1998

**LEMBAGA PENGARAH
BOARD OF DIRECTORS**

PENGERUSI ■ CHAIRMAN

Y. Bhg. Datuk Ramly Ahmad

ANGGOTA-ANGGOTA ■ DIRECTORS

Y. Bhg. Prof. Tan Sri Dato' Dr. Syed Jalaludin Syed Salim (Naib Canselor/Vice Chancellor)

Y.Bhg. Dato' Dr. Abdul Aziz bin Sheikh Abdul Kadir

Y.Bhg. Dato' Dr. Noor Laily bt. Dato' Abu Bakar

Y.Bhg. Dato' Patrick Lim Soo Kit

Y.Bhg. Datuk Hj. Isahak bin Mohd Yusuf

Y.Bhg. Tan Sri Dr. Johari bin Mat

Y.Bhg. Tuan Haji Ithnin bin Haji Hassan

PEGAWAI UTAMA Principal Officials

CANSELOR ■ CHANCELLOR

TYT Tun Dato' Seri (Dr.) Hj. Hamdan Sheikh Tahir
S.M.N., P.S.M., D.U.P.N.D.P., D.P.M.N., K.M.N.

PRO-CANSELOR ■ PRO-CHANCELLORS

Y. Bhg. Tan Sri Dato' Hj. Hashim Aman
P.M.N., P.S.M., D.P.M.K., D.S.N.S., D.P.M.J.D.C.S.M., S.S.S.A., J.M.N.
Y.Bhg. Tan Sri Dato' Gunn Chit Tuan P.M.N., P.S.M., D.M.P.N., J.S.M.

NAIB CANSELOR ■ VICE-CHANCELLOR

Y. Bhg. Prof. Dato' Dr. Syed Jalaludin Syed Salim D.S.S.A., D.P.M.P., J.S.M.
B. Vet. Sc. & A.H.(Punjab), M.Phil, Ph. D. (London), F.A.S.

TIMBALAN NAIB CANSELOR ■ DEPUTY VICE-CHANCELLORS

Hal Ehwal Akademik ■ Academic Affairs

Prof. Dr. Kamel Ariffin Mohd. Atan J.S.M.
B.A. (Malaya), M. A. (Western Ontario), Ph. D. (New South Wales)

Pembangunan ■ Development

Y. Bhg. Prof. Dato' Dr. Ir. Mohd. Zohadie Bardaie D.S.S.A.
Dip. Agric. (Malaya), B.S., M.S. (California, Davis),
Ph. D. (Cornell) M.I.E.M., P. Eng.

Hal Ehwal Pelajar ■ Student Affairs

Prof. Dr. Rahim Md. Sail J.S.M., D.S.M.
Dip.Agric.(Malaya),B.S.(California,Davis),M.S.,
Ph. D. (Wisconsin)

PENDAFTAR ■ REGISTRAR

Ahmad Zekri Abdul Khalil A.M.N.
B. Econ. (Malaya), Dip. in Management Analysis (INTAN)

BENDAHARI ■ BURSAR

Tuan Hj. Yusop Keling
B. Ec. (Hons.), Post-grad. D.I.A (Malaya), R. A. (M), M.B.I.M.

DEKAN ■ DEAN

Fakulti Ekologi Manusia ■ Faculty of Human Ecology

Assoc. Prof. Dr. Halimah Hj. Ahmad K.M.N.

Cert. Edu., Cert. Home Econs. (Malaya), B.S. (Utah State), M. S. (Iowa State), Ph. D. (Texas)

Fakulti Ekonomi dan Pengurusan ■ Faculty of Economics and Management

Assoc. Prof. Hj. Zainal Abidin Kidam

B. Agric. Sc. (Hons.) (Malaya), M.B.A. (Wisconsin-Madison)

Fakulti Kedokteran Veterinar dan Sains Peternakan ■

Faculty of Veterinary Medicine and Animal Science

Y. Bhg. Prof. Dato' Dr. Sheikh Omar Abdul Rahman D.P.S.K.

B.V.Sc. (Queensland) M.V.Sc. (Saskatchewan), M.R.C.V.S.

Fakulti Kejuruteraan ■ Faculty of Engineering

Prof. Ir. Abang Abdullah Abang Ali

B.Sc. (Hons.) (Brighton), M.Sc. (Manchester), F.I.E.M., P. Eng., M.I.C.E., C. Eng.

Fakulti Pengajian Bahasa Moden ■ Faculty of Modern Language Studies

Prof. Dr. Hj. Amat Juhari Moain K.M.N., A.M.N.

Cert. Ed., B.A. (Hons.), M.A., Ph.D. (Malaya), D.P.I.(UKM)

Fakulti Pengajian Pendidikan ■ Faculty of Educational Studies

Prof. Dr. Abdul Rahman Md. Aroff K.M.N.

B.A., Dip. Ed. (Malaya), M.Ed. (Sheffield), Ph. D. (Southampton)

Fakulti Perhutanan ■ Faculty of Forestry

Assoc. Prof. Dr. Rusli Mohd.

B.Sc. (For)(UPM) M.Phil. (Edinburgh), Ph.D. (North Carolina State)

Fakulti Pertanian ■ Faculty of Agriculture

Prof. Dr. Mohd. Yusof Hussein

Dip.Agric.(Malaya), B.S., M.S. (Louisiana State), Ph.D. (Adelaide)

Fakulti Perubatan dan Sains Kesihatan ■ Faculty of Medicine and Health Science

Y. Bhg. Prof. Datuk Dr. Mohd. Sham Kassim

P.J.N., K.M.N., P.M.C.

M.B.B.S. (Sydney), D.C.H (Glasgow), M.R.C.P., AM (Malaysia), F.R.C.P. (Edinburgh)

Fakulti Reka Bentuk dan Seni Bina ■ Faculty of Design and Architecture

Dr. Mustafa Kamal Mohd. Sharif

Dip. Agric. (UPM), B.S. (Louisiana State), M.S. (Tennessee), Ph.D. (Colorado State)

Fakulti Sains dan Pengajian Alam Sekitar ■ Faculty of Science and Environmental Studies

Prof. Dr. Muhamad Awang

Drs.(Bandung I.T.B.), Ph. D. (Sheffield)

Fakulti Sains Komputer dan Teknologi Maklumat ■
Faculty of Computer Science and Information Technology

Assoc. Prof. Dr. Abd. Azim Abd. Ghani
B.Sc. (Indiana State), M.S. (Miami), Ph. D.

Fakulti Sains Makanan dan Bioteknologi ■ Faculty of Food Science and Biotechnology

Prof. Dr. Gulam Rasul Rahmat Ali
D.V.M. (Pakistan), M.Sc. (Reading), M. Ed., Ph. D (Wisconsin)

Pusat Pengajian Siswazah ■ Graduate Studies Centre

Assoc. Prof. Dr. Kamis Awang
(*Sehingga 30 Ogos. 1998 / Untill 14 August 1998*)
B.Sc. (For) Hons., Ph.D. (Australia National). *Untill 14 August 1996*

Institut Biosains ■ Bioscience Institute

Prof. Dr. Abdul Rani Bahaman J.S.M
D.V.M. (Mymensingh), B. Sc. (La Trobe), M. Phill. (Massey), Ph.D. (UPM)

Pusat Pengajian Siswazah Pengurusan Malaysia ■

Malaysian Graduate School of Management
Assoc. Prof. Dr. Md. Zabid Abdul Rashid
B.S. (Agribus.) (UPM), M. Sc. (London) D.E.A., Dr. de Troisieme Cycle en Science de Gestion (Aix – Marseille/ESSEC)

Institut Pendidikan dan Pembelajaran Jarak Jauh (IDEAL) ■

Institute for Distance Education and Learning (IDEAL)
Assoc. Prof. Haji Azahari bin Ismail
B.S. (Hons.)(Malaya), M. S. (Wisconsin-Madison), Ph. D. (Maryland)

Taman Penyelidikan Universiti ■ University Research Park

Assoc. Prof. Khalip Abdul Raffar (K.M.N)
B. Agric. Sc., Dip. Ed. (Malaya), B.S., M. Agric. Sc. (Massey)

Pusat Komputer ■ Computer Centre

Assoc. Prof. Dr. Abd. Azim Abd. Ghani
(*Sehingga 30 Sept. 1998/Untill 30th Sept 1998*)
B.Sc. (Indiana State), M.S. (Miami), Ph. D.

Pusat Pembangunan Perniagaan ■ University Business Centre

Prof. Dr. Nik Muhammad Nik Majid

Dip. Agric. (Malaya), B.S. (Agric.), M.F. (Louisiana State), Ph. D. (British Columbia)

Pusat Islam ■ Islamic Centre

Assoc. Prof. Dr. Hj. Muhd. Fauzi bin Muhamad

Pusat Pengajian Matrikulasi ■ Matriculation Studies Centre

Assoc. Prof. Dr. Elias Saion

SmSn. (UKM), M. Sc. (Surrey), Ph. D. (St. Andrews)

Pusat Kebudayaan dan Kesenian Sultan Salahuddin Abdul Aziz Shah ■

The SSAAS Centre for Culture and Arts

Assoc. Prof. Dr. Ali Rajion

B. Sc. (Hons.) (UKM), M. Sc. (New England), Ph. D. (Melbourne)

Pusat Pembangunan Perisian ■ Centre for Software Development

Assoc. Prof. Dr. Bachok Taib

B. Sc. (Hons.) (UKM), M. Sc. (Reading), Ph. D. (Wollongong)

Pusat Program Luar ■ External Programmes Centre

Prof. Dr. Wan Sulaiman Wan Harun D.J.N.

B. Sc. (Agr), M. Sc. (Guelph), Dr. Agr. Sc. (Ghent)

Ketua Pustakawan ■ Chief Librarian

Kamariah Abdul Hamid

A.L.A. (London), M.L.S. (Hawaii)

Penerbit Universiti Putra Malaysia ■ Universiti Putra Malaysia Press

Sumangala Pillai

B. Soc. Sc.(Hons.)(USM), Dip. Publishing (UM)

1998

LAPORAN NAIB CANCELOR Vice Chancellor's Report



Kegawatan ekonomi bukan menjadi penghalang kepada UPM untuk bergerak maju dalam pelbagai bidang, malahan kegawatan ekonomi merupakan satu cabaran yang meningkatkan tahap kecekalan UPM menangani arus-arus perubahan. Walau pun kegawatan ekonomi yang berlaku di rantau ini memberi kesan kepada UPM, misi dan objektif harus diteruskan kerana pendidikan merupakan salah satu kunci kepada pembentukan negara maju.

Peng korporatan yang menjadi isu hangat di kalangan kakitangan dan pelajar sebelum ini telah menjadi kenyataan apabila

Kementerian menguatkuasakan perlembagaan baru bagi empat Institusi Pengajian Tinggi Awam (IPTA) termasuk Universiti Putra Malaysia pada 15 Mac 1998. Dengan penguatkuasaan Perlembagaan baru ini, UPM akan mempunyai sistem governan yang baru yang membolehkan penubuhan Lembaga Pengarah Universiti bagi menggantikan Majlis Universiti, serta penubuhan Senat dengan keanggotaan yang lebih kecil berbanding sebelumnya.

Keupayaan UPM melahirkan pelajar yang berpendidikan dalam pelbagai bidang terbukti dengan pertambahan jumlah pelajar yang bergraduat dengan Ijazah dan Diploma masing-masing. Seramai 3,487 pelajar telah bergraduat pada tahun 1998 iaitu peningkatan sebanyak 16 % berbanding tahun 1997 iaitu seramai 2,997 orang. Daripada jumlah tersebut seramai 17 telah dikurniakan Doktor Falsafah, 414 orang mendapat Sarjana, 2,698 orang mendapat Ijazah Pertama dan 358 orang mendapat Diploma.

Dari segi pengambilan pelajar pula, pada tahun 1998, UPM telah mengambil seramai 11,872 pelajar baru. Daripada bilangan ini seramai 8,820 orang mengikuti program Ijazah pertama, Diploma seramai 1,420 orang dan Matrikulasi seramai 1,632 orang. Daripada jumlah tersebut, 10,723 orang ditempatkan di Kampus Serdang dan 1,149 pula di tempatkan di Kampus Terengganu. Ini menunjukkan peningkatan sebanyak 6% berbanding tahun 1997.

UPM dalam usaha ke arah mendemokrasikan pendidikan, enrolmen pelajar telah ditingkatkan kepada 30,902 pelajar di pelbagai peringkat pengajian, meningkat 25.6% berbanding tahun 1997. Ini menjadikan UPM sebagai sebuah universiti yang terbesar dari segi bilangan pelajarinya.

UPM telah pun dikenali sebagai institusi pendidikan tinggi yang berwibawa dan telah dinilai dari segi prestasi sehingga tersenarai dalam universiti yang terkemuka di Asia. Oleh yang demikian pengambilan pelajar di peringkat pengajian siswazah ditingkatkan. Pengambilan pelajar di peringkat Pengajian

Though the current economic downturn has been quite devastating in its effects on the region, it has not stood in the way of the University's development. Indeed, it has served as a challenge to UPM to meet the tide of change, particularly economic, that engulfed the nation. The mission and objectives of the University have been pursued against the realisation that however severe the economic constraints, education will remain a vital element in the development of the nation.

Corporatization of Institutions of Higher Learning, a much debated issue by both students and academics, was implemented by the Ministry of Education in four universities including UPM on 15 March 1998. Corporatization brought a new system of Governance in the University - the University Council has been replaced by a Board of Directors and the Senate now consists of less members.

UPM's ability to produce graduates and diploma holders in various fields is clearly reflected in the increasing number of graduands: there has been a 16% increase in graduates with the number increasing from 2 997 in 1997 to 3 487 graduates in 1998. Of this total, 17 were conferred with Ph.D, 414 Masters degree, 2698 first degree and 358 with diploma.

The intake of new students in 1998 totalled 11 872, indicating a 6% increase over 1997. Of this total, 8 870 students are pursuing first degree programmes, 1420 diploma and 1 632 are matriculation students. Of this number, 10 723 are in the Serdang Campus while 1 149 are in the Terengganu campus.

In an effort to democratise education so as to enable as many young people as possible to avail themselves of a tertiary education, UPM has deliberately pursued a policy of increased student enrolment. This year saw enrolment soaring up to 30 962 in the various disciplines, an increase of 25.6% over the 1997 figures. This makes UPM the largest university in terms of enrolment.

Siswazah pula adalah seramai 1,519 orang iaitu 138 orang di peringkat Doktor Falsafah dan 1,381 di peringkat Sarjana meningkat sebanyak 53.3% secara keseluruhannya berbanding tahun 1997. Walaupun terdapat penurunan dalam pengambilan pelajar dalam program Ph.D sebanyak 12.7% terdapat peningkatan yang ketara dalam pengambilan pelajar dalam program Sarjana iaitu 65.8%. Ini disebabkan terdapatnya permintaan yang tinggi dalam program tersebut kerana semakin ramai rakyat Malaysia mula sedar tentang kepentingan pendidikan tinggi. Tambahan pula usaha-usaha yang dilakukan oleh UPM untuk memasarkan program-program pendidikan tinggi di luar negara telah dapat memperkenalkan program-program yang ada di UPM secara meluas lagi.

Sepanjang tahun 1998 beberapa promosi pendidikan tinggi peringkat antarabangsa telah diadakan iaitu di Negara Brunei Darussalam, Indonesia dan Shanghai untuk memasarkan program-program pengajian yang ditawarkan di UPM di peringkat antarabangsa. Sehingga kini jumlah pelajar luar negara di UPM telah mencecah lebih 500 orang yang datang dari lebih 40 buah negara di dunia.

Program pendidikan jarak jauh (PJJ) yang dikendalikan oleh Institut Pendidikan dan Pembelajaran Jarak Jauh (IDEAL) juga menunjukkan kemajuan. Kini enrolmen pelajarinya ialah seramai 5,087. Daripada bilangan ini 74% adalah yang berumur lebih 31 tahun. Ini menunjukkan bahawa wujud kesedaran di kalangan rakyat Malaysia untuk meningkatkan tahap pendidikan mereka ke tahap yang lebih tinggi.

Program PJJ yang bermula pada tahun 1995 ini telah berjaya melahirkan graduan pertama seramai sembilan orang melalui program Master Sains (Pembangunan Sumber Manusia) pada bulan Julai 1998. Sehingga tahun 1998 sebanyak 62 modul pengajian telah disediakan bagi keseluruhan program dan sebanyak 39 pusat pembelajaran di bandar-bandar strategik telah ditubuhkan bagi memudahkan pelajar-pelajar dari seluruh negara mengikuti program tersebut.

UPM juga telah memperkenalkan beberapa program baru bagi menyokong keperluan semasa dalam era menuju negara maju. Antara program baru yang ditawarkan ialah Bachelor Komunikasi di bawah Fakulti Ekologi Manusia, Bachelor Sains Kesihatan Persèkitaran dan

Largely as a result of its performance and achievements, UPM is recognised as a reputable institution of higher learning and is now rated among Asia's top universities. Consequently UPM has seen a rapid increase in graduate student population. The graduate intake for 1998 was 1 519, an increase of 53.3% over the 1997 figure. Of this total, 138 are Ph.D students while 1 381 are following masters programmes. Admittedly there was a 12.7% decrease in Ph. D intake but this was offset by a 65.8% increase in the number of students pursuing masters degree programmes. As mentioned earlier, this increase can be attributed to UPM's efforts to promote and market its programmes overseas as well as to an increased awareness of the need to enhance personal skills through continuing education.

UPM's concerted efforts to promote its academic programmes particularly through road shows in Negara Brunei Darussalam, Indonesia and Shanghai in China have been fruitful. Currently the foreign graduate student population stands at 500 and is drawn from about 40 countries.

The Distance Learning Programme which is managed by the Institute for Distance Education and Learning (IDEAL) has seen a tremendous increase in figures. To date it has a student enrolment of 5 087. Of this total, 74% are students who are over 31 years of age clearly reflecting an increased realisation among Malaysians of the need for higher educational qualifications.

In July 1998, the Distance Learning Programme convoked its first nine graduates in Masters in Science (Human Resource Development). This programme now offers 62 modules at 39 centres, strategically located throughout the nation. This move has served to facilitate students following these programmes.

UPM continues to provide new programmes to support the needs of a rapidly evolving nation. Among the new programmes offered are the Bachelors of Communication by the Faculty of

Pekerjaan di bawah Fakulti Perubatan dan Sains Kesihatan dan Bachelors Sains (Pembangunan Sumber Manusia) di bawah Fakulti Pengajian Pendidikan.

Permintaan yang tinggi terhadap program-program dalam bidang teknologi maklumat telah mencetuskan idea untuk mempertingkatkan lagi usaha-usaha untuk menangani masa depan dalam pendidikan sains dan teknologi dengan memanfaatkan bidang teknologi maklumat yang sedang pesat berkembang sejajar dengan kedudukan UPM dalam Koridor Raya Multimedia. Maka pada 1 Oktober 1998, UPM telah menubuhkan fakulti baru iaitu Fakulti Sains Komputer dan Teknologi Maklumat.

Kecenderungan UPM adalah untuk menawarkan pelbagai program pengajian terutamanya teknologi maklumat bagi menghadapi alaf baru pembangunan masa hadapan negara. Maka Fakulti Sains Komputer dan Teknologi Maklumat yang baru ditubuhkan ini telah memperkenalkan 4 pengkhususan baru dalam program Bachelors Sains komputer iaitu pengkhususan dalam sistem komputer, rangkaian komputer, kejuruteraan perisian dan multimedia.

Keempat-empat pengkhususan yang ditawarkan ini adalah di bawah pengendalian empat jabatan iaitu Jabatan Sains Komputer, Jabatan Teknologi Komunikasi dan Rangkaian, Jabatan Sistem Maklumat dan Jabatan Multimedia.

Saya berasa bangga kerana UPM dapat pengiktirafan sebagai sebuah institusi yang mementingkan penyelidikan. Pekara ini jelas kerana UPM sekali lagi menerima peruntukan IRPA yang tertinggi jika dibandingkan dengan 32 institusi penyelidikan yang lain termasuk universiti-universiti tempatan.

Pada tahun 1998, UPM telah menjalankan sebanyak 444 projek penyelidikan dan 25 kerja-kerja perundingan dalam tahun 1998. Untuk aktiviti-aktiviti ini sebanyak 86.76% geran penyelidikan IRPA telah dibelanjakan berbanding 84.81% pada tahun sebelumnya. Sebanyak RM 22,633,269 peruntukan penyelidikan IRPA dan RM 2 juta peruntukan untuk 225 projek penyelidikan jangka pendek dari Kementerian Sains, Teknologi dan Alam Sekitar telah diterima dalam tahun 1998.

Tumpuan penyelidikan yang dijalankan di bawah peruntukan IRPA meliputi bidang Argoindustri, Ekonomi, Alam Sekitar, Kesihatan, Kejuruteraan, Perkhidmatan dan Sosial. Sebanyak 20 projek yang

Human Ecology, Bachelors in Environmental and Occupational Health by the Faculty of Health and Medicine and Bachelors in Science (Human Resource Development) by the Faculty of Educational Studies.

The increasing demand for IT and multi-media related technology particularly now that UPM is strategically located in the Multimedia Super Corridor (MSC) has seen efforts directed at science and technology particularly information technology. This move has resulted in the establishment of a new faculty – the Faculty of Computer Science and Information Technology.

UPM plans to offer various programmes in IT especially to meet the challenges of the new millennium. Thus the Faculty of Computer Science & Information Technology has recently introduced the Bachelors in Computer Science degree which allows for specialisation in four areas - computer systems, computer networking, software engineering, and multimedia engineering. These four areas of specialisation are conducted by the Department of Computer Science, Department of Communication Technology & Network, Department of Information Systems and Department of Multimedia.

I take pride in noting that the allocation received for research indicates that once again UPM has been recognised as a major research institute in Malaysia. This year UPM received the highest funding for research through IRPA compared to 32 other research institutes and local universities. UPM's research activities benefited from a total allocation of RM22 633 239 million from IRPA and RM2 million for 225 short term projects from the Ministry of Science, Technology and Environment. In 1998, UPM was involved in 444 research studies and 25 consultancy projects. About 86.76% of the IRPA research grant was expended compared to 84.81% in the previous year.

berpotensi telah dipilih untuk dikomersilkan daripada 73 laporan penyelidikan IRPA yang diterima pada tahun 1998. Manakala seorang pegawai akademik telah dianugerahkan Saintis Muda Negara dan dua lagi pegawai akademik telah dianugerahkan "APEC Post-Doctoral Fellowship in Science and Engineering".

Oleh kerana pertambahan yang pesat dalam pengambilan pelajar dan enrolmen pelajar yang berjumlah 30,902 orang, maka UPM memerlukan tenaga dalam pelbagai peringkat pengurusan untuk mengendalikan pelajar. Untuk tujuan itu, UPM telah memperuntuk 4,414 jawatan. Daripada bilangan ini pada tahun 1998 sebanyak 265 orang telah dilantik yang melibatkan 234 orang dalam jawatan kumpulan pengurusan dan profesional dan 31 orang dalam kumpulan sokongan.

Dalam urusan kenaikan pangkat, seramai 22 pensyarah telah dinaikkan pangkat ke jawatan Profesor Madya dan tujuh ke jawatan Profesor, manakala tiga orang dalam kumpulan sokongan dinaikkan pangkat dalam perkhidmatan yang sama. Seramai 55 kakitangan UPM telah meletak jawatan pada tahun 1998, manakala 73 lagi telah bersara dari perkhidmatan masing-masing.

Aktiviti pembangunan juga perlu bergerak aktif di UPM bagi menyeimbangkannya dengan pertambahan bilangan pelajar di UPM supaya kemudahan-kemudahan yang diperlukan mencukupi bagi melahirkan pelajar-pelajar yang berkualiti. Sehubungan dengan itu, UPM telah menerima peruntukan pembangunan sebanyak RM 35.6 juta daripada kerajaan pada tahun 1998 untuk membiayai projek-projek baru RMK-7 dan meneruskan projek-projek RMK-6. Antara projek-projek yang berjaya disiapkan dalam tahun 1998 ialah pembinaan bangunan Kolej ke-10 dan Kolej Ke-11 yang bernilai RM 37.5 juta, bangunan Asrama Pelajar Atlet yang bernilai RM 4.4 juta yang dibiayai oleh Majlis Sukan Negara (MSN), enam dewan kuliah bernilai RM 1.9 juta dan beberapa projek pembangunan lain.

Projek-projek pembangunan dalam pembinaan pula ialah projek naik taraf sistem bekalan air di kampus Serdang dan mendirikan sebuah kafeteria di kampus cawangan di UPM, Terengganu. Manakala projek-projek baru yang bermula pada tahun 1998 ialah pembinaan Kompleks Kejuruteraan (RM26.2 juta), Bangunan Kompleks Akademik Pusat (RM 10.8 juta), Bangunan Kompleks Sains Sosial (RM 5.1 juta), Bangunan Tambahan Fakulti Ekonomi dan

Under IRPA, the focus of research was on Agro-Industry, Environment, Economics, Health, Engineering, Service and Social sectors. As many as 20 potential projects have been identified for commercialization from the 73 IRPA research reports received in 1998. UPM records with pride that one of our academic staff was conferred the 'Young Scientist Award and two others have been awarded the APEC Post-Doctoral Fellowship in Science and Engineering.

The tremendous increase in student intake has resulted in UPM creating additional posts in various fields to manage this large student population of 30 902 effectively and efficiently. Consequently of the 4 414 posts that have been created in 1998, 265 have already been filled with 234 in the Professional and Management category and 31 in the support services.

A promotion exercise saw 22 lecturers upgraded to Associate Professors, and seven to Professors while three support staff were promoted. A total of 55 staff resigned and another 73 retired from service in 1998.

The rapid increase in student population implies a commensurate infrastructural development to ensure a conducive teaching-learning atmosphere. UPM has therefore been allocated RM35.6 million in development funds by the government to carry out projects under the Seventh Malaysia Plan (RMK-7) and to complete projects initiated under the RMK-6.

Amongst the projects completed in 1998 are the 10th and 11th Residential Colleges entailing RM37.5 million, an Athletes' Hostel costing RM4.4 million which was financed by the National Sports Council (MSN), six Lecture Halls at RM1.9 million and several other projects.

Among the other infrastructure projects undertaken and completed are the upgrading of the water supply system within the Serdang Campus and the construction of a cafeteria at the Terengganu Campus. New projects initiated in 1998 are the

pengurusan (RM 5 juta), Bangunan Fakulti Sains Komputer dan Teknologi Maklumat (RM 3.7 juta), Kompleks Hal Ehwal Pelajar (RM 1.2 juta) dan Stadium (11.8 juta). UPM juga telah membuat pembangunan secara usaha sama dengan syarikat swasta iaitu pembangunan Kompleks Asrama Pelajar yang merangkumi 14 blok asrama lima tingkat yang mampu menempatkan seramai 6,960 pelajar.

Pada 4 Ogos 1998, UPM telah berjaya menerbitkan akhbarnya sendiri. Penerbitan ini bertujuan untuk menyebarkan maklumat terkini mengenai hal-ehwal akademik kepada masyarakat luar dan juga kejayaan yang dicapai oleh UPM terutamanya dalam bidang pendidikan, penyelidikan dan pembangunan. Di samping itu ianya juga bertujuan mendidik dan membentuk minda warga kampus dan luar kampus ke arah matlamat yang selari dengan wawasan negara, dan bagi menempatkan UPM dalam rangkaian siber antarabangsa terutamanya dalam ruangan "*college/ University Newspaper*" dunia.

Buat pertama kalinya, UPM telah menjalankan aktiviti bagi pegawai-pegawai utama dan pegawai dari kumpulan pengurusan dan profesional dalam bidang pentadbiran melalui aktiviti "*Corporate War Games*" yang bertujuan untuk memantapkan semangat bekerja secara berpasukan, kemahiran mengurus krisis, ketahanan mental serta fizikal dan keupayaan kepimpinan pegawai-pegawai UPM sebagai persediaan menghadapi persaingan yang kian mencabar menjelang alaf baru.

UPM amat menyedari hakikat bahawa untuk terus maju dan berkembang, universiti harus bertindak secara proaktif untuk memperkukuh hubungan dengan pelbagai pihak dari dalam dan luar negara dengan mengadakan kerjasama dengan sektor industri, sektor swasta, sektor awam dan universiti-universiti terkemuka dari dalam dan luar negara terutamanya dalam bidang penyelidikan, pendidikan, teknologi dan teknologi maklumat. Untuk tujuan itu, UPM telah menandatangani 45 memorandum persefahaman/perjanjian kerjasama sepanjang tahun 1998. Dalam pada itu, UPM juga telah menerima sebanyak 43 delegasi pelawat dari seluruh dunia yang antara mereka ingin mewujudkan hubungan kerjasama dengan UPM.

Perkembangan teknologi maklumat yang tiada batasnya telah mendorong UPM melaksanakan perubahan-perubahan selaras dengan perkembangan semasa bagi meletakkan UPM sebagai sebuah

Engineering Complex (RM26.2m), Central Academic Complex (RM10.8m), Social Science Complex (RM5.1m), an extension to the Faculty of Computer Science and Information Technology (RM3.7m), the Students' Affairs Complex (RM1.2m), and a Sports Stadium (RM11.8m). In a move to alleviate student accommodation problems, UPM has embarked on a joint venture with a private corporation to build fourteen 5-storey blocks with the capacity to house 6,960 students.

On 4 August 1998, the first issue of the University newspaper, *The Putra Tribun* was published. A major goal of this newspaper is to disseminate current information/news on academic affairs as well as advancements on education and R&D achieved by the University to the general public. Besides, UPM envisages the newspaper to take on the role of helping to create a mindset both within the campus and the community at large towards achieving the vision of the nation. And of course in the international network, *Putra Tribun* has the distinction of being listed in the world list of "*College/University Newspapers*".

Envisaging the new millenium to be one of immense challenges which will require special skills on the part of management, the University for the first time organised a "*Corporate War Games*" exercise for all management and professional category of staff. The *Corporate War Games*, though fun, was designed to inculcate team work ethics, crisis management, mental and physical resilience and development of leadership qualities.

In order to further progress, UPM has taken a proactive stance to strengthen the relationship from within and without by establishing linkages with industry and the private and public sectors, and renown universities in the fields of research, education technology and information technology. Towards this objective, UPM has signed 44 Memorandum of Understanding in 1998. In addition, the University played host to 43 foreign delegations that were keen to undertake collaborative projects with UPM.

universiti yang ulung di rantau ini. Sehubungan dengan itu pada tahun 1998, UPM telah memperkenalkan "kad pintar (smart card)" kepada pelajar-pelajarnya secara berperingkat-peringkat melalui kerjasama dengan BSN Commercial Bank (BSNC).

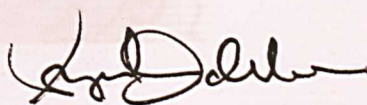
Penggunaan kad pintar ini meliputi pelbagai aspek. Antaranya ialah sebagai kad pengenalan pelajar, kad perpustakaan dan kad bank. Kad pintar ini apabila dibangunkan sepenuhnya akan mengandungi maklumat lengkap mengenai akademik pelajar seperti butir-butir peperiksaan, pendaftaran kursus dan konvokesyen.

UPM telah mengambil tindakan sewajarnya dalam menyelesaikan masalah pepijat alaf (Y2K). Kerja-kerja naik taraf komputer kerangka utama terutamanya sistem maklumat pelajar, sistem gaji, sistem komputer perpustakaan sedang dijalankan dan dalam peringkat akhir pengujian. Masalah ini dijangka dapat diselesaikan sepenuhnya sebelum 31 Oktober 1999.

Sebelum saya mengakhiri laporan ini, saya juga ingin memaklumkan tentang perkembangan Taman Penyelidikan Universiti (TPU) yang kini mempunyai dua pusat teknologi/inkubator. Bilangan syarikat-syarikat baru (start-up company) telah pun meningkat dan kebanyakan syarikat yang bertapak telah pun mendapat status MSC. Namun demikian, kedudukan TPU sebagai "cybercity" tidak dapat diputuskan oleh pihak-pihak tertentu. Saya berharap isu ini akan dapat penjelasan segera dari pihak-pihak tertentu supaya syarikat-syarikat yang beroperasi di TPU tidak menghadapi kesulitan.

Akhir sekali saya mengucapkan terima kasih kepada semua pihak yang telah berusaha membantu UPM bergerak menuju ke arah kemajuan yang diharapkan selaras dengan misi universiti untuk menjadi sebuah universiti yang ulung di rantau ini dalam aspek pendidikan, penyelidikan dan pembangunan.

Sekian terima kasih.



Prof. Tan Sri Dato' Dr. Syed Jalaludin bin Syed Salim
F.A. Sc., D.S.S.A., D.P.M.P., J.S.M., P.S.M.,
B. Vet. Sc. A.H. (Punjab), M. Phil, Ph. D. (London).

Unprecedented developments in IT have led to UPM introducing changes in line with rapidly evolving technology. In 1998, in collaboration with Bank Simpanan National Commercial Bank (BSNC), the 'Smart Card' for students was implemented and its usage will be extended in stages. This card has several uses. It is an identification as well as a Library and Bank card. When fully developed, this Card will contain complete information on the student — all academic details such as examination details, course registration and date of convocation.

Several measures have been instituted to be Y2K compliant. Main-frame computers particularly relating to students data, salary system, and library records have been tested several times and are in the final testing stage. We expect to be Y2K ready by October 1999.

I would like to draw attention to the setting up of UPM-MTDC and the development of the University Research Centre (TPU). The number of incubator companies has increased and many have attained MSC status. However, the status of TPU as a cybercity has not been formalised by the authorities concerned. I earnestly hope this matter is resolved immediately so as not to create problems for the companies operating in TPU.

Finally, I wish to thank all parties who have assisted UPM to stride forward confidently on the path of its mission to be the foremost university in the region in education, research and development.

Thank you.



■ SISWAZAH

Pada tahun 1998 seramai 3487 pelajar telah bergraduasi dan dianugerahkan ijazah atau diploma masing-masing. Pecahan bilangan siswazah mengikut peringkat pengajian adalah seperti di Jadual 1.

Bilangan Siswazah mengikut Peringkat Pengajaran Number of Graduates by Level of Study		
	1997	1998
Doktor Falsafah <i>Ph.D</i>	22	17
Sarjana <i>Masters</i>	188	414
Ijazah Pertama <i>Bachelors</i>	2355	2698
Diploma <i>Diploma</i>	348	358
Jumlah/Total	2359	3487

Jadual 1 ■ Table 1

Bilangan pelajar yang lulus adalah seperti di Jadual 2. Pengeluaran siswazah ijazah pertama UPM meningkat 15% daripada sebelumnya, manakala siswazah ijazah tinggi meningkat sebanyak 105% dan siswazah diploma pula meningkat sebanyak 3% berbanding tahun 1997.

■ Pengambilan Pelajar

Pada sesi 1998, Universiti Putra Malaysia telah mengambil seramai 11,872 pelajar dengan pecahan 10,723 bagi Kampus Serdang dan 1,149 bagi Kampus Terengganu (UPMT). Pecahan jumlah pengambilan pelajar adalah seperti di Jadual 3

■ GRADUATES

For the 1998/1999 academic session, a total of 3 487 students graduated and were conferred degrees or diplomas. The breakdown of graduates by level of study is shown in Table 1.

The breakdown of graduates according to various study programmes is as shown in Table 2. Compared to the previous years, the number of first degree graduates of UPM increased by 15% while the number of Diploma graduates increased by 3% for the same period. However, the number who graduated with postgraduate degrees saw a 105% increase.

■ Student Intake

For the 1998/1999 academic session, a total of 13 391 students registered for various study programmes (Table 3).

In all, the student intake in UPM increased by some 9.47% compared to the previous year. According to figures, the increase is particularly obvious in the postgraduate programmes which show an increase of 53.3%, while the Degree programme registered a 2.6% increase. There was a 39.6% increase at Diploma level while the Matriculation programme figures are constant.

Pengambilan Pelajar mengikut Program Student Intake by Programme		
	1997	1998
Doktor Falsafah <i>Ph.D</i>	158	138
Sarjana <i>Masters</i>	833	1381
Ijazah Pertama <i>Bachelors</i>	8593	8820
Diploma <i>Diploma</i>	1017	1420
Matrikulasi <i>Matriculation</i>	1632	1632
Jumlah/Total	12,233	13,391

Jadual 3 ■ Table 3

Bilangan Pelajar yang Lulus (mengikut Program)
The Number of Graduates who Convocated (by Programme)

Program Siswazah Postgraduate Programmes	1998
Doktor Falsafah <i>Ph.D</i>	17
Master Sains <i>Master of Science</i>	211
Master Sains Pentadbiran <i>Master of Administration Science</i>	9
Master Pentadbiran Perniagaan <i>Master of Business Administration</i>	121
Master Perubatan Veterinar <i>Master of Veterinary Medicine</i>	4
Master Pengurusan <i>Master of Management</i>	39
Master Sastera <i>Master of Arts</i>	8
Master Alam Sekitar <i>Master of Environment</i>	17
Master Ekonomi <i>Master of Economics</i>	5
Jumlah Kecil Sub-Total	431
Program Bacelor Bachelors Programmes	
Bacelor Sains (Pembangunan Manusia) <i>Bachelor of Science (Human Development)</i>	146
Doktor Perubatan Veterinar <i>Bachelor of Veterinary Medicine</i>	53
Bacelor Sains Perhutanan <i>Bachelor of Forestry Science</i>	91
Bacelor Sains (Alam Sekitar) <i>Bachelor of Science (Environment)</i>	131
Bacelor Sains Komputer <i>Bachelor of Computer Science</i>	377
Bacelor Pendidikan (Bimbingan dan Kaunseling) <i>Bachelor of Education (Guidance & Counselling)</i>	100
Bacelor Pendidikan (TESL) <i>Bachelor of Education (TESL)</i>	116
Bacelor Pendidikan (Sains Pertanian) <i>Bachelor of Education (Agricultural Science)</i>	43
Bacelor Sains Hortikultur <i>Bachelor of Horticultural Science</i>	80
Bacelor Sains Pertanian <i>Bachelor of Agricultural Science</i>	84
Bacelor Perakaunan <i>Bachelor of Accountancy</i>	103
Bacelor Sains (Ekonomi Sumber) <i>Bachelor of Science (Resource Economics)</i>	140
Bacelor Sains (Perniagaan Tani) <i>Bachelor of Science (Agribusiness)</i>	143
Bacelor Kejuruteraan (Awam) <i>Bachelor of Engineering (Civil)</i>	39
Bacelor Kejuruteraan (Elektronik/Komputer) <i>Bachelor of Engineering (Electronic/Computer)</i>	37
Bacelor Kejuruteraan (Mekanikal/Sistem) <i>Bachelor of Engineering (Mechanical/System)</i>	45
Bacelor Kejuruteraan (Pertanian) <i>Bachelor of Engineering (Agriculture)</i>	51
Bacelor Pendidikan (Pendidikan Jasmani) <i>Bachelor of Education (Physical Education)</i>	80
Bacelor Pendidikan (PBMP) <i>Bachelor of Education (PBMP)</i>	315
Bacelor Pendidikan (Sains Rumah Tangga) <i>Bachelor of Education (Home Science)</i>	30
Bacelor Sains Perikanan <i>Bachelor of Fishery Science</i>	42
Bacelor Sains (Sains Samudera) <i>Bachelor of Science (Marine Science)</i>	22
Bacelor Sains (Bioteknologi) <i>Bachelor of Science (Biotechnology)</i>	42
Bacelor Sains dan Teknologi Makanan <i>Bachelor of Science and Food Technology</i>	55
Bacelor Sains (Kepujian) <i>Bachelor of Science (Honours)</i>	718
Bacelor Sains Dengan Pendidikan (Kepujian) <i>Bachelor of Science & Education (Honours)</i>	193
Bacelor Pentadbiran Perniagaan <i>Bachelor of Business Administration</i>	15
Bacelor Sains (Sains Bioperubatan) <i>Bachelor of Science (Biomedical Science)</i>	26
Bacelor Sains (Pemakanan dan Kesihatan Komuniti) <i>Bachelor of Science (Nutrition & Community Health)</i>	31
Bacelor Sastera <i>Bachelor of Arts</i>	341
Jumlah Kecil Sub-Total	2698
Program Diploma Diploma Programmes	
Diploma Pembangunan Manusia <i>Diploma in Human Development</i>	40
Diploma Kesihatan Haiwan dan Penternakan <i>Diploma in Animal Health & Husbandry</i>	37
Diploma Perhutanan <i>Diploma in Forestry</i>	39
Diploma Perikanan <i>Diploma in Fisheries</i>	43
Diploma Sains Komputer <i>Diploma in Computer Science</i>	99
Diploma Kejuruteraan Pertanian <i>Diploma in Engineering</i>	54
Diploma Perniagaan Tani <i>Diploma in Agribusiness</i>	40
Diploma Pertanian <i>Diploma in Agriculture</i>	56
Jumlah Kecil Sub-Total	358
JUMLAH BESAR GRAND TOTAL	3487

Jadual 2 • Table 2



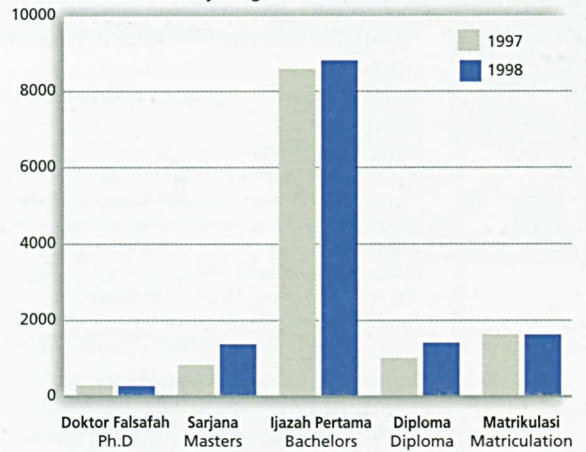
Secara keseluruhan, pertambahan dalam pengambilan pelajar ialah sebanyak 9.47% berbanding tahun sebelumnya. Mengikut pecahan, program ijazah tinggi menunjukkan pertambahan sebanyak 53.3%, ijazah pertama meningkat sebanyak 2.6%, Diploma meningkat sebanyak 39.6% dan program matrikulasi tidak mengalami peningkatan dalam pengambilan pelajar.

Enrolmen Pelajar

Pada tahun 1998, UPM mempunyai bilangan pelajar seramai 30,902 orang iaitu secara keseluruhannya meningkat sebanyak 25.6% berbanding tahun sebelumnya. Program Doktor Falsafah meningkat sebanyak 13.6%, manakala program Sarjana pula meningkat sebanyak 37%. Program Ijazah pertama menunjukkan peningkatan sebanyak 24.4%, Diploma meningkat 37.4% dan program Matrikulasi meningkat 14.7% berbanding tahun 1997.

Pengambilan Pelajar Mengikut Program
Student Intake by Programme

Rajah 1 Chart 1



Student Enrolment

For the year 1998, the student population stood at 30 902 which represents a 25.6% increase over the previous year. Ph.D students increased by 13.6%, while those pursuing their masters increased by 37%, Bachelor's by 24.4%, Diploma by 37.4% while the Matriculation Studies population increased by 14.7% compared to the 1997 figure.

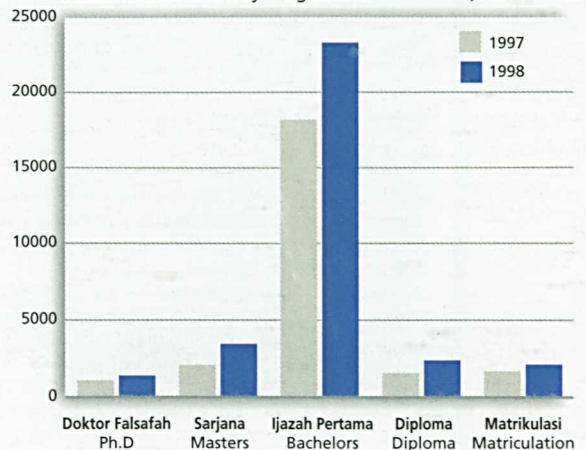
Enrolmen Pelajar mengikut Program
Student Enrolment by Programme

	1997	1998
Doktor Falsafah Ph.D	484	550
Sarjana Masters	2272	3112
Ijazah Pertama Bachelors	18,409	22,909
Diploma Diploma	1735	2385
Matrikulasi Matriculation	1696	1946
Jumlah/Total	24,596	30,902

Jadual 4 Table 4

Enrolmen Pelajar mengikut Program
Students Enrolment by Programme

Rajah 2 Chart 2



■ PUSAT PENGAJIAN SISWAZAH SISWAZAH

Pengalaman UPM dalam pengajian siswazah selama 20 tahun telah berjaya mengeluarkan ramai graduan Master dan Doktor Falsafah dalam pelbagai bidang sains dan teknologi serta sains sosial. UPM juga berjaya menarik minat pelajar-pelajar dari 44 buah negara untuk mengikuti program pengajian siswazah di sini. Setakat bulan Disember 1998, enrolmen pelajar siswazah ialah seramai 3662 orang. Daripada jumlah tersebut, seramai 525 orang adalah pelajar luar negara (Jadual 5).

Bilangan Pelajar Tempatan & Luar Negara <i>Number of Local & Foreign Students</i>		
	1997	1998
Pelajar Dalam Negeri <i>Local Students</i>	2240	3137
Pelajar Luar Negara <i>Foreign Students</i>	516	525
Jumlah/Total	2756	3662

Jadual 5 ■ Table 5

Dalam usaha untuk memperkenalkan program pengajian siswazah UPM di luar negara, Pusat Pengajian Siswazah telah menyertai beberapa pameran pendidikan yang dianjurkan oleh Kementerian Pendidikan Malaysia dan juga organisasi luar. Pada tahun 1998, Pusat Pengajian Siswazah telah menyertai Pameran Pendidikan Malaysia yang telah diadakan di Bandar Seri Begawan, Negara Brunei Darussalam, Jakarta, Bandung dan Medan, Indonesia dan di Shanghai, China. Di samping itu, Pusat ini juga turut menyertai Pameran Pendidikan Pasca Sarjana yang telah dianjurkan oleh kerajaan Indonesia.

Pada akhir sesi 1998 seramai 488 pelajar siswazah telah bergraduasi (Jadual 6).

Pecahan Bilangan Siswazah mengikut Peringkat Pengajian <i>Graduate Breakdown by Courses</i>	
Program	Bilangan
Doktor Falsafah (Ph.D) <i>Ph.D</i>	25
Master Sains <i>Master of Science</i>	233
Master Ekonomi <i>Master of Economics</i>	8
Master Sains Pertanian <i>Master of Agricultural Science</i>	9
Master Sastera <i>Master of Arts</i>	8
Master Alam Sekitar <i>Master of Environment</i>	18
Master Pengurusan <i>Master of Management</i>	39
Master Perubatan Veterinar <i>Master of Veterinary Medicine</i>	4
Master Pentadbiran Perniagaan <i>Master of Business Administration</i>	120

Jadual 6 ■ Table 6

■ GRADUATE STUDIES

The Graduate Studies Programme has been successfully conducting Masters and Ph.D programmes in the fields of Science, Technology and Social Science for the past twenty years. Its graduate student population is drawn from 44 countries. Currently up to December 1998, the graduate enrolment totalled 3662. Of this total, 525 are foreign students (Table 5).



In order to promote the graduate studies programme to foreigners, the Centre for Graduate Studies has participated in various educational fairs sponsored by the Ministry of Education and other foreign organisations. In 1998, it participated in the Malaysian Educational Exhibition in Bandar Seri Begawan, Brunei Darussalam, Jakarta, Bandung and Medan in Indonesia and Shanghai, China. Besides, the Centre also took part in the Postgraduate Education Exhibition sponsored by the Indonesian government.

The 1997/1998 session saw 488 graduate students convocating (Table 6).

■ PENDIDIKAN JARAK JAUH (IDEAL)

Program pendidikan jarak jauh (PJJ) UPM dikendalikan dan diselaraskan oleh Institut Pendidikan dan Pembelajaran Jarak Jauh/Institute for Distance Education and Learning (IDEAL). Misi IDEAL ialah untuk mendemokrasikan pendidikan dengan memastikan peluang kemasukan yang sama dan berjaya dalam pendidikan tinggi dan pembelajaran sepanjang hayat.

Pada tahun 1998, IDEAL telah menawarkan enam program pengajian. Bachelor Komunikasi merupakan program baru.

- Bachelor Pendidikan (PBMP)
- Bachelor Pendidikan (B&K)
- Bachelor Pendidikan (TESL)
- Bachelor Sains Komputer
- Bachelor Komunikasi
- Master Sains (Pembangunan Sumber Manusia) (M.S.(HRD))

Pada tahun 1998 seramai 1785 pelajar telah diambil menjadikan jumlah pelajar PJJ seramai 5087 pelajar (Jadual 7).

Pecahan Bilangan Pelajar Mengikut Program Breakdown Number of Students by Programme					
	1995/96	1996/97	1997/98	1998/99	JUMLAH
Bac. Pend. (B&K) Bac. of Education (B&K)	0	431	636	246	1313
Bac. Pend. (PBMP) Bac. of Education (PBMP)	0	456	660	564	1680
Bac. Pend. (TESL) Bac. of Education (TESL)	0	277	450	385	1112
Bac. Sains Komputer Bac. of Computer Science	25	190	0	135	350
Bac. Komunikasi Bac. of Communication	0	0	0	384	384
M.S HRD M.S HRD	12	96	69	71	248
Jumlah/Total	37	1450	1815	1785	5087

Jadual 7 ■ Table 7

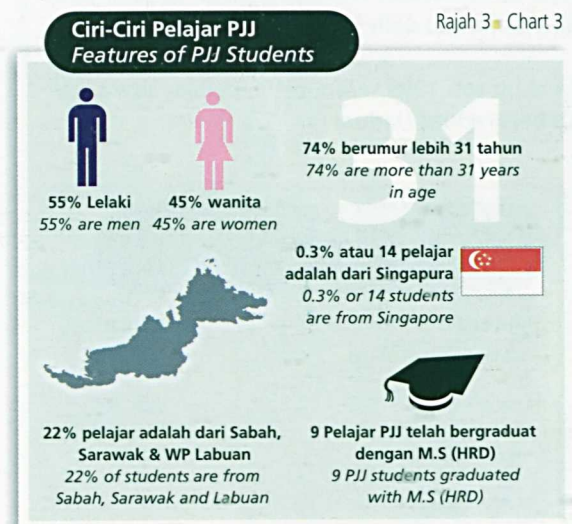
■ INSTITUTE FOR DISTANCE EDUCATION AND LEARNING (IDEAL)

The Distance Learning Programme (PJJ) in UPM is coordinated by IDEAL. It aims to avail quality and continuous education to all citizens especially those who are employed and who had missed out on tertiary education opportunities earlier in life.

In 1998 IDEAL offered six study programmes with the most current being the Bachelor of Communication:

- Bachelor of Education (PBMP)
- Bachelor of Education (B&K)
- Bachelor of Education (TESL)
- Bachelor of Computer Science
- Bachelor of Communication
- Master of Science (Human Resource Development)

In 1998, 1 785 students enrolled bringing the total number of students in the distance learning programmes to 5 087.



■ Pengajaran dan Pembelajaran PJJ

Kaedah pengajaran dan pembelajaran PJJ adalah berteraskan pembelajaran fleksibel melalui modul belajar sendiri (self-instructed modules). Modul tersebut yang ditulis oleh pensyarah-pensyarah UPM bagi setiap kursus disediakan dalam bentuk cetak dan diedarkan kepada semua pelajar. Pada tahun 1998 sebanyak 62 modul telah disediakan bagi kesemua program pengajian. Pada tahun 1998 seramai 206 tutor telah dilantik di seluruh negara.

Bagi memastikan keberkesanan pembelajaran sendiri, beberapa bentuk sokongan untuk pelajar PJJ disediakan termasuklah kuliah bersemuka, sesi tutorial dan penyediaan bahan rujukan

Sehingga tahun 1998, IDEAL telah menyediakan sebanyak 39 pusat-pusat pembelajaran di bandar-bandar strategik di seluruh negara termasuk di Malaysia Timur (Kuching dan Bintulu di Sarawak dan Kota Kinabalu dan Tawau di Sabah) dengan kerjasama Yayasan Pelajaran MARA (YPM), CELCOM dan beberapa syarikat swasta. Pusat pembelajaran dilengkapi dengan kemudahan bilik tutorial dan perbincangan, bilik peperiksaan, pusat sumber, kemudahan perhubungan, alat mengajar dan sebagainya.

■ Promosi Program PJJ

Promosi program PJJ UPM telah dijalankan oleh IDEAL di dalam dan di luar negara. Aktiviti promosi dan penerangan telah ditujukan kepada guru-guru, tentera, dan pegawai kerajaan dan swasta di maktab perguruan, pusat pembelajaran, sekolah, pusat latihan tentera dan sebagainya. Promosi melalui radio terutamanya di Sabah dan Sarawak juga telah diadakan. Di samping itu, promosi luar negara juga telah diadakan iaitu kepada Persatuan Guru-guru Bahasa Melayu, Singapura, staf Prince of Songkhla University, Patani, Thailand, Universiti Bogor, Universiti Brunei, dan Universiti Singapura.



■ Teaching and Learning Approach

The teaching and learning approach is based on flexible self-instructional modules. These self-instructional modules are written by UPM lecturers and are bound and distributed to all PJJ students. In 1998, 62 modules were published and distributed and 206 tutors were employed to assist students under this programme.

For a more effective self-learning process, various support services are provided to these students. These include face-to-face sessions with lecturers, tutorials and preparation of reference materials.

As of 1998, IDEAL had established 39 centres at strategic locations throughout the nation including East Malaysia (Kuching & Bintulu in Sarawak and Kota Kinabalu & Tawau in Sabah) in collaboration with MARA Educational Foundation (YPM), CELCOM and several other private corporations. These centres are equipped with lecture and conference halls, examination halls, resource rooms, and communication and teaching aids.

■ PJJ Promotional Activities

IDEAL has undertaken extensive campaigns both locally and overseas to promote its distance learning programmes. These promotions are targeted at the teachers, military personnel, government staff, private teacher training colleges, educational centres, schools and military training centres. PJJ Programmes have also been aired in Sabah and Sarawak. Overseas promotional activities have largely been carried out through the Bahasa Malaysia Teachers' Association of Singapore, staff of Prince Songkhla University, Patani, Thailand, University Bogor, Brunei University and Singapore University.

Bahagian Hal Ehwal Pelajar terus melaksanakan fungsi sebagai pelengkap kepada kecemerlangan akademik pelajar. Aktiviti-aktiviti kokurikulum, kebajikan dan perkhidmatan terus dilaksanakan terhadap pelajar demi kestabilan kehidupan jasmani dan rohani mereka di samping kemudahan untuk pembinaan sahsiah diri.

Dua peristiwa penting yang berlaku pada tahun ini ialah pewujudan:

- Akaun Amanah Kokurikulum
Melalui akaun ini pelajar perlu menabung sebanyak RM50.00 satu sesi (RM25.00 satu semester). Wang dari akaun ini akan digunakan untuk mempertingkatkan kebajikan pelajar.
- Anugerah Naib Canselor
Anugerah ini diberi kepada pelajar yang aktif dan cemerlang dalam bidang kokurikulum dan akademik berdasarkan kriteria yang telah ditetapkan.

■ Pembangunan Pelajar

Aktiviti kokurikulum, tatatertib pelajar dan penyampaian maklumat atau berita-berita berkaitan dengan pelajar UPM disalurkan terus melalui Unit Pembangunan Pelajar. Unit ini bertanggungjawab memproses segala permohonan daripada 66 persatuan, kelab dan kumpulan pelajar bagi mengadakan kegiatan-kegiatan atau projek, menyelaraskan pilihan raya pelajar untuk Majlis Perwakilan Pelajar, aktiviti pakaian seragam, minggu suai kenal dan sebagainya.

Pelbagai aktiviti kokurikulum telah dijalankan bagi membentuk tahap kepimpinan pelajar seperti perkhemahan, seminar, perdebatan, forum, lawatan pembelajaran, aktiviti kebudayaan, sukan dan sebagainya. Pelbagai prasarana kokurikulum telah disediakan oleh pihak UPM dalam membantu pelajar mencapai matlamat pendidikan negara di samping memberi peluang kepada pelajar mencurahkan dan mengasah bakat-bakat yang dimiliki mengikut landasan yang sewajarnya. Aktiviti dan jumlahnya boleh dilihat di Jadual 8.

The Student Affairs Division continues to provide the vital support activities that go towards moulding a balanced personality in students. The blend of co-curriculum, social and welfare activities is specifically aimed at developing emotional and physical stability towards personal maturity and development.

Two important events this year were:

- Establishment of the Co-Curriculum Trust Fund
Students are to contribute RM50.00 for each session (or RM25.00 per semester) towards this Trust Fund which will be utilised to improve the facilities/welfare of the students.
- Vice-Chancellor's Award
An award that will be granted to an outstanding student who excels in both the co-curricular & academic fields, based on stated criteria.

■ Student Development

Co-curricular activities, student discipline and dissemination of all student-related information in UPM is channelled through the Students Development Unit. This Unit is responsible for processing all applications from the 66 associations clubs and students' unions and for conducting these activities and projects and to supervise the elections of office bearers to the Students' Representative Council, activities of uniformed societies, orientation week and other related activities.

The various co-curricular activities largely aimed at developing leadership qualities include camping, seminars, debates, forums, study tours, cultural



Aktiviti-Aktiviti yang Dijalankan Sepanjang Sesi 1998/99
Activities Carried out in the 1998/1999 Session

Aktiviti Activities	Jumlah Aktiviti No of Activities
Seminar/Bengkel Seminar/Workshop	55
Rekreasi Recreation	65
Pameran/Promosi Exhibitions/Promotions	25
Lawatan Sambil Belajar Study Tours	35
Motivasi Motivation	35
Jamuan/Keraian Entertainment	22
Kepimpinan Leadership	40
Kerohanian Spiritual	23
Khidmat Masyarakat Community Service	30
Sukan Sports	40
Jumlah Total	360

Jadual 8 ■ Table 8

■ **Biasiswa**

Sepanjang tahun 1998, 23,180 pelajar telah memperoleh bantuan kewangan dalam bentuk biasiswa dan pinjaman. Daripada bilangan tersebut, seramai 1,315 menerima biasiswa dan 21,865 mendapat pinjaman (Jadual 9).

■ **Aktiviti Sukan**

Aktiviti sukan merupakan kegiatan paling menonjol pada tahun 1998. Dalam Kejohanan Sukan Komanwel, beberapa pelajar UPM di bawah Program Majlis Sukan Negara telah mewakili Malaysia. Teoh Boon Lim telah menyertai Kejohanan 20 km jalan kaki, menembak sport pistol diwakili oleh Bibiana Ng Pei Chin dan bola jaring diwakili oleh Pua Pei Ling, Kuah Seow Peng, Seow Li Yong dan Wan Norafizan Wan Mahadi.

Bilangan Pelajar yang Mendapat Kemudahan Tabung Kebajikan bagi Sesi 1998/99
Number of Students who Received Welfare Funds for 1998/99 session

Tabung Funds	Bilangan Pelajar yang diberi Bantuan
Tabung Majlis Raja-Raja & Yang Dipertuan Negeri (RM500.00 seorang/per person)	20
Dermaiswa Bakti Bakti Grant (Menabung Yuran Pengajian/ Tuition Fees)	172
Yayasan Lee Lee Foundation (RM500.00 seorang/per person)	10
Tabung Pusingan Kerajaan Negeri State Revolving Fund (Pinjaman RM400.00 seorang/loan of RM400 per person)	667

Jadual 10 ■ Table 10

performances and sports. UPM has more than sufficient co-curricular infrastructure to assist students explore their potential and in so doing achieve the avowed national educational aspiration as well develop their latent skills and potentials.

The Activities of the students are reflected in Table 8

■ **Scholarships and Loans**

For the year 1998, 23 180 students have received financial assistance either in the form of scholarships or loans. Of this total 1 315 received scholarships whilst 21 865 were study loan recipients.

Bilangan Pelajar Mengikut Pinjaman Tajaan Biasiswa/Pinjaman Sesi 1998/99
Scholarship/Loans Received by Sponsoring Body

Penaja Sponsors	Biasiswa Scholarship	Pinjaman Loans	Jumlah Total
JPA	692	7,597	8,289
KPM	505	1,236	1,741
MARA		3,745	3,745
PTPTN		4,702	4,702
Kerajaan Negeri Sarawak		218	345
Yayasan Sarawak		345	145
Kerajaan Negeri Sabah		227	227
Yayasan Sabah		353	353
Kerajaan Negeri Kedah		364	364
Yayasan Kelantan		126	126
Yayasan Melaka		120	120
Yayasan Pahang		354	354
Kerajaan Negeri Perak		346	346
Negeri Perlis		3	3
Negeri Pulau Pinang		227	227
Yayasan Perak		238	238
Kerajaan Negeri Selangor		381	381
Yayasan Trengganu		368	368
Sime Darby		22	22
Kuok Foundation		14	14
Tenaga Nasional Bhd. (TNB)		14	14
Bank Bumiputera		3	3
Yayasan TAR (Sarawak)		212	212
Kwong Lee Bank		6	6
Fajar Bakti		4	4
The New Straits Times		6	6
Yayasan Negeri Sembilan		214	214
Yayasan Selangor		242	242
Yayasan TAR (KL)		19	19
Majlis Raja-Raja Melayu	3		3
Hong Leong Mgmt. Co. Sdn. Bhd		5	5
Petronas		136	136
Golden Hope Plantations	15		15
Telekom	12		12
Sony	8		8
Ericsson	9		9
Majlis Sukan Negeri Perak	6		6
Majlis Sukan Negeri Selangor	8		8
KFC Holding (M) Bhd.	3		3
Tan Sri Lee Loy Seng	25		25
MCEF		32	32
Balai Ikhtisas	12		12
Malaysian Sheet Glass	14		14
Sarawak Shell Bhd.	3		3
Tiada Penaja (Diploma)		537	
Tiada Penaja (Bacelor)		133	
Jumlah/Total	1315	22525	23840

Jadual 9 ■ Table 9

Acara sukan yang lain ialah Sukan Kolej Kediaman, Sukan Antara Universiti, Majlis Anugerah Sukan UPM Kali ke-18, penyertaan Kelab Sukan Pelajar di kejohanan jemputan serta sebagai penganjur beberapa kejohanan di UPM.

■ Aktiviti Kebudayaan

Unit Kebudayaan telah mengadakan serta menyelaras pelbagai aktiviti kebudayaan dan kesenian. Dianggarkan lebih 2,500 pelajar terlibat secara langsung dengan program-program yang dianjurkan. Unit kebudayaan juga menyediakan pelbagai kemudahan seperti pinjaman, latihan dan khidmat nasihat.

Antara aktiviti kebudayaan sepanjang 1998 ialah

- Pekan Teater 1998 Peringkat Negeri Selangor
- Teater Amal 'Kerusi'
- Program Rakan Seni Bengkel Seni Teater antara IPT
- Persembahan Akustik pada Majlis Makan Malam Persatuan Biokimia dan Biologi Molekul Malaysia
- Malam Asperasi Caklempong UPM '98.
- Persembahan Rebana Ubi Sempena Lawatan Sultan Selangor ke UPM
- Pertandingan Dikir Barat antara IPTA
- Pertandingan Fiesta Nasyid Kontemporari Remaja '98
- Bengkel Teknologi Maklumat
- Kem Bina Insan
- Diskusi Ilmu
- Konsert Perdana - *Di Kala Hati Bercahaya*
- Persembahan Kompang di Majlis Perasmian Stesen Minyak Mobil di Bangi
- Persembahan Tarian Kesenian Rakyat (kontrak enam bulan sepanjang 1998) di Restoran Nelayan Bangi
- Persembahan Tarian di Malaysia Fest
- Penubuhan Kelab Pantun
- Menyertai Kejohanan Silat peringkat IPT, kebangsaan dan antarabangsa.



■ Sports Activities

There was a surge in sports activities in 1998. A number of UPM students took part in the Commonwealth Games under the aegis of the National Sports Council's Programme. Teoh Boon Lim participated in the 20km walk, Ng Pei Chin in the Pistol Shooting event and Puan Pei Ling, Kuah Seow Peng, Seow Li Yong and Wan Norafizan Wan Mahadi represented Malaysia in netball.

Other major sporting events in the year were the Inter-College Games, Inter-University Games, the 18th UPM Sports Awards, and the participation of UPM Sports Club in invitational events. UPM played host to several sporting events as well.

■ Cultural Activities

The Cultural Unit organises and coordinates various cultural and arts-related events. It is estimated that as many as 2 500 students were directly involved in many of these activities. This unit also provides loans, training and serves as an advisory centre for cultural activities.

Among the cultural activities organised in 1998 include the following:

- *Pekan Teater* (State level)
- *Teater Amal 'Kerusi'*
- Friendship Programme – Arts Workshop/Arts Theatre among IHLs in Malaysia
- Acoustic Performance at the Annual Dinner of the Malaysian Association of Biochemical & Molecular Biology
- *Malam Aspirasi Caklempong UPM '98*
- *Rebana Ubi* Performance in conjunction with DYMM Sultan Selangor's visit to UPM
- *'Dikir Barat'* Competition among IHLs
- Contemporary Junior *'Nasyid'* Fest & Carnival '98
- Information Technology Workshop
- Camp *'Bina Insan'*
- Discussion on Knowledge
- Premier Concert – *'Di Kala Hati Bercahaya'*
- *Kompang* Performance at the Official Opening of the Mobil Station at Bangi.
- Traditional Village Dance Performance at Nelayan Restaurant, Bangi (on a six-month contract basis)
- Dance performance at *Malaysia Fest*
- Initiation of the Poetry Reading Club
- Participation at National & International IHL *Silat* Competition

■ Kaunseling dan Kerjaya

Lima aktiviti kaunseling dan kerjaya telah dijalankan sepanjang tahun 1998. Aktiviti-aktiviti tersebut ialah:

- Kaunseling kelompok
- Pembimbing Rakan Siswa
- Aktiviti Kerjaya
- Aktiviti Keusahawanan, dan
- Temuduga dalam kampus

Di bawah aktiviti keusahawanan, sebanyak 12 aktiviti telah dijalankan bagi meningkatkan kemahiran keusahawanan di kalangan pelajar. Manakala melalui temuduga dalam kampus, sebanyak 78 syarikat telah mengadakan temuduga pelajar.

■ Kesihatan

Seramai 62,906 pelajar telah mendapatkan rawatan dari Pusat Kesihatan Pelajar (PKP) sepanjang tahun 1998 iaitu kenaikan sebanyak 6.54% berbanding tahun sebelumnya. Ini menunjukkan kesedaran di kalangan pelajar tentang kepentingan menjaga kesihatan.



■ Palapes

Palapes UPM menjurus pelajar terhadap latihan ketenteraan, memupuk disiplin dan kepimpinan serta membentuk personaliti intelektual yang mempunyai ketahanan mental dan fizikal yang tinggi. Slogan SENTIASA DI HADAPAN merupakan teras kepada Palapes UPM untuk berjaya sebagai pelajar institusi ini dengan berbekalkan ilmu dan ketahanan fizikal.

Sepanjang tahun 1998, lima aktiviti telah dilaksanakan dengan jayanya oleh Palapes UPM. Aktiviti-aktiviti tersebut ialah:

- Pentauliahn Palapes ke-17 di ITM Shah Alam
- Lawatan Panglima Pemerintahan Latihan Tentera Darat
- Pertandingan Merempuh Halangan Rakan Muda IPT
- Kem Tahunan
- Serah Terima Jawatan Timbalan Komandan



■ Career & Counselling

Five major career & counselling activities were carried out in 1998:

- Group Counselling
- Student Guidance
- Career Guidance
- Entrepreneurship Related Activities
- Interviews on Campus

Through entrepreneurship related activities, 12 projects have been undertaken, directed at enhancing business acumen among students. Under the 'interview in campus campaign', 78 companies carried out on campus student interviews for job placement.



■ Health

A total of 62 906 students were given treatment at the Students' Health Centre (PKP) in 1998, an increase of 6.54% compared to the previous years. This figure reflect students' awareness of the importance of looking after their health.

■ The Reserve Officers Training Unit (ROTU)

ROTU activities are directed towards military training, inculcation of discipline and leadership qualities as well as developing a personality with high physical and mental endurance levels. The slogan 'Ever Forward' serves to underscore the need for ROTU officers to succeed given their tertiary and physical endurance training.

In 1998, five major activities were successfully undertaken by ROTU.

- 17th Commissioning Parade at ITM, Shah Alam
- Army Chief of Staff's visit to UPM
- IPT Junior Obstacle Course
- Annual Camp
- Deputy Commandant's Handing-Over Ceremony

■ Kolej Kediaman

Kolej adalah institusi sejagat, pelengkap kepada tradisi budaya ilmu bagi mencipta kecemerlangan melalui pengintegrasian pendidikan formal dan tidak formal. Kolej juga membantu melahirkan graduan yang serba boleh dan cemerlang melalui suasana dan persekitaran yang kondusif. Melalui aktiviti-aktiviti yang dijalankan dapat mengasah bakat, menyerlahkan potensi keintelektualan dan kepimpinan di samping menanam nilai-nilai murni. Objektifnya antara lain ialah untuk:

- Menyediakan perkhidmatan dan kemudahan penginapan
- Memantau kualiti dan perkhidmatan bekalan makanan yang disediakan
- Menyediakan kemudahan asas pembelajaran dan pelengkap aktiviti kokurikulum
- Menyediakan kemudahan persekitaran yang selamat
- Pelengkap kepada aktiviti kokurikulum

Sepanjang tahun 1998, pelbagai aktiviti telah dijayakan oleh semua kolej kediaman UPM bagi menyemai sifat setiakawan serta tanggungjawab di kalangan pelajar. Antara aktiviti yang telah dilaksanakan ialah :

- Kursus Fasilitator
- Kursus Kepimpinan
- Acara Sempena Minggu Konvo
- Aktiviti gotong royong
- Program Motivasi
- Seminar Kecemerlangan
- Minggu Bahasa
- Kempen Keselamatan
- Hari Keluarga Kolej
- Malam Anugerah Kecemerlangan
- Program Kebajikan
- Kursus Kerohanian dan lain-lain

Walaupun kolej kediaman tidak mempunyai kemudahan yang secukupnya, berkat usaha dan kerjasama pelajar dengan pihak pentadbiran kolej, aktiviti-aktiviti ini telah dapat dijalankan seperti yang dirancang.

■ Residential Colleges

Colleges are universal institutions that serve to integrate formal and informal education. Colleges also nurture able graduates in all fields through a conducive environment. The various activities conducted at college level are aimed at moulding talents, instilling noble values, and providing intellectual and leadership training. Among the objectives of Residential Colleges are to:

- Provide accommodation
- Monitor the quality and service of food provided
- Provide basic amenities for learning and co-curricular activities
- Provide a conducive environment
- Serve as a focal point for co-curriculum activities

Throughout 1998, all Residential Colleges were involved in organising various activities to inculcate the spirit of goodwill and responsibility amongst the residents. These were some of the major activities:

- Facilitators' Course
- Leadership Course
- Convocation Week-related Activities
- Community Help Service
- Motivation Programme
- Seminar on Excellence
- Language Week
- Security Campaign
- College Family Day
- Excellence Award Night
- Community Service
- Spiritual Training Courses

Despite the constraints faced by the various residential colleges, particularly in terms of infrastructure, the efforts of the students and the cooperation extended by the college administration enabled the planned projects to be carried out successfully.



■ Penyelidikan IRPA

Sebanyak 444 projek penyelidikan IRPA telah diluluskan sehingga tahun 1998 dengan peruntukan yang diterima bagi tahun 1998 iaitu sebanyak RM22,633,269. Tumpuan penyelidikan yang dijalankan di bawah IRPA meliputi Agroindustri, Ekonomi, Alam Sekitar, Kesihatan, Teknologi Maklumat, Pembuatan, Galian dan Tenaga, Sains dan Kejuruteraan, Perkhidmatan dan Sains Sosial.

Pecahan penyelidikan mengikut sektor tumpuan ialah seperti di Jadual 11.

■ IRPA Research Fund

A total of 444 IRPA research projects have been approved for 1998 totalling RM22 633 269. Research priority areas under IRPA are Agroindustry, Economy, Environment, Health, Information Technology, Manufacturing, Power and Minerals, Science & Engineering, and Social Sciences.

The allocation of funds according to research priority areas are shown in Table 11.

Tumpuan Penyelidikan yang dijalankan di bawah IRPA 1998 Research Focus under IRPA 1998

Pusat Penyelidikan Research Centre	Projek Projects
Agro-Industri Agro-Industry	247
Galian & Tenaga Minerals & Energy	4
Pembuatan Manufacturing	40
Perkhidmatan & IT IT & Services	13
Ekonomi Economy	15
Kesihatan Health	19
Sosial Social	26
Alam Sekitar Environment	24
Sains Science	56
Jumlah/Total	444

Jadual 11 ■ Table 11



■ Penyelidikan Jangka Pendek

Selain daripada projek IRPA melalui Kementerian Sains, Teknologi dan Alam Sekitar, UPM menerima peruntukan sebanyak RM2 juta bagi membiayai 225 projek jangka pendek. Ringkasan permohonan penyelidikan jangka pendek adalah seperti terdapat di Jadual 12.

Permohonan Penyelidikan Jangka Pendek 1998 Applications for Short Term Research 1998		
Fakulti Faculty	Bil. Projek No. of Projects	Jumlah diluluskan (RM) Total Approved (RM)
Pertanian Agriculture	14	136,925
Ekologi Manusia Human Ecology	12	92,851
Ekonomi dan Pengurusan Economics & Management	14	95,311
Kejuruteraan Engineering	39	390,000
Perhutanan Forestry	18	170,300
Pengajian Bahasa Moden Modern Language Studies	7	25,383
Matrikulasi Matriculation	2	11,813
Perubatan & Sains Kesihatan Medical & Health Science	25	223,950
Sains & Alam Sekitar Science & Environment	40	393,000
Universiti Putra Terengganu University Putra Terengganu	21	170,696
Pengajian Pendidikan Educational Studies	16	101,670
Veterinar & Sains Peternakan Veterinary & Animal Science	7	76,000
Sains Makanan & Bioteknologi Food Sciences & Biotechnology	8	80,000
Rekabentuk & Senibina Design & Architecture	1	10,000
Institut Biosains Bioscience Institute	1	10,000
Jumlah/Total	225	1,987,899

Jadual 12 ■ Table 12

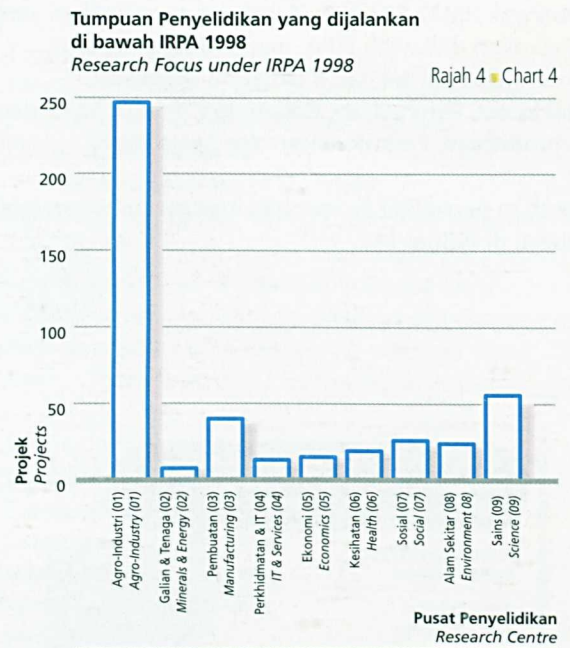
■ Anugerah Sainstis Muda Negara 1998

Prof. Madya Dr. Zulkarnain bin Zainal dari Jabatan Kimia, Fakulti Sains dan Pengajian Alam Sekitar telah menerima Anugerah Sainstis Muda Negara 1998.

Empat hasil penyelidikan UPM telah dipamerkan di ITEX'98, di Sunway Pyramid dan tujuh lagi telah dipamerkan di pameran sempena sambutan Minggu Sains ASEAN di Hanoi, Vietnam.

■ Short-term Research Funds

Apart from IRPA funding through the Ministry of Science, Technology & Environment, UPM has also been allocated RM2 million to finance 225 short-term projects. A brief overview of the short-term research allocation is reflected in Table 12.



■ National Young Scientist Award 1998

Associate Prof. Dr. Zulkarnian bin Zainal from the Chemistry Department, Faculty of Science & Environment was awarded the *Young Scientist Award* for 1998.

Four research breakthroughs were exhibited at ITEX'98, at Sunway Pyramid and seven others were exhibited at the exhibition commemorating *ASEAN Science Week* at Hanoi, Vietnam.

■ PERJAWATAN

Dalam tahun 1998 terdapat sebanyak 4414 jawatan di UPM mengikut kategori seperti di Jadual 13.

Jawatan Mengikut Kategori <i>Breakdown of Post by Category</i>	
Kumpulan Group	Jawatan 1998 <i>No. of Posts 1998</i>
Kumpulan Pengurusan Tertinggi <i>Senior Management Group</i>	33
Kumpulan Pengurusan Profesional <i>Management & Professional Group</i>	1557
Kumpulan Sokongan <i>Support Services Group</i>	2824
Jumlah/Total	4414

Jadual 13 ■ Table 13

■ Pelantikan dan Kenaikan Pangkat

Seramai 265 orang telah dilantik mengisi jawatan kosong. Daripada jumlah tersebut 234 dilantik ke jawatan dalam Kumpulan Pengurusan dan Profesional, manakala 31 ke jawatan dalam Kumpulan Sokongan. Pelantikan ke jawatan baru ini terdiri daripada jawatan bertaraf tetap, kontrak dan sementara berdasarkan kekosongan menggantikan penyandang yang bersara, meletak jawatan, dinaikkan pangkat atau dilantik semula ke jawatan baru dalam skim perkhidmatan yang lain. Dalam urusan kenaikan pangkat, seramai 22 Pensyarah dinaikkan pangkat ke jawatan Profesor Madya Gred DS1 dan tujuh ke jawatan Profesor Gred VK7. Bagi Kumpulan Sokongan pula, tiga orang dinaikkan pangkat dalam skim perkhidmatan yang sama.

■ STAFFING

In 1998 the University had a total staff strength of 4 414. The breakdown of posts according to category is shown in Table 13.

■ Appointments and Promotions

A total of 265 personnel were appointed, of which 234 were in the Management and Professional group while 31 others were in the Support Services group. These appointments included permanent, temporary and contract positions which had fallen vacant following retirements, resignations, promotions and redeployment to new posts under different service schemes.

A promotion exercise saw 22 lecturers being promoted to Associate Professors (Grade DS1) and seven to Professors (Grade VK7). Three staff from the Support Services Group were promoted within their schemes.



■ Peletakan Jawatan dan Persaraan

Seramai 55 kakitangan Universiti Putra Malaysia telah meletak jawatan. Mereka terdiri daripada empat orang dalam Kumpulan Pengurusan dan Profesional dan 15 orang dalam kumpulan sokongan. Peletakan jawatan ini disebabkan mendapat tawaran pekerjaan baru di organisasi lain dan tamat tempoh kontrak perkhidmatan.

Di bawah peruntukan Pencen bagi Pekerja - pekerja Dalam Pihak-pihak Berkuasa, Berkanun dan Tempatan, seramai 73 staf UPM telah bersara dari perkhidmatan masing-masing iaitu 23 orang dalam Kumpulan Pengurusan dan Profesional, manakala 50 orang dalam Kumpulan Sokongan. Butir-butir lengkap mengenai pegawai yang bersara wajib, pilihan dan oleh sebab kesihatan adalah seperti di Jadual 14.

Perletakan Jawatan dan Persaraan Resignations and Retirement

Kumpulan Group	Wajib Compulsory	Pilihan Optional	Meninggal Dunia Deaths	Jumlah Total
Kumpulan Pengurusan Profesional Professional Management Group	17	5	1	23
Kumpulan Sokongan Support Group	21	26	3	50
Jumlah/Total				73

Jadual 14 ■ Table 14

■ Perkhidmatan Cemerlang

Majlis Penyampaian Anugerah Cemerlang telah diadakan pada 18 Ogos 1998. Naib Canselor telah menyampaikan anugerah tersebut kepada 170 penerima anugerah. Majlis yang diadakan setiap tahun ini merupakan salah satu cara bagi universiti memberikan penghargaan kepada kakitangan yang dapat membentuk kecemerlangan diri di samping membantu universiti sama ada dari segi pentadbiran, pendidikan dan pembangunan.

■ Resignations and Retirements

A total of 55 staff resigned, four from the Management and Professional Group and 51 were from the Support Services Group. The bulk of the resignations can be attributed to job offers in other organisations.

Some 73 staff of the University under the pensionable scheme also retired. Of these, 23 were from the Management and Professional Group and 50 from the Support Services Group. Details of resignations, retirements and optional retirements are shown in Table 14.

■ Excellent Service Awards

The Excellent Service Award Presentation Ceremony was held on 18 August 1998. The Vice Chancellor honoured 170 staff with this award. This ceremony, a yearly affair, is a way of acknowledging staff who have provided excellent service to either administration, education or development of the university.



1998

LAPORAN AKADEMIK FAKULTI/PUSAT Academic Reports From Faculty/Centre

■ FAKULTI EKOLOGI MANUSIA

Pada tahun 1998, Fakulti telah berjaya melahirkan 146 graduan Bachelor Sains (Pembangunan Manusia) dan 40 graduan Diploma Pembangunan Manusia. Sempena konvokesyen tahun 1998, seorang pelajar Fakulti iaitu Cik Norhasni Zainal Abidin telah dianugerahkan Pingat Diraja atas kecemerlangannya dalam bidang akademik. Seramai tujuh pelajar daripada Fakulti juga telah berjaya menerima anugerah Naib Canselor.

■ Statistik Pengambilan Pelajar

- 536 Diploma Pembangunan Pengurusan
- 480 Bac. Pembangunan Manusia
- 45 Bac. Muzik
- 164 Bac. Komunikasi
- 174 Program Master
- 27 Program Ph.D

■ Program Francais

Program Diploma Pembangunan difrancais kepada

- Kolej Indra Kayangan, Perlis
- Kolej Islam Yayasan Pelajaran Johor
- Kolej Cermaj Jaya, Kuching
- Institut Pembangunan Sumber Manusia, Sri Kembangan
- Institut Pembangunan Sumber Manusia Trolak

■ Aktiviti

- 6 Seminar
- 4 Bengkel
- 4 Kursus - dua bertaraf antarabangsa & dibiayai oleh JICA
- 7 Konsert Okestra

Pada 9 Disember 1998, CDRC distrukturkan semula kepada CDL (Taman Asuhan Kanak-Kanak) di bawah pentadbiran Jabatan Pengajian Pembangunan Keluarga. Fakulti juga melalui Jabatan Komunikasi telah menawarkan Program Bachelor Komunikasi mulai Semester Mei 1998/99. Seramai 124 calon telah diterima mengikuti program berkenaan.

■ FACULTY OF HUMAN ECOLOGY

In 1998, 146 Bachelor of Science (Human Development) and 40 Diploma in Human Development students graduated. A graduate, Norhasani Zainal Abidin, was awarded the Royal Medal in the 1998 convocation for academic excellence while seven other graduates from the faculty were conferred the Vice Chancellor's Award.

■ Statistics on Student Intake

- 536 Diploma in Management Development
- 480 Bachelor of Human Development
- 45 Bachelor of Music
- 164 Bachelor of Communication
- 174 Masters Programmes
- 27 Ph. D Programmes

■ Franchised Programmes

The Diploma in Development programme has been franchised to:

- Kolej Indra Kayangan Perlis
- Kolej Islam Yayasan Pelajaran Johor
- Kolej Cermaj Jaya, Kuching
- Institut Pembangunan Sumber Manusia Sri Kembangan
- Institut Pembangunan Sumber Manusia Trolak

■ Activities

- 6 Seminars
- 4 Workshops
- 4 Courses – 2 of international status and sponsored by JICA
- 7 Orchestra Concerts.

On 9 December 1998, CDRC was restructured as CDL (Child Development Centre) under the administration of the Family Development Studies Department. The Faculty through the Communications Department began offering the Bachelor of Communication programme for the May 1998/99 semester. 124 students were selected to pursue this programme.

Aktiviti penyelidikan di FEM memberi penumpuan isu keluarga dan kanak-kanak, kepenggunaan, pembangunan komuniti, komunikasi dan muzik. Projek-projek ini melibatkan bantuan daripada geran IRPA, Yayasan Pembangunan Negeri Johor, Kerajaan Negeri Kelantan, UNESCO, UNICEF, UNFPA, HAWA dan lain-lain badan.

Sepanjang 1998, Fakulti Ekologi Manusia telah menghasilkan sejumlah 41 penerbitan termasuk 14 makalah dalam jurnal, 10 judul buku dan 17 kertas kerja di prosiding.

Pada tahun 1998 En. Asnarulkhadi Abu Samah, Puan Minni Ang K.H dan Puan Sharifah Norazizan Syed Abd. Rashid telah menerima Ijazah Kedoktoran Falsafah. Fakulti juga mengambil seramai tiga pensyarah dua di Jabatan Komunikasi dan seorang di Jabatan Muzik dan tiga tutor di Jabatan Komunikasi. Manakala seramai 17 pegawai akademik masih lagi mengikuti ijazah lanjutan dan Master di dalam dan luar negara.

■ FAKULTI EKONOMI DAN PENGURUSAN (FEP)

Pada tahun 1998, dua Profesor, dua Profesor Madya dan seorang pensyarah telah bersara. Tiga puluh pensyarah, enam tutor dan seorang Pembantu Tadbir telah dilantik.

Perpindahan Jabatan Ekonomi Pertanian ke Fakulti Pertanian telah melibatkan dua program akademik iaitu program Bachelo Sains Perniagaantani dan Diploma Perniagaantani. Bilangan pelajar yang berdaftar di Fakulti pada tahun 1998 adalah seramai 4,248 orang (Jadual 15). Dari jumlah tersebut, 115 orang mengikuti program pasca siswazah manakala bakinya seramai 4,133 orang mengikuti program ijazah pertama.

FEP menawarkan empat program di peringkat Bachelo, dan dua program pada peringkat Master dan Ph.D. Antara 172 kursus yang ditawarkan oleh fakulti pada tahun 1998, dua merupakan kursus baru.

Pada tahun 1998, sebanyak 31 projek penyelidikan dijalankan oleh FEP. Daripada jumlah tersebut, 12 projek adalah tajaan IRPA, sementara 19 projek dibiayai oleh projek jangka pendek UPM. FEP telah berjaya menerbitkan 8 judul buku, 28 artikel di jurnal dan 19 kertas kerja telah dibentangkan di persidangan, bengkel dan seminar.

The research activities of the Faculty were directed to Family and Child Issues, Consumerism, Community Development, Communication and Music. These projects received grants from IRPA, Johore Development Foundation, Kelantan State government, UNESCO, UNICEF, UNFPA, HAWA and other bodies.

Academic staff of FEM succeeded in publishing 14 journal articles, 10 books, and 17 papers in conference proceedings for the year.

In 1998, En Asnarulkhadi Abu Samah, Ms. Minni Ang and Puan Sharifah Norazizan Syed Abdul Rashid received their Ph. Ds. FEM also found the need to recruit three lecturers, two for the Communications Department and one for Music Department as well as three tutors for the Communications Department. Currently, 17 academic staff of FEM are pursuing post-graduate studies either locally or overseas.

■ FACULTY OF ECONOMICS AND MANAGEMENT

In 1998, two Professors, two Associate professors and one lecturer retired. Thirty lecturers, six tutors and an Assistant Registrar were appointed.

The Faculty offers four programmes at Bachelor's level, and 2 programmes at Masters and Ph. D level. Out of the 172 courses offered by the Faculty, two are new.

These new courses were made possible with the integration of the Agricultural Economics Department with Faculty of Agriculture. The two courses are the Bachelor of Agribusiness Science and Diploma in Agribusiness.

Pecahan Pelajar Mengikut Program Student Breakdown by Programme

Kursus Penuh Masa Full Time Courses

Doktor Falsafah Ph.D	33
Sarjana/ Masters	82
B.S Peniagaantani B.Sc Agribusiness	298
Bac. Perakaunan Bac. of Accountancy	1316
Bac. Perakaunan (Pendidikan)	288
Bac. of Accountancy (Education)	
Bac. Ekonomi Bac. of Economics	981
Bac. Pentadbiran Perniagaan	1250
Bac. of Business Administration	

Kursus Separuh Masa Part-Time Courses

Bac. Pentadbiran Bac. of Administration	373
Bac. Ekonomi Bac. of Economics	154

Jadual 15 Table 15



FEP juga telah melantik seorang pemeriksa luar dan Profesor Bersekutu di Jabatan Perakaunan dan Kewangan. Pemeriksa Luar tersebut ialah Profesor Roger Juchan, dari University of Western Sydney Australia sementara Profesor Bersekutu Jabatan ialah Prof. M. Ariff dari Monash University, Australia.

Di bawah program pertukaran pelajar pula, seramai empat pelajar dari Center of International Management, Hochschule Bremen, University of Applied Science, Jerman sedang mengikuti program Bachelor Pentadbiran Perniagaan di FEP.

Presiden MIA (Malaysian Institute of Accountants) Dato' Hanifah Noordin, ahli majlis dan beberapa orang perwakilan MIA telah membuat kunjungan ke FEP pada 22 Mei 1998.

Seminar-seminar yang dikendalikan oleh FEP:

- *Real Estate Investment into the Next Millennium* anjuran bersama Asean Real Estate Society
- *Workshop on Findings of Micro-level Studies and Curriculum Development Activities* - FAO/UNFPA Project on Strengthening of Research and Training in Population and Development Dynamics of Rural Fishing Communities
- *WTO Regional Seminar on Trade and Environment*
- Seminar Fakulti

■ FAKULTI KEJURUTERAAN

Fakulti Kejuruteraan telah berjaya mendapat peruntukan kerajaan bagi pembinaan Kompleks Kejuruteraan berjumlah RM26 juta. Beberapa makmal baru telah dibina khususnya untuk memenuhi keperluan bidang kejuruteraan baru seperti Kejuruteraan Aeroangkasa dan Kejuruteraan Kimia.

■ Pengajaran dan Pengajian Siswazah

Fakulti Kejuruteraan mempunyai 2,700 pelajar Bachelour Kejuruteraan dan 276 pelajar siswazah M.S. dan Ph.D dalam bidang-bidang berikut :

- Kejuruteraan Aeroangkasa
- Kejuruteraan Awam
- Kejuruteraan Biologi dan Pertanian
- Kejuruteraan Elektrik dan Elektronik
- Kejuruteraan Kimia dan Alam Sekitar
- Kejuruteraan Mekanikal dan Pembuatan
- Kejuruteraan Proses dan Makanan
- Kejuruteraan Sistem Komputer dan Komunikasi

The number of students enrolled as of 1998 totals 4248 (Table 15). Of this total, 115 are postgraduate students while 4133 are pursuing basic degree programmes.

In 1998, FEP undertook 31 research projects. Of this, 12 were sponsored by UPM's short-term project fund. In terms of publications, academic staff successfully published 8 books, 28 journal articles and presented 19 working papers at workshops, seminars and colloquiums.

FEP has appointed Professor Roger Juchan from University of Western Sydney Australia as the external examiner and Prof. M. Ariff from Monash University, Australia as the Adjunct Professor at the Department of Finance and Accountancy.

Under the students' exchange programme, four students from the Centre of International Management, Hochschule Bremen, University of Applied Science, Germany are pursuing the Bachelor of Business Administration programme.

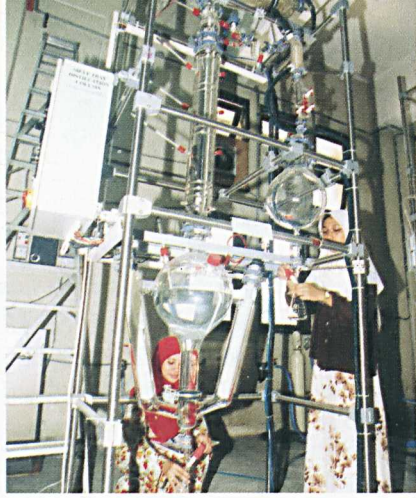
The President of the Malaysian Institute of Accountants (MIA), Dato' Hanafiah Nordin and Council Members visited the Faculty on 22 May 1998.

The following seminars/workshops were organised by FEP:

- *Real Estate Investment into the Next Millennium*. This was jointly organised with Asean Real Estate Society
- *Workshop on Funding of Micro-level Studies and Curriculum Development Activities*
- *FAO/UNFPA Project on Strengthening of Research and Training in Population and Development Dynamics of Rural Fishing Communities*
- *WTO Regional Seminar on Trade and Environment*
- Faculty Seminar

■ FACULTY OF ENGINEERING

The Faculty of Engineering was successful in obtaining a government grant of RM26 million for the construction of an Engineering Complex. A number of new laboratories have already been constructed to meet the needs of new fields of study such as Aeronautical and Chemical Engineering.



Untuk menilai kurikulum satu Jawatankuasa Penasihat Fakulti yang terdiri daripada jurutera-jurutera sektor awam dan swasta telah ditubuhkan. Seramai lapan professor dari beberapa universiti terkemuka telah dilantik sebagai pemeriksa luar. Beberapa program M.S. Struktur C telah dimulakan termasuk *Emergency Response & Planning* dengan kerjasama Jabatan Bomba.

Para pensyarah di Fakulti telah menerbitkan 54 makalah dalam jurnal antarabangsa dan serantau.

■ Persidangan, Seminar dan Kursus

Fakulti Kejuruteraan telah mengelola beberapa persidangan dan seminar peringkat kebangsaan dan antarabangsa seperti berikut :

- *International Conference on Advanced Materials and Technologies*
- Kursus pendek *Electromagnetic Compatibility (EMC)*
- Seminar on *Comprehensive Expert System (ES) for Environmental Input Assessment (EIA) Evaluation, Approval and Monitoring*
- Forum on *Engineering Commercial Agriculture*
- *Regional Conference on Emergency Response & Planning in the Coming Millennium*
- Kursus *OrbixWeb Cobra*
- *Second IEEE National Conference on Telecommunications Technology*
- Kursus dalaman berbentuk "maju diri"

■ Bantuan untuk Penyelidikan

- Geran IRPA
- Sumbangan Penyelidikan untuk Housing Research Centre (HRC)
- RM1.58 juta dari Kementerian Perumahan & Kerajaan Tempatan untuk Blok Berongga Kait Panca Tahan Beban
- 11 Unit Perisian dan Peralatan Digital Design System bernilai USD15000 daripada Altera Corporation

■ Teaching and Graduate Studies

The Faculty has a total of 2 700 engineering undergraduates, and 276 Masters and Ph. D students in the following disciplines:

- Aeronautical Engineering
- Civil Engineering
- Biological & Agricultural Engineering
- Electrical & Electronics Engineering
- Chemical & Environmental Engineering
- Mechanical and Production Engineering
- Computer Systems and Communications Engineering

To facilitate curriculum evaluation, a Faculty Advisory Committee has been established. This committee consists of engineers drawn from the corporate and private sectors. Eight professors from various universities have been appointed as external examiners. Masters Structure C programmes have been introduced including one on *Emergency Response & Planning* in collaboration with the Department of Fire & Rescue Services.

Faculty members have published 54 articles in regional and international journals.

■ Conferences, Seminars and Courses

The conventions and seminars at national and international levels organised by the Faculty are as follows:

- *International Conference on Advanced Materials and Technologies*
- Short Course on *Electromagnetic Compatibility (EMC)*
- Seminar/Course on *Comprehensive Expert System (ES) for Environmental Input Assessment (EIA), Approval and Monitoring.*
- Forum on *Engineering Commercial Agriculture*
- *Regional Conference on Emergency Response & Planning in the Coming Millennium.*
- *OrbixWeb Cobra Course*
- *Second IEEE National Conference on Telecommunication Technology*
- Faculty-organised Courses on Self-development

■ Research Assistance

- IRPA grant
- Research subsidy for Housing Research Centre (HRS)
- RM 1.58 million from the Ministry of Housing & Local Government for the construction of the Block Berongga Kait Panca Tahan Beban
- 11 Units of Software Equipment for a Digital Design System valued at USD 15,000 from Altera Corporation

■ FAKULTI PENGAJIAN BAHASA MODEN

Fakulti ini terdiri daripada tiga jabatan, iaitu Jabatan Bahasa Melayu, Jabatan Bahasa Inggeris dan Jabatan Bahasa Asing. Program yang dikendalikan adalah seperti berikut :

- Bac. Sastera
 - Bahasa & Linguistik Melayu
 - Bahasa Inggeris
 - Bahasa Mandarin
 - Bahasa Arab
- MA dan Ph.D
 - Bahasa Melayu
 - Kesusteraan Melayu
 - Kesusteraan Inggeris
 - Bahasa Inggeris
- Kursus Teknikal untuk Bac. Pendidikan
- Kursus Kemahiran Bahasa
 - untuk Program Diploma dan Bachelor di UPM
 - untuk program francais
- Program francais
 - Bac. Sastera dengan Kolej Yayasan Melaka



■ Statistik Pelajar Fakulti

- 349 graduan Bachelor dalam bidang
 - Bahasa dan Linguistik Melayu
 - Bahasa Inggeris
 - Bahasa Mandrin
- Lapan graduan ijazah lanjutan
- Pelajar meningkat daripada 2300 di tahun 1997 kepada 2900 pada tahun 1998
- Pelajar ijazah lanjutan meningkat dari 130 ke 260
- 15 pelajar MS dan Ph.D adalah dari luar negara

Dalam bidang Teknologi Maklumat (IT), Fakulti telah menubuhkan Unit Pembangunan IT yang mengandungi Makmal Bahasa, Makmal Komputer dan Makmal Teknologi Bahasa.

Fakulti juga terlibat dalam beberapa projek penyelidikan jangka panjang dan jangka pendek. Sebanyak 10 penyelidikan jangka pendek dan beberapa penyelidikan jangka panjang termasuk yang dibiayai oleh IRPA sedang dijalankan.

Dalam bidang penerbitan, pegawai akademik di ketiga-tiga jabatan telah menghasilkan 13 judul buku dalam bidang bahasa dan sastera, 25 artikel dalam jurnal, 25 kertas kerja yang dibentangkan dalam seminar kebangsaan dan antarabangsa dan 12 modul pengajaran untuk program Pendidikan Jarak Jauh (PJJ).

■ FACULTY OF MODERN LANGUAGE STUDIES

The Faculty consists of three departments, that is the Department of Malay Studies, English Department and Foreign Language Department. The programmes offered by these departments are as follows:

- Bachelor of Arts
 - Malay Language and Linguistics
 - English Language
 - Mandarin
 - Arabic Language
- Masters and Ph.D
 - Bahasa Melayu
 - Malay Literature
 - English Literature
 - English Language
- Technical Courses for Bachelors in Education
- Language Proficiency Courses
 - For Diploma and Bachelor Programmes in UPM
 - For the Franchised Programme
- Franchised Programme
 - Bachelors in Literature in collaboration with Kolej Yayasan Melaka
- Statistics on Students
 - 349 students graduated with a Bachelors in
 - Malay Language and Literature
 - English Language
 - Mandarin
 - 8 students graduated with postgraduate degrees
 - An increase in student population from 2300 in 1997 to 2900 in 1998
 - There are 15 foreign Masters and Ph.D students

To keep abreast of Information Technology developments, the Faculty has established the IT Development Unit which has developed three laboratories – Language Laboratory, Computer Laboratory and the Language Technology Laboratory.

In the area of research, the Faculty has about 10 short term and several long term research projects, some of which are funded by IRPA.

Academic staff of the Faculty have published 13 language books, 25 journal articles, and 12 modules for the the Distance Learning Programmes. Besides, about 25 papers have been presented at conferences, both national and international.

Antara aktiviti yang dijalankan ialah

- Seminar Kebangsaan Bahasa Melayu,
- Malam Tradisi Sastera Rakyat,
- Hari Apresiasi Drama dan Filem Melayu,
- Pementasan Drama,
- Malam Gema Senandung II,
- Kolokium Bahasa,
- English Language Camp,
- Kursus Asas Bahasa Inggeris,
- Projek penyumbangan buku bahasa Mandarin

Empat orang dari fakulti telah mendapat ijazah doktor falsafah dan dua telah dinaikkan pangkat ke Profesor Madya. Pegawai akademik dan pegawai am Fakulti telah bertambah daripada 85 kepada 98 orang. Pegawai Fakulti juga terlibat dalam aktiviti pengembangan dan perundingan dalam sektor awam dan swasta, termasuk juga menjadi pakar rujuk mata pelajaran wajib di Lembaga Akreditasi Negara (LAN) serta dalam Sidang-sidang pakar Mabbim (Majlis Bahasa Brunei Darussalam-Indonesia-Malaysia).

Sepanjang tahun 1998, Fakulti telah menerima 25 pelawat dari luar negara seperti Jepun, Jerman, Brunei Darussalam, Perancis, Republik Rakyat China, Afrika Selatan, Negara Yeman, Iran, United Kingdom, dan Peru.

■ FAKULTI PENGAJIAN PENDIDIKAN

Fakulti Pengajian Pendidikan (FPP) telah menawarkan satu program pengajian baru iaitu Bachelour Sains (Pembangunan Sumber Manusia) pada sesi Mei 1998/1999. Program tersebut ditawarkan oleh Jabatan Pemajuan Profesional dan Pendidikan Lanjutan. Pengambilan pertama untuk program ini adalah seramai 105 orang.

Dari segi penerbitan, Jabatan Pendidikan (JP) telah dapat menghasilkan sebanyak 10 judul buku, 25 buah makalah di dalam jurnal dan 17 lain-lain penulisan ilmiah. Sementara itu, Jabatan Pemajuan Profesional dan Pendidikan Lanjutan (JPPPL) pula telah dapat menghasilkan sebanyak 16 judul buku termasuk bab di dalam buku, 15 buah makalah di dalam jurnal dan 17 buah kertas kerja persidangan dan seminar.

FPP telah menganjurkan Seminar Antarabangsa MICELT '98 pada 21-22 Mei 1998 di Pulau Pinang. Seminar yang telah dirasmikan oleh Yang Berhormat

Among the activities carried out by the Faculty include

- A National Seminar on the Malay Language
- Traditional Folk Literature Night
- Malay Film and Drama Appreciation Day
- Staging of a Drama
- *Gema Senandung II* Night
- Language Colloquium
- English Language Camp
- Basic English Language Course
- Donation of Mandarin books

Four Faculty staff obtained their Ph.D while two were promoted to Associate Professors. There was an increase in academic and general staff from 85 to 97. Faculty staff also contributed to extension work and have served as consultants to private and public sector corporations, e.g. as subject matter experts for the National Accreditation Board(LAN) and in the expert sessions of MABBIM (Majlis Bahasa Brunei Darussalam-Indonesia-Malaysia).

During the year, the Faculty received 25 visitors from various countries including Japan, Germany, Brunei Darussalam, France, The Republic of China, South Africa, Yemen, Iran, United Kingdom and Peru.

■ FACULTY OF EDUCATIONAL STUDIES

The Department of Professional Advancement and Further Education of the Faculty has introduced a new degree programme, the Bachelor of Science (Human Resource Development). The first intake of 105 pioneer students are pursuing the programme.

In terms of publications, the Education Department of the Faculty has published 10 books, 15 journal articles and 17 other professional publications, whilst the Department of Professional Advancement & Further Education has published 16 books, 15 journal articles, and has contributed chapters in books. A total of 17 papers have been presented in conferences and seminars.



Menteri Pendidikan Malaysia telah dapat menarik minat beberapa pakar Bahasa Inggeris untuk hadir mengambil bahagian dan membentangkan kertas kerja.

Pada 24 Julai 1998, Fakulti Pengajian Pendidikan telah mengadakan Majlis Anugerah Pelajar Terbaik. Anugerah-anugerah yang diberikan mencakupi keseluruhan program pengajian di FPP termasuk Anugerah Pelajar Terbaik Keseluruhan.

Aktiviti-aktiviti yang berikut diadakan pada tahun 1998:

- Hari Gotong-Royong yang melibatkan penyertaan dari semua kakitangan termasuk juga para pelajar fakulti.
- Lawatan IBMM (Institut Bahasa Melayu Malaysia) ke FPP yang bertujuan bertukar-tukar pandangan berkenaan Sekolah Bestari dan hubung kaitnya dengan bidang teknologi maklumat.
- Sempena Minggu Alam Sekitar Peringkat UPM, bertema "Cintai Alam, Hargai Kehidupan," Fakulti Pengajian Pendidikan muncul sebagai pemenang gerai pameran terbaik.
- Sambutan Hari Q FPP telah berlangsung pada 12 Disember 1998. Tema yang dipilih untuk tahun ini adalah "Q Fakulti Tanggungjawab Bersama".

■ FAKULTI PERHUTANAN

Dari sudut pembangunan akademik, Fakulti telah merangka beberapa program baru yang akan ditawarkan mulai daripada tahun 2000 dan seterusnya. Program yang dirancangan itu ialah Bachelo Teknologi dan Sains Kayu, Bachelo Pengurusan Rekreasi dan Ekopelancongan, Bachelo Sains Perhutanan dengan beberapa opsyen baru serta program Master Sains (Rekreasi dan Ekopelancongan).

Fakulti Perhutanan telah mengeluarkan seorang graduan Ph.D, 14 graduan Master Sains, 91 graduan Bachelo Sains Perhutanan di mana dua daripadanya memperoleh ijazah kepujian kelas pertama, dan 39 graduan Diploma Perhutanan.

Para pensyarah di Fakulti telah berjaya mendapatkan peruntukan penyelidikan IRPA dan jangka pendek berjumlah RM2,807,618.00. Fakulti juga telah berjaya menghasilkan sebanyak 65 penerbitan. Daripada jumlah itu, 31 penerbitan adalah dalam jurnal di mana dua daripadanya diterbitkan dalam jurnal antarabangsa yang terdapat di *Science Citation Index 1998*, dan 34 lagi dibentangkan dalam persidangan.

The Faculty successfully sponsored and organised MICELT '98 from 21-22 May 1998 at Penang. The seminar which was officiated by the Minister for Education was well attended by renown local and foreign English language experts, several of whom presented papers.

On 24 July 1998, the Faculty had the Outstanding Students Awards Ceremony. The awards were for students from all the programmes offered by the Faculty and included the Overall Outstanding Student Award.

Among the activities carried out in the Faculty were the following:

- 'Gotong-Royong' Day which saw participation from staff and students of the Faculty
- Visit from IBMM (Bahasa Melayu Institute of Malaysia) to exchange ideas on 'SMART Schools in relation to IT
- In the 'UPM Environment Week' with the theme of 'Love the Environment, Value Life' the FPP stall emerged as the best overall winner.
- Q-Day celebrations were observed on 12 December 1998. The Theme for the year was 'Quality – Our Responsibility'.

■ FACULTY OF FORESTRY

From the academic perspective, the Faculty has planned a number of courses which will commence from the year 2000. They are the Bachelor of Wood Science and Technology, Bachelor of Recreation Management and Ecotourism, Bachelor of Forestry Science with various new options as well as the Master of Science (Recreation and Eco-Tourism).

One Ph. D, 14 Masters, 91 Bachelor of Forestry Science (two of which attained 1st class honours) and 31 Diploma students graduated from the Faculty of Forestry in 1998. The Faculty has successfully obtained IRPA and short-term funds totalling RM2 807 618.00 and has 65 publications to its credit. Of this, 31 are journal articles (with two of the journal articles published in international journals that are cited in the *Science Citation Index 1998*) and 34 were papers presented at conferences and seminars.

Sebanyak 10 kursus jangka pendek dan seminar telah dijalankan di mana satu daripadanya merupakan kursus di peringkat antarabangsa iaitu *Second Training Course on Forestry Research Strategy: Formulation Planning and Management*.

Dari sudut pembangunan kerjaya, seorang pensyarah telah dinaikkan pangkat ke jawatan Profesor Madya manakala dua orang tutor, masing-masing telah berjaya memperoleh ijazah Ph.D dan Master Sains.

■ FAKULTI PERTANIAN

Pada awal 1998 Fakulti Pertanian telah distrukturkan semula dengan penyatuan disiplin-disiplin pertanian yang terdiri daripada sains haiwan, ekonomi dan perniagaantani, mekanisasi ladang, pengembangan disatukan dengan agronomi hortikultur, sains tanah dan perlindungan tumbuhan. Dengan penstrukturan semula fakulti pada pertengahan tahun 1998, enam jabatan akan wujud mulai 1 Januari 1999.

- Jabatan Sains Haiwan
- Jabatan Sains Tanaman
- Jabatan Perlindungan Tumbuhan
- Jabatan Pengurusan Tanah
- Jabatan Perniagaantani dan Sistem Maklumat
- Jabatan Teknologi Pertanian

Penstrukturan ini bertujuan untuk memantapkan lagi program akademik yang ditawarkan dan memberi lebih peluang kepada pelajar untuk membuat pilihan bidang pengajian.

Aktiviti penyelidikan kemuncak Fakulti ialah pelancaran Varieti Jagung Putra J-58 oleh Y.B. Datuk Dr. Sulaiman Daud, Menteri Pertanian pada 8 Oktober 1998. Jagung ini hasil penyelidikan Prof. Madya Dr. Ghizan Saleh. Putra J-58 merupakan jagung kacukan pertama negara ini untuk makanan ternakan.



Ten short courses and seminars have been conducted by the Faculty of Forestry with one at an International level – The 2nd Training Course on Forestry Research Strategy : Formulation Planning and Management. From the career development perspective, a lecturer was promoted to Associate Professor and two tutors have successfully completed their Ph. D and Master in Science, respectively.



■ FACULTY OF AGRICULTURE

Early in 1998 the Faculty was restructured by combining agricultural disciplines such as Veterinary Science, Economics and Agribusiness, and Farm Mechanization. Extension was combined with Agronomy, Horticulture, Soil Science and Plant Protection. This restructuring exercise in mid-1998 resulted in the Faculty having six departments beginning January 1999:

- Department of Veterinary Science
- Department of Plant Science
- Department of Plant Protection
- Department of Soil Management
- Department of Agribusiness and IT
- Department of Agricultural Technology

This restructuring was mainly aimed at consolidating the academic programmes offered so as to provide students with better options for course selection

The culmination of the research activity for the Faculty was the launch of the Corn hybrid *Putra J-58* by YB Datuk Sulaiman Daud, the Minister of Agriculture on 8 October 1998. This hybrid variety is the outcome of research carried out by Assoc. Prof. Dr. Ghizan Saleh. *Putra J-58* is the first corn hybrid variety that is specifically for animal feed.

■ FAKULTI PERUBATAN & SAINS KESIHATAN

Pada 4 Ogos 1998, nama Fakulti telah ditukar secara rasmi ke Fakulti Perubatan dan Sains Kesihatan oleh Y.B Dato' Seri Mohd Najib bin Razak, Menteri Pendidikan. Pada tahun ini Fakulti telah mengalami beberapa perkembangan dari segi kurikulum dan fizikal.

Dalam tahun 1998, Fakulti Perubatan dan Sains Kesihatan melalui Jabatan Perubatan, Jabatan Pemakanan dan Kesihatan Komuniti serta Jabatan BioPerubatan telah menjalankan sejumlah 81 penyelidikan dan telah menghasilkan sejumlah 139 penerbitan termasuk makalah dalam jurnal, majalah dan kertas kerja.

Fakulti telah melantik beberapa pemeriksa luar dengan tujuan menjamin kualiti pembelajaran dan pengajaran. Antara pemeriksa luar (tempatan) yang telah dilantik ialah Prof. Dr. S. Baskaran dari Universiti Malaya (Biokimia), Prof. Dr. Abdul Hamid Abdul Rashid dari Universiti Kebangsaan Malaysia (Anatomi), Prof. Madya Dr. Zailina Ismail dari Universiti Sains Malaysia (Fisiologi) dan Prof. S.K. Lam dari Universiti Malaya (Mikrobiologi).

Pemeriksa luar (luar negara) pula termasuklah Prof. Dr. Peter C. Rubin dari University Nottingham dan Prof. Dr. Robert Walker dari University of Southampton. Fakulti juga masih mengekalkan Prof. E.M. Symonds dari University of Nottingham sebagai penasihat.

Empat pensyarah dari Fakulti telah memenangi anugerah negara dan antarabangsa berasas mutu khidmat dan penyelidikan yang dijalankan:

- Prof. Dr. C.P. Ramachandran
Anugerah Mary Kingsley Medal oleh Universiti Liverpool, United Kingdom.
- Dr. M.K. Vidyadaran
Anugerah Mengenang Jasa oleh Persatuan Veterinar Malaysia pada bulan September 1998
- Prof. Dr. Gnanasothie Duraisamy
Fellow of the Academy of Medicine Malaysia
- Prof. Dr. Leslie Charles Lai Chin Loy
Fellow of the Royal College of Pathologists, U.K

■ FACULTY OF MEDICINE AND HEALTH SCIENCE

On 4 August 1998, the Faculty was officially declared as the Faculty of Medicine and Health Science by YB Dato' Seri Mohd. Najib Tun Razak, the Minister of Education. This year also saw the Faculty making great strides in curriculum and physical development.

In 1998, the Department of Medicine, Department of Nutrition and Community Health and Department of Biomedicine carried out 81 research projects and published some 139 articles in journals, magazines and proceedings.

In a move to maintain high standards of teaching/learning, the faculty has appointed a number of external examiners. The local external examiners are Prof. Dr. S Baskaran from Universiti Malaya (Biochemistry) Prof. Dr. Abdul Hamid Abdul Rashid

from UKM (Anatomy), Assoc. Prof. Dr. Zailina Ismail from USM (Physiology) and Prof. S. K. Lam from UM (Microbiology).

Foreign external examiners include Prof. Dr. Peter C. Rubin from the University of Nottingham and Prof. Dr. Robert Walker from the University of Southampton. Prof. E.M. Symonds from the University of Nottingham remains the advisor to the Faculty.

Four lecturers from the Faculty have been conferred national and international awards for outstanding service and research. They are:

- Prof. Dr. C. P. Ramachandran
Mary Kingsley Medal Award by University of Liverpool, United Kingdom
- Dr. M. K. Vidyadaran
Service Award by the Veterinary Association of Malaysia
- Prof. Dr. Gnanasothie Duraisamy
Fellow of the Academy of Medicine Malaysia
- Prof. Dr. Leslie Charles Lai Chin Loy
Fellow of the Royal College of Pathologists, UK



Sepanjang tahun 1998, Fakulti telah menganjurkan beberapa aktiviti ke arah kecemerlangan pelajar dan kakitangan :

- Program *Outward Bound* untuk pelajar Perubatan di Templer Park
- Pameran Pemakanan
- Kempen Kesedaran Kanser oleh pelajar BioPerubatan
- Projek *Clean and Green* oleh Pelajar BioPerubatan
- Kursus Pembangunan Motivasi untuk Pegawai Sokongan Jabatan Pemakanan dan Kesihatan Komuniti
- Kursus Pengenalan Keselamatan dan Kesihatan Pekerjaan

Pada tahun 1998, Fakulti telah menerima beberapa pelawat dari dalam dan luar negara. Antara pelawat yang berkunjung ke Fakulti ialah lawatan delegasi dari Tongji Medical University, Wuhan, dan beberapa buah sekolah di Malaysia.

■ FAKULTI KEDOKTORAN VETERINAR DAN SAINS PETERNAKAN

Fakulti Kedokteran Veterinar dan Sains Peternakan menawarkan program prasiswazah dan pascasiswazah dalam bidang sains veterinar (perubatan veterinar dan produksi haiwan). Para graduan bukan sahaja akan memperolehi ilmu dan kemahiran veterinar tradisional tetapi juga pengetahuan dan kemahiran berkenaan kaedah-kaedah diagnostik makmal dan sains peternakan seperti pemakanan, genetik pembiakbakaan, ekonomi dan juga sistem pengurusan bantuan komputer.

■ Program-program Fakulti

- PraSiswazah
 - Doktor Perubatan Veterinar (DPV)
 - Diploma Kesihatan Haiwan dan Peternakan(DKHP)
- PascaSiswazah
 - Master Sains Veterinar (MVSc)
 - Master Sains (MS)
 - Master Perubatan Veterinar (MVM)
 - Doktor Falsafah (Ph. D)

Throughout 1998 the Faculty sponsored several activities towards inculcating excellence in staff and students:

- Outward Bound Programme for students at Templer's Park
- Food Exhibition
- 'Cancer Awareness Campaign' by Biomedics students
- Motivation/Development Course for Support Staff of the Department of Nutrition & Community Health
- Introductory Course on Occupational Safety & Health

In 1998 the Faculty received delegations from the Tongji Medical University, Wuhan, China and from several schools in Malaysia.

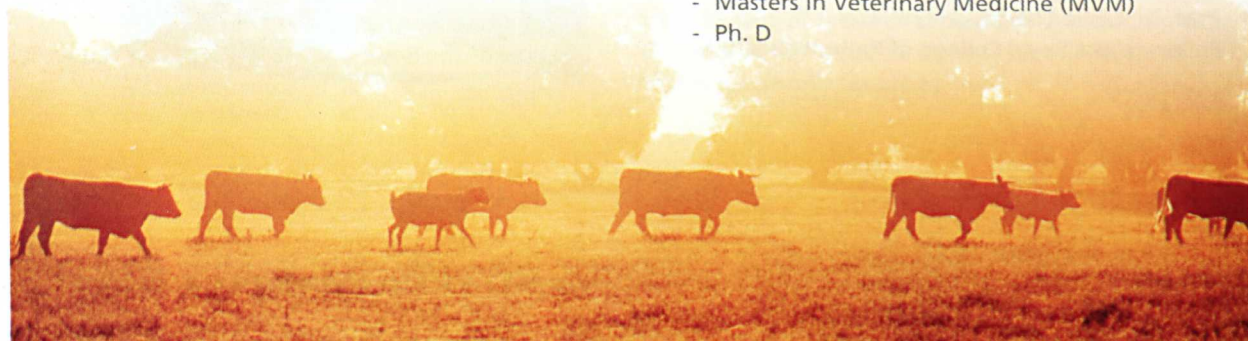


■ FACULTY OF VETERINARY MEDICINE AND ANIMAL SCIENCE

The Faculty of Veterinary Medicine and Animal Science offers graduate and postgraduate programmes in Veterinary Science (Veterinary Medicine and Animal Science). Graduates are not only able to master skills and knowledge of traditional veterinary studies but also on laboratory diagnostic methods and animal husbandry-related aspects such as feeds, genetic cloning, economics and computer-assisted management systems.

■ Faculty Programmes

- Undergraduate
 - Doctorate in Veterinary Medicine (DPV)
 - Diploma in Animal Health & Production (DKHP)
- Postgraduate
 - Masters in Veterinary Science (MV Sc)
 - Masters in Science (M. Sc)
 - Masters in Veterinary Medicine (MVM)
 - Ph. D



■ Kursus-kursus yang Dikendalikan

- Asas Kesihatan dan Pemakanan Ekuin
- Seminar *Recent Advances in Animal Health and Production*
- Bengkel Ultrasonografi Veterinar
- Bengkel Kardiologi Veterinar.

Dari segi penerbitan, para pensyarah telah menghasilkan 25 penerbitan dalam jurnal antarabangsa, 24 penerbitan dalam jurnal tempatan dan membentangkan sebanyak 13 kertas kerja di persidangan di Malaysia dan luar negara.

■ FAKULTI REKABENTUK & SENIBINA

Pada tahun 1998, Fakulti telah mendapat tambahan empat pensyarah dalam bidang seni bina, reka bentuk bandar, dan reka bentuk grafik. Pada masa yang sama Fakulti juga menerima dua tutor dalam bidang reka bentuk industri dan reka bentuk bandar.

Dari segi infrastruktur pula, Fakulti telah dapat menyediakan 3 lagi bilik studio dan juga sebuah bengkel untuk kegunaan pengajaran. Fakulti masih lagi berusaha untuk mendapatkan bangunan studio dan bengkel tambahan bagi menampung keperluan pelajar dan juga satu bangunan pentadbiran untuk staf.

Fakulti telah melantik beberapa penilai luar bagi menilai projek pelajar-pelajar tahun akhir program Master Seni Bina Landskap (MLA). Seramai tiga pelajar telah dinilai untuk membolehkan mereka bergraduasi. Penilai-penilai luar berkenaan ialah Encik Nor'Azam bin Shuib, Universiti Sains Malaysia, Dr. Nik Ismail Azlan, Institut Arkitek Landskap Malaysia (ILAM) dan Puan Rashidah Abdul Rashid, Institut Arkitek Landskap Malaysia (ILAM).

Di sepanjang tahun 1998, sebanyak empat kertas ilmiah dibentangkan dalam seminar dan konferensi. Sementara itu, dua lagi hasil penerbitan adalah dalam bentuk laporan kerja perundingan.

FRSB telah menjalankan aktiviti berikut di sepanjang tahun 1998:

- Kem Jati Diri III
- Bengkel Pelan Strategik I FRSB
- Kursus Laman WEB
- Bengkel Pelan Strategik Professional Training Centre, FRSB
- Kursus-kursus pendek berkala dalam bidang landskap

■ Courses Conducted

- Basic Equine Diet and Health
- Seminar on Recent Advances in Animal Health and Production
- Workshop on Veterinary Ultrasonography
- Workshop on Veterinary Cardiology

In terms of publications, Faculty staff have published 25 articles in international journals, 24 others in local journals and have presented 13 papers at local/foreign conferences.

■ FACULTY OF DESIGN & ARCHITECTURE

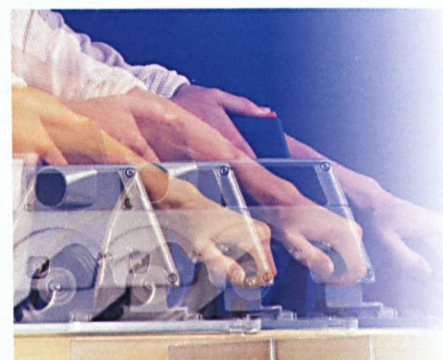
In 1998, four lecturers specialising in architecture, town planning and graphic design, and two tutors with industrial design and town planning credentials joined the Faculty.

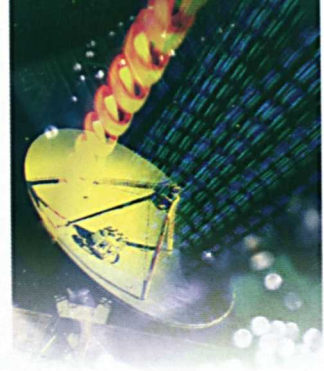
In terms of infrastructure development, the Faculty was able to add on three new studios and a workshop. However, to meet student and staff needs, Faculty efforts are on-going to build additional workshops and an administration block.

The Faculty has appointed external examiners to supervise the final-year projects of three students pursuing Masters in Landscape Science (MLA). The external examiners are Encik Nor Azam Shuib from USM, Dr. Nik Ismail Azlan from the Institute of Landscape Malaysia (ILAM) and Puan Rashidah Abdul Rashid, also from ILAM.

In terms of publications, four papers have been presented at seminars and conferences while two others are in the form of consultancy reports. The following are some of the activities undertaken by the Faculty:

- Third 'Jati Diri' Camp
- Workshop on FRSB Strategic Plan 1
- Website Course
- Workshop on FRSB Professional Training Centre Strategic Plan
- Short Courses on Landscaping





■ FAKULTI SAINS KOMPUTER DAN TEKNOLOGI MAKLUMAT

Pada tanggal 1 Oktober 1998 tertubuhlah Fakulti Sains Komputer dan Teknologi Maklumat hasil dari hasrat Universiti dalam menangani masa depan dalam pendidikan sains dan teknologi dengan memanfaatkan bidang teknologi maklumat yang sedang pesat berkembang.

Dengan tertubuhnya Fakulti baru ini, empat pengkhususan baru dalam program Bachelo Sains Komputer telah diperkenalkan pada sesi November 1998-1999 :

- Bachelo Sains Komputer (Pengkhususan Sistem Komputer)
- Bachelo Sains Komputer (Pengkhususan Rangkaian Komputer)
- Bachelo Sains Komputer (Pengkhususan Kejuruteraan Perisian)
- Bachelo Sains Komputer (Pengkhususan Multimedia)

Keempat-empat pengkhususan yang ditawarkan ini adalah di bawah pengendalian empat jabatan iaitu Jabatan Sains Komputer, Jabatan Teknologi Komunikasi dan Rangkaian, Jabatan Sistem Maklumat dan Jabatan Multimedia. Program Diploma Sains Komputer telah difrancaiskan kepada institusi pengajian swasta. Setakat tahun 1998 sebanyak 28 kolej swasta telah mengendalikan program francais ini.

Dari segi penerbitan sebanyak 12 artikel telah diterbitkan dalam jurnal dan sejumlah 35 artikel dibentangkan dalam persidangan.

■ FAKULTI SAINS MAKANAN DAN BIOTEKNOLOGI

Fakulti Sains Makanan dan Bioteknologi terdiri daripada tiga jabatan iaitu Jabatan Sains Makanan, Jabatan Teknologi Makanan dan Jabatan Bioteknologi.

■ FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

This new Faculty was established on 1 October 1998 to fulfil the University strategy to incorporate rapidly evolving information technology into science and technology education.

The Faculty offers four specialisations for the Bachelor of Computer Science programme which commenced in the 1998/1999 November session:

- Bachelor of Computer Science (Computer Systems)
- Bachelor of Computer Science (Computer Networks)
- Bachelor of Computer Science (Software Engineering)
- Bachelor of Computer Science (Multimedia)

These four specialisations are offered and coordinated by four Departments viz Department of Computer Science, Department of Communication Technology, Department of Information Systems, and Department of Multimedia. The Diploma in Computer Science programme has been franchised to private institutions. As of 1998, 28 private colleges are conducting this franchised programme.

In terms of publications, 12 articles have been published in various journals and another 35 papers have been presented at conferences.

■ FACULTY OF FOOD SCIENCE AND BIOTECHNOLOGY

This Faculty consists of three Departments viz. Department of Food Science, Department of Food Technology and Department of Biotechnology.

■ Faculty Programmes

- Bachelor's Programme
 - Bachelor of Science and Food Technology
 - Bachelor of Science (Food Studies)
 - Bachelor of Science (Biotechnology)

■ Program-program Fakulti

- Program Bachelo
 - Bac. Sains dan Teknologi Makanan
 - Bac. Sains (Pengajian Makanan)
 - Bac. Sains (Bioteknologi)
- Program Pasca Siswazah (MS dan Ph.D)
 - Sains Makanan
 - Teknologi Makanan
 - Bioteknologi

■ Statistik Pelajar

- Jumlah enrolmen - 1134
 - 1014 pelajar siswazah
 - 121 pasca siswazah
 - 43 pasca siswazah Ph.D
 - 70% pasca siswazah memilih bidang bioteknologi

Bilangan tenaga pengajar dalam tahun 1998 ialah seramai 32 orang, dimana 81% telahpun mempunyai kelulusan akademik tertinggi iaitu Ph.D. Dari jumlah ini, 50% berjawatan Profesor Madya dan Profesor. Jumlah pegawai sokongan pula ialah 45 orang. Selain dari pengajaran, pensyarah-pensyarah Fakulti juga menjalankan aktiviti penyelidikan dan telah menghasilkan 182 jenis penerbitan. Pecahan penerbitan Fakulti adalah seperti dalam jadual 16.

Dari segi aktiviti perkhidmatan profesional pula, Fakulti telah menjalankan sebanyak tujuh kursus pendek:

- Kursus Sehari Memproses Susu Kacang Soya dan Tauhu Manis
- Bengkel *HACCP: Principles and Applications*
- Hari Pengenalan Produk Baru (8 September). Satu acara tahunan untuk memperkenalkan produk hasil kajian pelajar tahun akhir Bac. Sains dan Teknologi Makanan kepada warga kampus dan industri makanan tempatan.
- Bengkel *Molecular Markers for Plant Breeders*
- Kursus Latihan *Molecular Tools for Biotechnology - Multiplex Polymerase Chain Reaction (PCR)* (10-12 Disember).

- Postgraduate Programmes (Masters & Ph. D)
 - Food Science
 - Food Technology
 - Biotechnology

■ Student Statistics

- Total Enrolment – 1134
- 1 014 undergraduates
- 121 post graduates
- 43 Ph.D students
- 70% of the postgraduate students have opted for Biotechnology

In 1998, the staff strength of the Faculty was 32; of this 81% are Ph. D holders. Almost 50% of the staff are either Professors or Associate Professors. The Faculty has 45 support staff.

Apart from teaching, lecturers are also involved in research activities and have 182 publications to their credit (Table 16).

The Faculty's Professional Services Unit, has conducted seven short courses. These are:

- One-day course on soya milk & sweet soya cake
- HACCP Workshop — Principles and Applications
- New Product Day (8 September)
An annual event to introduce new products of final year Bac. of Science & Food Technology students to the campus community and local food industry.
- Training Course on Molecular Tools for Biotechnology — Multiplex Polymerase Chain Reaction (PCR) (10-12 December)

Penerbitan dalam tahun 1998 Publications in 1998

Terbitan/Publications	No
Makalah Jurnal (Diterbitkan) <i>Journal Articles (Published)</i>	36
Makalah Jurnal (Dalam Proses Terbitan) <i>Journal Articles (In Press)</i>	42
Buku/Bab dalam buku <i>Books/Chapters in books</i>	2
Prosiding/Pembentangan <i>Proceedings/Papers presented</i>	102
Jumlah Total	182

Jadual 16 ■ Table 16

■ FAKULTI SAINS & PENGAJIAN ALAM SEKITAR

Dalam tahun 1998, Jabatan Sains Komputer telah dinaikkan taraf menjadi Fakulti Sains Komputer dan Teknologi Maklumat pada 1 Oktober 1998. Fakulti juga telah menawarkan program baru untuk program ijazah lanjutan iaitu Master Sains (Statistik Gunaan) melalui struktur C. Dua pegawai kontrak telah dilantik untuk memantapkan urusan pentadbiran Fakulti.

■ Anugerah

- Prof. Madya Dr. Zulkarnain Zainal telah dianugerahkan Saintis Muda Negara 1998
- Cik Yap Chiew Lin, pelajar fakulti telah dianugerahkan Pingat Tan Sri Ong Kee Hui untuk Postgraduate Chemistry Medal 1998.

■ Pemeriksa Luar

- Prof. Dr. Abdul Latif bin Mohamad dari Universiti Kebangsaan Malaysia dilantik sebagai Penilai Luar untuk program Bachelor Sains (Alam Sekitar).
- Prof. Dr. Muhammad Yahya juga dari Universiti Kebangsaan Malaysia dilantik sebagai Penilai Luar untuk program-program di Jabatan Fizik.

■ Pelawat

- Prof. Roger Casanova, University of Nice-Sophia Antipolis Perancis
- Prof. Sinshuke Tanabe, Dr. Hidetoshi Kumata, Ehime University
- Dr. Hideshige Takada, Tokyo University
- Prof. S. B. Palmer, University of Warwick
- Y.T. Chen dari Universiti Teknologi Malaysia

■ Projek Penyelidikan

- 80% disokong oleh IRPA
- 9% disokong oleh dana Universiti
- 8% disokong oleh agensi bukan kerajaan seperti :
 - Malaysian TORAY Science Foundation
 - ADB - Asean
 - PORIM
 - Sime Darby
 - Petronas
 - UNEP- Nairobi
 - Danish Cooperation for Environment and Development
 - Japan International Cooperation Agency (JICA)

■ FACULTY OF SCIENCE AND ENVIRONMENTAL STUDIES

The Faculty has begun offering a new Structure C postgraduate programme, the Masters of Science (Applied Statistics). Two contract officers have been enlisted to consolidate the administration of the Faculty. In October 1998, the Department of Computer Science of this Faculty was upgraded to the Faculty of Computer Science and Information Technology.

■ Awards

- Assoc. Prof. Dr. Zulkarnain Zainal was awarded the National Young Scientist Award.
- Ms Yak Chiew Lin, a graduate of the Faculty was awarded the Tan Sri Ong Kee Hui Postgraduate Chemistry Medal.

■ External Examiners

- Prof. Dr. Abdul Latif bin Mohamad from UKM has been appointed as an external examiner for the Bachelor of Science (Environment) Programme.
- Prof. Dr. Mohamad Yahya also from UKM has been appointed as an external examiner for the Physics Department.

■ Visitors

- Prof. Roger Casanova, University of Nice-Sophia Antipolis, France
- Prof. Sinshuke Tanabe and Dr. Hidetoshi Kumata, Ehime University, Japan
- Dr. Hideshige Takada, Tokyo University
- Prof. S. B. Palmer, University of Warwick
- Y. T. Chen, University of Technology Malaysia

■ Research Projects

- 80% supported by IRPA grant
- 9% supported by University grant
- 8% supported by corporate agencies such as
 - Malaysian TORAY Science Foundation
 - ADB - Asean
 - PORIM
 - Sime Darby
 - Petronas
 - UNEP - Nairobi
 - Danish Cooperation for Environment and Development
 - Japan International Cooperation Agency (JICA)





Dalam tahun 1998, Fakulti Sains dan Pengajian Alam Sekitar menghasilkan sejumlah 648 penerbitan termasuk 95 makalah jurnal, 548 kertas di prosiding dan 5 buah buku. Sebahagian besar daripada penerbitan tersebut tertumpu kepada isu-isu Alam Sekitar, Fizik, Biologi, Kimia dan Biokimia dan Mikrobiologi.

Dalam usaha meningkatkan budaya cemerlang di peringkat Fakulti, beberapa aktiviti telah diadakan terutamanya dalam membudayakan sains dan teknologi di kalangan kakitangan, pelajar-pelajar sekolah, mahasiswa dan masyarakat termasuk sebuah persidangan antarabangsa sains.

Fakulti telah diberi tanggungjawab oleh Kementerian Pendidikan Malaysia untuk menganjurkan Program Kesedaran Sains untuk Guru-Guru Sains. Program ini diadakan sepuluh minggu bagi setiap sesi kemasukan selama empat tahun. Tujuan program ini adalah untuk meningkatkan nisbah 60:40 para pelajar yang mengikuti kursus Sains Teknologi berbanding Sains Sosial di sekolah dan seterusnya di IPTA.

■ PUSAT PENGAJIAN SISWAZAH PENGURUSAN MALAYSIA

Pada Januari 1998, MGSM mempunyai lima (5) pegawai akademik (2 Professor, 2 Professor Madya, dan 1 pensyarah berkelulusan Ph.D). Terdapat pegawai-pegawai akademik yang dijemput untuk mengajar di MGSM. Pada masa yang sama, MGSM menerima seorang Professor Pelawat Fullbright, Prof. Dr. Jackie Snell yang bercuti sabatikal dari San Jose State University, California USA.

Jumlah pelajar baru yang diambil oleh MGSM adalah 195 orang. Pengambilan dan kemasukan pelajar-pelajar adalah seperti terdapat di Jadual 17.

■ Pelawat kepada Pusat

- En. Joel Rateau dari French Foundation for Management Education (FNEGE)
- Prof. John Clarke dari University of Western Sydney-Hawkesbury.

In 1998, Faculty staff were responsible for 648 publications, of which 95 were journal articles, 548 were conference papers and five were books. Most of the publications relate to Environment, Physics, Biology, Chemistry and Biochemistry and Microbiology.

In order to promote academic excellence and a culture of science and technology a number of activities were conducted for staff, school children and graduates. Besides, the Faculty also hosted an international conference on science.

The Faculty was also honoured to be invited by the Ministry of Education to host the Science Awareness Programme for Teachers. Each session of this programme was conducted over 10 weeks for a period of four months. This programme was aimed at attaining a ratio of 60: 40 students attending Science and Technology courses compared to Social Sciences in schools and institutions of higher learning.

■ MALAYSIAN GRADUATE SCHOOL OF MANAGEMENT

The staff strength of the Malaysian Graduate School of Management Centre (MGSM) in 1998 was five with the breakdown being two Professors, two Associate Professors and one lecturer with Ph. D. Academic staff with relevant credentials were invited as and when the need arose to teach at MGSM. MGSM also benefited from a visiting Fullbright, Prof. Dr. Jackie Snell, who was on sabbatical leave from San Jose State University, California, USA.

The 1998 student intake was 195 and the breakdown according to programme is shown in Table 17.

■ Visitors to MGSM

- Mr. Joel Rateau from the French Foundation for Management Education (FNEGE)
- Prof. John Clarke from the University of Western Sydney-Hawkesbury

Jumlah Pelajar Baru yang diambil oleh MGSM
Student Intake by MGSM

Program Programme	Mei 1998 May 1998	September 1998 September 1998	Jumlah Enrolmen Total Enrolment
MBA	118	33	287
M.S	14	-	26
Ph.D	30	-	80
Jumlah/Total	162	33	393

Jadual 17 ■ Table 17

■ MOU

- Aix-Marseille, France untuk menjalankan MBA (Euro-Asian Management)

■ Seminar

- Survival Strategies in a Hostile Environment
- Seminar akademik bersama Fakulti Ekonomi & Pengurusan

Pusat mempunyai tiga aktiviti perundingan dan penyelidikan yang dijalankan untuk Kementerian Sains Teknologi dan Alam Sekitar, Johor Corporation, dan Program Pembangunan Bersepadu Pertanian Pulau Pinang. Tajuk projek- projek yang dijalankan adalah seperti berikut:

- Ujian keluaran minuman jus jernih buah-buahan tempatan
- Kajian kemungkinan menubuhkan medium density fibre board
- Kajian kemungkinan pembinaan Taman Agro-technology Pulau Pinang

MGSM juga menjalankan program-program pembangunan eksekutif dan pengurus-pengurus kanan untuk Malaysia Airlines pada Ogos dan September 1998. Program-program serupa juga dijalankan di Sarawak melalui anak syarikat SEDC, CMM Sdn Bhd.

Pada tahun 1998, Pusat telah menghasilkan 10 artikel yang diterbitkan dalam jurnal tempatan dan luar negara dan dua buah buku.

■ PUSAT PENGAJIAN MATRIKULASI

Pusat Pengajian Matrikulasi (PPM) berperanan untuk memberi latihan prauniversiti untuk pelajar bumiputera dalam bidang sains dan teknologi. Pelajar lepasan Pusat Pengajian Matrikulasi akan ditempatkan di fakulti-fakulti UPM mengikut kelayakan yang dicapai.

■ Program Yang Ditawarkan

- Sains, Kejuruteraan
- Perubatan
- Perakaunan dan Pengurusan
- TESL dan Muzik.

■ MOU

- Aix – Marseille, France to conduct MBA (Euro-Asian Management)

■ Seminars

- Survival Strategies in an Hostile Environment
- Academic Seminar jointly with the Faculty of Economics & Management

The School is currently undertaking three major research and consultancy projects for the Ministry of Science, Technology and Environment, Johore Corporation and Integrated Agricultural Development Programme for Penang. These are as follows:

- Tests on local clear fruit juice production
- Feasibility of establishing a medium density fibre board
- Feasibility of building an Agro-Technology Park in Penang

Besides these consultancy projects, MGSM has also conducted two-month executive development programmes for executives and Senior Managers of MAS. Similar programmes were conducted for subsidiaries of SEDC of Sarawak and CMM Sdn. Bhd.

MGSM staff published 10 articles in local and international journals and two books during the year.

■ MATRICULATION STUDIES CENTRE

This Centre (PPM) conducts training for Bumiputera pre-university students in the fields of science and technology. Those who succeed in obtaining the necessary grades will be employed in various Faculties in UPM.

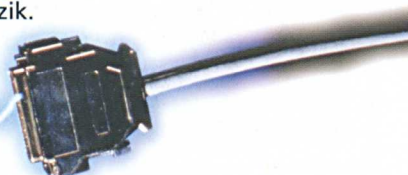
■ Programmes Offered

- Science, Engineering
- Medicine
- Accounting & Management
- TESL & Music

6618 students registered to undergo this programme at the Serdang and Kuala Terengganu campuses and at 25 franchised colleges.

■ Coordination & Monitoring of the Matriculation Programme

The Centre maintains a uniform matriculation



Seramai 6618 pelajar telah mendaftar untuk mengikuti program-program tersebut di kampus Serdang, Kuala Trengganu dan 25 Institusi Pengajian Tinggi Swasta yang bekerjasama dengan PPM.

■ Penyelarasan dan Pemantauan Program Matrikulasi

PPM mengawal selia mutu pengajian programnya dengan mengadakan penyelarasan dengan semua IPTS yang menjalankan programnya sebelum setiap semester bermula. Soalan peperiksaan bagi setiap kursus disediakan oleh pegawai akademik di kampus induk dan peperiksaan berpusat dilaksanakan. Lawatan ke IPTS juga diadakan dari masa ke masa bagi meninjau perjalanan program.

■ Khidmat Rundingan

Beberapa orang pegawai PPM juga terlibat secara langsung dalam memberikan khidmat rundingan kepada agensi-agensi dan jawatankuasa seperti Jawatankuasa Penggubalan Kurikulum Matrikulasi Kementerian Pendidikan dan agensi luar. Dua orang pegawai PPM juga dilantik sebagai pendraf dan editor substantif projek *Kamus Melayu-Inggeris Dewan Bahasa dan Pustaka*. Beberapa orang pegawai juga telah dilantik untuk menganggotai jawatankuasa *Malaysian University English Test (MUET)*

■ Peningkatan Kelayakan Akademik

Hampir 50% tenaga pengajar PPM telah mengambil inisiatif untuk meningkat kelayakan akademik mereka dengan mengikuti ijazah peringkat Sarjana secara sambilan. Sepanjang tahun 1998, Pusat Pengajian Matrikulasi telah menganjur dan menghantar beberapa orang pegawai menyertai seminar dan bengkel yang berkaitan dengan bidang masing-masing.

■ PUSAT PROGRAM LUAR

Pusat Program Luar (PPL) ditubuhkan pada bulan Mei 1997 untuk merealisasikan dasar melebarkan pendidikan tinggi dan membawanya ke pintu rumah dengan kos yang termampu. PPL beroperasi secara biayai diri atau *self-financing* menerusi pendapatan royalti daripada program-program yang difrancaiskan atau yang dikendalikan secara berkembar dengan institusi-institusi luar.

programme by a close coordination of all franchised colleges(IPTS) which offer its programmes.

Examination questions for each course are set by academic staff at the main campus and examinations are centralised. Visits to the various IPTS are carried out from time to time to review programme implementation and maintenance of academic standards.

■ Consultancy Service

A number of staff of the Centre are involved in providing consultancy services to various agencies and committee's such as the Matriculation Curriculum Development Committee of the Ministry of Education and other agencies. Two staff have been enlisted for a substantive project - the Dewan Bahasa dan Pustaka Malay-English Dictionary. A number of staff have been appointed members of the Malaysian University English Test (MUET) committee.

■ Personal Advancement

A majority of the staff in the Centre have taken the initiative to pursue graduate degree programmes on a part-time basis. Throughout 1998, the Centre sponsored staff to relevant seminars/workshops.

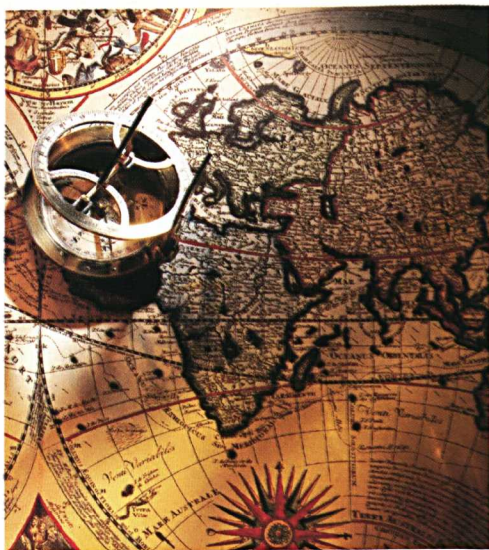
■ EXTERNAL PROGRAMMES CENTRE (PPL)

This Centre was established in May 1997 with the aim of enabling as many people as possible to avail themselves of a tertiary education. The Centre operates on a self-financing mechanism based on royalties from franchised/twinning programmes with private colleges(IPTS).

■ Activities of the Centre

The following are some of the important activities organised by the Centre:

- Preparation of guidelines for conducting external programmes of UPM at pre and postgraduate level.
- To market UPM programmes to local and foreign IPTS
- To manage compatibility evaluation of IPTS to conduct UPM programmes externally
- To assist and facilitate UPM faculties in negotiating collaborative programmes with IPTS
- To play the role of an intermediary between the faculties at UPM and the bursars of the IPTS



■ Aktiviti PPL

Antara aktiviti-aktiviti penting yang dikendalikan oleh PPL adalah seperti berikut :

- Menyediakan dasar dan garis panduan perjalanan program luar UPM peringkat pra dan pasca siswazah
- Memasarkan program UPM ke IPTS dalam dan luar negara
- Menguruskan penilaian kesesuaian IPTS menjalankan program luar UPM
- Membantu fakulti-fakulti dalam rundingan atau mengatur rundingan bagi pihak fakulti untuk kerjasama dengan institusi--institusi berkenaan
- Memainkan peranan sebagai unit perhubungan antara pusat tanggungjawab khususnya fakulti-fakulti dan bendahari institusi luar

Antara bulan Jun hingga Disember tahun 1997, PPL menerima sebanyak 48 permohonan daripada IPTS untuk bekerjasama serta mengendalikan program - program UPM dalam bentuk francais atau berkembar. Kini, sebanyak 51 buah IPTS telah diluluskan permohonannya oleh Senat UPM. Senarai IPTS yang mendapat kelulusan adalah seperti di dalam Jadual 18. Daripada 51 IPTS tersebut, setakat sesi Mei 1998/99, hanya 42 buah sahaja yang telah menjalankan program yang diluluskan. Masih terdapat 16 buah IPTS yang membuat permohonan untuk bekerjasama tetapi masih belum dibuat penilaian dan lawatan pemeriksaan.

Untuk mengawal selia dasar dan perjalanan PPI, satu Jawatankuasa Pengurusan telah ditubuhkan. Jawatankuasa ini terdiri daripada Naib Canselor, Pengarah PPI, Dekan yang berkaitan, Pendaftar dan Bendahari.

Between June and December 1997, the Centre received as many as 48 applications from IPTS to offer programmes either on a franchised or twinning basis with UPM. To date, 51 IPTS have had their applications approved by the Senate. The successful list of IPTS are shown in Table 18. Of the 51 IPTS approved for the 98/99 session, only 42 are currently conducting the programmes that have been approved. 16 other IPTS are awaiting evaluation and examination of facilities.

To coordinate and supervise the running of the Centre, a Management Committee has been established consisting of the Vice Chancellor, the PPL Director, Deans of the various faculties, the Registrar, and the Bursar of UPM.

IPTS yang Menjalankan Program-Program UPM dalam bentuk Berkembar atau Francais Private Colleges Offering Programmes Either on a Twinning/Franchised Basis

IPTS Private Colleges	Mula Perlaksanaan Date Commenced
Kolej Indra Kayangan	3 Jun 98
Institut Teknologi A.N.S	Mei 98
Institut Yayasan Bumiputera Pulau Pinang	Jan 98
Kolej Mara Kulim	Mei 98
Cosmospec Information Technology Institute	8 Jun 98
Institut Pembangunan Sumber Manusia Trolak	20 Mei 98
Kolej Premier Yayasan Perak	Mei 98
Kolej Anjung Selatan	
Kolej IKRAM	Jun 98
Kolej MSC Premier	Nov 98
Kumpulan Pendidikan Perdana	Jun 98
Kolej SAL	Mei 98
IPI-ABIM	Mei 98
Kolej Prime	Mei 98
Kolej TISC	Mei 98
Kolej UNITEK	Mei 98
Institut MaxiseGAR	Mei 98
Kolej Kurniawan	Mei 97
International City Institute of Technology	Mei 98
Institut Pembangunan Sumber Manusia Sri Kembangan	Mei 97
ELS Institute Language Centre	Mei 98
Pusat Teknologi & Pengajian Lanjutan	Mei 97
Kolej Teknologi Timur	Mei 98
Pusat Pendidikan Lanjutan	Mei 98
YPM Cheras	Mei 98
Institut Teknologi Cybermatics	Mei 98
Impens, Pandan Perdana	Mei 98
Kolej Karisma	Nov 98
Kolej Negeri	Mei 98
Kolej Uniti	Mei 98
Institut Kota	Mei 98
Kolej Yayasan Melaka	Mei 97
Institut Sains & Teknologi Darul Takzim	Mei 98
Kolej Islam YPJ	Jun 98
Infotech Tebrau	Mei 98
Institut Teknologi Perindustrian	
Institut Kemajuan Iktis Pahang	Nov 97
Kolej Shahputra	Mei 98

Jadual 18 ■ Table 18

1998

KHIDMAT SOKONGAN Support Services



■ INSTITUT BIOSAINS

Institut Biosains merupakan satu landasan di UPM untuk membangun dan meningkatkan penyelidikan serta latihan siswazah. Penyelidikan di Institut Biosains adalah bersifat multidisiplinari, berpacuan pasaran (market-driven) dan berdasarkan arahan daripada pihak perancang (top-down) dalam bidang-bidang utama seperti sumber genetik, produk semulajadi, pertanian tepat, teknologi akuakultur, penyakit dan makanan ternakan. Dalam tahun 1998 ini, satu bidang baru, iaitu teknologi biokomposit, yang dianggap penting bagi ekonomi negara, telah ditambah dalam senarai penyelidikan Institut.

Ketika ini, penyelidik adalah daripada fakulti-fakulti di UPM yang dipelawa menjadi Fellow. Institut kini mempunyai 23 siswazah, kebanyakannya mengikuti program doktorat dan dapat membantu mengendalikan projek-projek penyelidikan. Sebahagian besar projek-projek penyelidikan di Institut Biosains adalah anjuran:

- Program IRPA dibawah Kementerian Sains, Teknologi dan Alam Sekitar, Malaysia
- Geran penyelidikan dari luar negara seperti dari Kesatuan Eropah (EU)
- Institut Sumber Genetik Tumbuhan Antarabangsa (IPGRI)

Institut Biosains meneruskan penyelidikan di bidang-bidang yang berikut :

- Diagnosa Penyakit
- Mikrobiologi Penghadaman
 - Teknologi Ruman Mikrob
 - Probiotik Haiwan
- Teknologi Sumber Akuatik
- Hasil Semulajadi
- Pertanian Tepat

Selain dari menjalankan penyelidikan, Institut Biosains sering mengadakan persidangan, seminar dan bengkel untuk memajukan pengetahuan, maklumat dan pencapaian penyelidikan. Kini Institut Biosains aktif dalam perbincangan untuk mengadakan projek *bioconversion wastes*.

Lebih daripada lima seminar telah diadakan dan satu daripadanya adalah Seminar Biokomposit Kebangsaan. Pusat Teknologi Biokomposit telah juga dilancarkan semasa seminar tersebut.

■ THE BIOSCIENCE INSTITUTE

The Bioscience Institute was established to further develop postgraduate research and training. Research conducted at the Institute is multi-disciplinary, market-driven and based on top-down directives in the key areas of genetic resources, natural products, precision agriculture, aquaculture technology, animal diseases & feeds. In 1998, biocomposite technology, an emerging area considered important to the national economy, was added on to the list of research priorities of the Institute.

Currently, researchers are academic staff of the faculties at UPM who are invited to be a fellow of the Institute. The Institute has 23 graduates who are pursuing their Ph.D and who are therefore in a position to assist in research. The bulk of the Institute's research projects are supported by:

- The IRPA Programme under the Ministry of Science, Technology & Environment.
- Foreign Research Grants such as those from the European Union
- The International Plant Genetic Resources Institute (IPGRI)

The Institute is carrying out research in the following areas:

- Disease Diagnosis
- Digestive Microbiology
 - Rumen Microbial Technology
 - Animal Probiotics
- Aquatic Resource Technology
- Natural Products
- Precision Agriculture

Apart from carrying out research, the Bioscience Institute often organises conferences, seminars and workshops to disseminate knowledge, information and research findings. Discussions are currently underway on a bioconversion waste project.

More than five seminars have been conducted with a major one being a national seminar on Biocomposites. The establishment of a Centre for Biocomposite Technology was an important outcome of this seminar.

Institut Biosains telah berjaya mengaturkan empat perjanjian persafahaman (MoU) antara UPM dengan pihak swasta dan institusi penyelidikan dan melibatkan penyelidik dari kumpulan pertanian tepat, biokomposit dan teknologi akuatik :

- UPM-MINT (Malaysia Institute for Nuclear Technology Research
- UPM - Sabutek (M) Sdn. Bhd.
- UPM - Syarikat Lakescape Integration
- UPM - Inter-Sea Fishery (M) Sdn. Bhd.

■ BAHAGIAN PEMBANGUNAN

Bahagian Pembangunan adalah salah satu jabatan yang menjadi tulang belakang Universiti yang bertanggungjawab dalam pembangunan fizikal dan pembangunan infrastruktur serta penyelenggaraan. Di bawah RMK7, Universiti telah menerima peruntukan sebanyak RM159,646,000.00 bagi projek sambungan RMK6 dan pelaksanaan projek baru RMK7.

Selanjutnya bagi menampung keperluan semasa, Universiti telah menandatangani satu perjanjian usaha sama membangunkan sebuah kompleks asrama pelajar secara penswastan pada 29 Julai 1998. Projek yang dibangunkan oleh sebuah syarikat konsesi Strategic Crest Sdn. Bhd. ini bertempat di tapak seluas 15 hektar Ladang 5 UPM. Kerja-kerja pembinaan telah pun bermula dengan pembersihan tapak dan kerja-kerja tanah pada awal Disember 1998. Kompleks ini merangkumi 14 blok asrama lima tingkat yang mampu menempatkan seramai 6960 pelajar.

Projek-Projek yang Telah Siap Projects Completed

- Pembinaan bangunan-bangunan baru di Kampus Serdang, dua buah bangunan lapan tingkat kolej kediaman pelajar Ke-10 dan Ke-11 (RM37,512,882.00)
New buildings at Serdang Campus, two new Residential Colleges – 8-Storey 10th & 11th Colleges (RM37 512 882.00)
- Bangunan Asrama Pelajar Atlet, (RM4,460,000.00)- pembiayaan oleh MSN
Student Athletes Hostel– funded by MSN (RM4 460 000.00)
- Bangunan Studio Fakulti Rekabentuk dan Senibina (RM443,000.00)
A Studio for Faculty of Design & Architecture (RM443, 000.00)
- Enam unit bangunan dewan kuliah menggunakan 'prefabricated cabin' (RM1,890,000.00)
Six Lecture Halls using 'prefabricated cabin' material (RM1, 890, 000.00)
- Bangunan 'Animal House' Fakulti Perubatan dan Sains Kesihatan (RM124,000.00)
Animal House for the Faculty of Medicine & Health Science (RM124, 000.00)
- Kerja-kerja naik taraf pemasangan talian kabel telefon (RM52,060.00).
Upgrading of telephone cables in campus (RM52, 060.00).

Projek-Projek dalam Pembinaan Projects under Construction

- Projek naik taraf sistem bekalan air di kampus induk UPM (RM5,069,740.00 - sekitar 45% siap)
Upgrading of water supply system in the Serdang Campus (RM5, 069, 740.00) -45% completed.
- Projek mendirikan sebuah kafeteria di kampus Cawangan Kuala Terengganu (RM29,590.00 - sekitar 85% siap).
Construction of a cafetria at Kuala Terengganu campus (RM29, 590.00) - 85% completed.

Projek-Projek Baru New projects

- Kompleks Kejuruteraan (RM26,200,000.00)
Engineering Complex (RM26, 200.00)
- Bangunan Kompleks Akademik Pusat (RM10,850,000.00)
Central Academic Complex (RM10, 850, 000.00)
- Bangunan Kompleks Sains Sosial (RM5,150,000.00)
Social Science Complex (RM5, 150, 000.00)
- Bangunan Fakulti Sains Komputer dan Teknologi Maklumat (RM3,700,000.00)
Faculty of Computer Science and IT (RM3, 700, 000.00)
- Kompleks Hal Ehwal Pelajar (RM1,194,401.00)
Students' Affairs Complex (RM1, 194, 401.00)
- Stadium: Dewan Serbaguna dan Trek Sintetik (RM11,800,000.00)
Stadium, Multi-Purpose Hall and Synthetic Track (RM11, 800, 000.00)

Jadual 19 ■ Table 19

The Institute has successfully organised the signing of four MOUs with research institutes/bodies for collaboration in precision agriculture, biocomposites and aquatic technology. These are:

- UPM – MINT (Malaysian Institute of Nuclear Technology)
- UPM – Sabutek (M) Sdn. Bhd.
- UPM – Syarikat Lakescape Integration
- UPM – Inter-Sea Fishery (M) Sdn. Bhd.

■ DEVELOPMENT DIVISION

This Division is responsible for physical infrastructure development and maintenance of the University. Under the Seventh Malaysian Plan (7th MP), the University was allocated RM159 646 000 for new projects and completion of projects initiated under the 6th MP.

In order to further upgrade facilities at the University, the Division has entered into an agreement with a private corporation to

undertake the construction of a students' hostel complex. The company, Strategic Crest Sdn. Bhd., has been contracted to develop a 15-acre land at Field 5 UPM. Ground works have already been initiated. This complex consists of fourteen 5-storey blocks with the capacity and facilities to accommodate 6 960 students.



■ PERPUSTAKAAN

Peningkatan dalam penggunaan teknologi maklumat diteruskan dengan langganan kepada jurnal dalam talian melalui Internet, iaitu *EBSCO Host on the World Wide Web* dan *Emerald Intelligence and Full Text Electronic Library*. Pembekalan dokumen dari British Library and Document Supply Centre telah dipohon secara dalam talian dengan menggunakan sistem ARTTEL dan proses ini mempercepat penerimaan bahan untuk pengguna yang memerlukannya. Laman Web Perpustakaan, yang menyediakan linkages kepada beberapa laman web dan sumber maklumat dalam dan juga luar negara, telah dapat sambutan baik dari pihak luar yang banyak menggunakannya sebagai langkah pertama untuk akses beberapa laman web lain.

Satu perpustakaan fakulti ditubuhkan pada awal tahun di Fakulti Perubatan dan Sains Kesihatan, dan seorang Pustakawan ditugaskan untuk mengurus koleksi dan perkhidmatannya. Perpustakaan Fakulti Perubatan dan Sains Kesihatan kini mempunyai sejumlah 5,653 naskhah buku dan 97 judul jurnal.

■ Pangkalan Data Elektronik

Pangkalan Data Dalaman yang diwujudkan dengan menggunakan perisian MINISIS berkembang maju dengan penambahan 11,554 rekod secara keseluruhannya. Sehingga Disember 1998, jumlah rekod bagi setiap pangkalan data adalah :

- AGRIMAL (20,229)
- MAKMAL (43,240)
- MUWIC (5,018)
- FAMILY (2,466)
- HOUSING (2,400)
- SMI (800).

■ LIBRARY

IT use in library services has been upgraded with the on-line Internet journal subscription service viz *EBSCO Host on the World Wide Web*, *Emerald Intelligence* and *Full Text Electronic Library*. Requests for documents is undertaken on-line from British Library and the Document Supply Centre through the ARTTEL system thus hastening the document delivery process for end-users. The Library Website which is linked to various other websites and foreign sources of information has received overwhelming response from the users who appear to be using it to gain access to other websites!

For the first time, a library has been established at the Faculty of Medicine and Health Science with a professional librarian in charge. This library has a collection of 5 653 books and 97 journals.

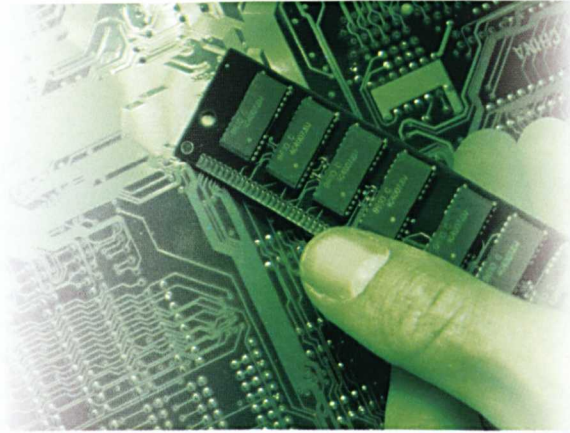
■ Electronic Database

The Electronic Database has been established using the MINISIS software. This database has grown to include 11 554 records. As of December 1998, the total number of records for each database is as follows:

- AGRIMAL: 20 229
- MAKMAL: 43 240
- MUWIC: 5 018
- FAMILY: 2 466
- HOUSING: 2 400
- SMI: 800

Koleksi Buku <i>Book Collection</i>	425,924	438,786
Koleksi Pandang-dengar <i>Audio-Visual Collection</i>	60,916	61,299
Koleksi Jurnal <i>Journal Collection</i>	21,471	21,139

Jadual 20 ■ Table 20



Selain daripada pangkalan data dalaman, akses kepada pangkalan data elektronik yang dilanggan juga berkembang maju dengan peningkatan dalam penggunaan CD-ROM dan juga pangkalan data dalam talian tempatan seperti NSTP Online, PALMOILIS dan SIRIMLINK.

■ Perkhidmatan Maklumat

Penumpuan perkhidmatan adalah kepada penelitian maklumat untuk topik-topik khusus yang dipohon oleh para pengguna. Sebanyak 416 penelitian maklumat berdasarkan topik telah disempurnakan. Beberapa sumber maklumat yang relevan telah dinilai oleh para pustakawan dan dihubungkan kepada Laman Web Perpustakaan.

■ Program Pendidikan Pengguna

Program Orientasi Perpustakaan bertujuan memberi kemahiran pencarian maklumat dalam bentuk bercetak dan juga elektronik kepada para pengguna. Program Pendidikan Pengguna Berterusan diadakan sebanyak 127 sesi dengan penyertaan hampir 3000 pelajar. Kursus Pengenalan Perpustakaan bagi para pelajar francais UPM dari Kolej Yayasan Melaka dan Institut Kemajuan Ikhtisas Pahang telah diadakan pada 23-27 Disember, dengan dihadiri oleh 1,511 pelajar.

■ PUSAT PEMBANGUNAN PERNIAGAAN (UBC)

Sepanjang tahun 1998, UBC telah mengalami beberapa perubahan dari segi bilangan unit, kakitangan dan aktiviti yang dijalankan. Unit Multimedia secara rasmi telah dikeluarkan dari pentadbiran UBC pada 1 Jun 1998. Oleh itu, sehingga penghujung tahun 1998, hanya lima unit sahaja yang masih di bawah pentadbiran UBC iaitu Unit Perundingan, Pembangunan Perniagaan, Komersilisasi, Latihan dan Unit Teknologi.

Apart from the electronic database, there has been increased access to electronic databases such as the NSPT Online, PALMOILIS and SIRIM LINK through the use of CD-ROM and the local area network.

■ Information Service

The focus of this services has been mainly to undertake information search on specialised topics. A total of 416 such requests have been completed. A number of relevant information sources have been assessed by the librarians and linked to the Library Website.

■ User Education Programme

The Library Orientation Programme is organised each year to equip users with information search skills for both print and electronic media. This year, 127 sessions have been organized under the programme involving some 3 000 students. A similar course for students from the franchised Kolej Yayasan Melaka and the Institut Kemajuan Ikhtisas, Pahang was held from 23-27 December and was attended by 1 511 students.

Bilangan Sesi Ceramah dan Jenis Kumpulan Number of Lecture Sessions/Groups	
Akademik Academic	Bil. Ceramah No. of Lectures
Pelajar Peringkat Ijazah, Diploma & Matrikulasi Degree, Diploma & Matriculation Students	120
Program Pendidikan Jarak Jauh Distance Learning Programme	4
Program Pasca Ijazah Postgraduate Programme	6
Program Pendidikan Education Programme	127
Program Literasi Maklumat Berterusan On-going Information Literacy Programme	3000 Pelajar/ Students

Jadual 21 ■ Table 21

■ UNIVERSITY BUSINESS CENTRE (UBC)

The year 1998 saw UBC undergoing several structural and functional changes. The Multimedia Unit officially separated from UBC, effective June 1998. This leaves five units under the administration of UBC — Consultation, Business Development, Commercialisation, Training and Technology.

■ Unit Perundingan

Sepanjang tahun 1998 sebanyak 53 projek perundingan dengan nilai keseluruhan RM2,361,767.00, telah dijalankan oleh pensyarah UPM. Dari jumlah tersebut, 19 projek telah membuat bayaran *over head* kepada UPM dengan jumlah keseluruhan sebanyak RM86,065.35.

■ Unit Pembangunan Perniagaan

Sepanjang tahun 1998 Unit ini telah menyelaraskan pelbagai aktiviti perniagaan UPM. Antara yang utama ialah :

- Syarikat Desasiswa Catering Services
- Pembinaan Asrama Pelajar oleh Syarikat Strategic Crest
- Projek Hidroponik Genting
- *Tribun Putra*, akhbar UPM
- Pembangunan Kampus Bintulu
- Penggambaran iklan
- Sewa telefon di kampus

■ Unit Komersilisasi

Bagi tahun 1998 hanya satu produk sahaja berjaya dikomersilkan iaitu BioFertilizer Production, hasil penyelidikan Prof. Dr. Azidah Hashim. Sebuah syarikat JV (Malaysian Agric High Tech) antara UPM dan MTDC telah ditubuhkan bagi mengkomersilkan produk tersebut. Sebanyak 13 produk lain juga telah sedia untuk dikomersilkan dan rundingan sedang diadakan (Jadual 22).

■ Unit Teknologi

Sepanjang tahun 1998, dua aktiviti utama telah dijalankan oleh unit ini iaitu :

- Menubuhkan Pusat Komersilisasi UPM yang terletak di Putra Infoport UPM
- Menyelaraskan segala aktiviti antara UPM dan MTDC

■ Consultation Unit

For the year 1998, UPM staff undertook 53 consultation projects valued at RM2 361 767.00. Of this, 19 projects contributed royalties to UPM totalling RM86 965.35.

■ Business Development Unit

For the year 1998, the Unit supervised various business activities with the more important ones being:

- Syarikat Desasiswa Catering Services
- Construction of accommodation blocks by Strategic Crest Co.
- Hydroponic Project, Genting
- *Tribun Putra*, the newspaper of UPM
- Development of Bintulu Campus
- Advertisement Placings
- Rental of Telephones in Campus

■ Commercialisation Unit

For 1998 only one project was commercialised i.e. Biofertilizer production, an outcome of Prof. Dr. Azidah Hashim's research project. A joint-venture company Malaysian Agri High Tech was formed between UPM and MTDC to market the product. Negotiations for commercialisation of 13 other products are underway (Table 22).

Produk yang telah sedia untuk dikomersilkan Products that are ready to be Commercialized

Produk Products	Penyelidik Researcher
Teknologi Biofilter <i>Biofilter Technology</i>	Prof. Madya Dr. Azni Idris
Pengeluaran Kerotina <i>Carotene Production</i>	En. Badlishah Sham
Pengering <i>Drier</i>	Dr. Nordin Ibrahim
<i>Ganoderma for Nutraceuticals</i>	Dr. Tong Chow Chin
Pengeluaran Gelatin <i>Gelatin Manufacture</i>	Prof. Dr. Suhaila Prof. Madya Dr. Azni Idris Dr. Md. Nordin Ibrahim
Perprosesan Buah Citrus <i>Citrus Fruit Processing</i>	Prof. Dr. Suhaila Mohamad
Pengeluaran Orkid & Eko-Pelancongan <i>Orchid Production and Ecotourism</i>	Dr. Salleh Kadzimin
Pengumpul Buah Sawit Terlerai <i>Oil Palm Loose Fruit Collector</i>	Dr. Salleh Jaafar
Pengeluaran Haruan untuk produk <i>Production of Haruan for Nutraceutical and cosmetic products</i>	Dr. Abd. Manan Mat Jais
Pengeluaran Cendawan Shitake <i>Production of Shitake mushroom</i>	Dr. Tan Yee How
<i>Production of Soft and Hard Ferrite</i>	Dr. Salleh Mansur
Projek R&D pengeluaran minuman, kesihatan beras perang <i>R&D Project for Health Foods Production</i>	Dr. Mohd. Yazid Abd. Manap
Kultur Tisu <i>Tissue culture</i>	Prof. Dr. Marziah Mahmood

Jadual 22 ■ Table 22

■ TAMAN PENYELIDIKAN UNIVERSITI (TPU)

Pada awal tahun 1998 ini Bahagian Ladang berpindah ke bangunan baru berhampiran dengan Bukit Expo dan perpindahan ini diikuti pula dengan penstrukturan semula yang melibatkan pengurangan kawasan dan kakitangan serta bidang dan fungsinya. Sejumlah 330 orang kakitangan terpaksa dikurangkan kepada 120 orang sahaja. Kakitangan tetap Bahagian Ladang dari pelbagai peringkat ditukarkan ke fakulti dan jabatan lain di UPM secara berperingkat - peringkat.

Dalam pertengahan tahun 1998 pula nama Taman Penyelidikan Universiti (TPU) diterima pakai bagi menggantikan nama Bahagian Ladang. Fungsi utama TPU ialah penyediaan kemudahan penyelidikan dan perniagaan. Menjelang akhir tahun, satu keputusan telah dibuat oleh pihak Pengurusan UPM bagi membenarkan peruntukan sejumlah lebih RM600,000.00 dari akaun amanah ternakan ayam untuk digunakan oleh TPU bagi kerja-kerja pembangunan perniagaannya. Dengan itu, mulai tahun 1999 pihak UPM tidak lagi memberi peruntukan tahunan bagi kerja-kerja pembangunan kecuali peruntukan pembiayaan emolumen dan perkara yang berkaitan dengannya dan ini telah mengakibatkan penstrukturan semula Taman Penyelidikan Universiti pada akhir tahun 1998.

Rumusan hasil dan kos bagi setiap unit di Taman Penyelidikan Universiti pada tahun 1998 ditunjuk di Rajah 5.

■ UNIPUTRA PRODUCTION

Uniputra Production telah ditubuhkan secara rasmi pada 18 Julai 1997. Aktiviti utama sejak ditubuhkan adalah seperti berikut :

- Membantu sistem telekuliah Universiti Putra Malaysia untuk proses pengajaran dan pembelajaran.
- Membantu pihak IDEAL dalam memberi kemudahan sistem telekuliah untuk program Pendidikan Jarak Jauh (PJJ)

Technology Unit

The two important activities carried out by this unit for 1998 were:

- Establishment of the Commercialisation Centre UPM, situated at Infoport UPM
- Coordination of UPM/MTDC activities

■ UNIVERSITY RESEARCH PARK (TPU)

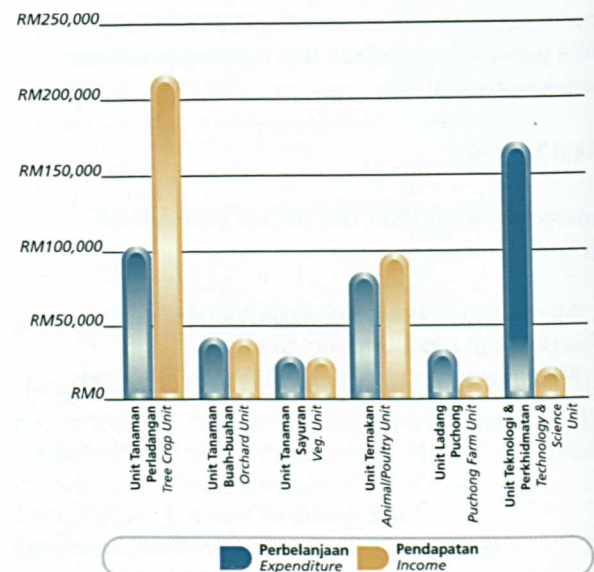
Early in 1998, UPM's Farm moved office to Expo Hill. This move also brought with it restructuring of the farm resulting in a reduced function, area and staff. A staff strength of 330 was reduced to 120. Permanent staff of the Farm were transferred in stages to various faculties and departments of UPM.

In mid-1998, a name change was effected and the Farm became known as the University Research Park. The main function of TPU is to provide facilities for research and business undertakings related to the core activities of the University. Towards the end of 1998, a decision was made to grant RM600 000.00 from the Chicken Unit Fund to TPU for business development activities. As TPU now has to operate as a cost effective centre which will no longer receive grants from UPM, further restructuring had to be effected towards the end of 1998.

A summary of the expenditure and income for each unit in TPU for 1998 is shown in Chart 5.

Rajah 5 ■ Chart 5

Kos & Pendapatan TPU 1998
TPU Expenditure & Income



- Membantu pihak Akademi Seni Kebangsaan melatih para pelajarnya menjalankan latihan amali dalam kursus Penulisan Skrip Filem III
- Memberi khidmat kepada pihak luar dalam kerja-kerja penerbitan video, seperti khidmat penyuntingan, penggambaran, rakam suara dan rakam salin
- Bersama-sama dengan Syarikat Eka Dagang (MOU) untuk mengeluarkan album "Puncak Menara" (album nyanyian oleh artis yang terdiri daripada mahasiswa)
- Menerbitkan beberapa video dokumentari dengan kerjasama beberapa Fakulti
- Membantu beberapa pensyarah menjalankan kajian menggunakan video (penggunaan video sebagai dokumentari visual dan laporan visual)
- Bekerjasama dengan Fakulti Pengajian Pendidikan menerbitkan klip video tentang Alam Sekitar
- Menerbitkan klip video Hari Raya Aidilfitri untuk siaran di RTM

■ PUSAT KOMPUTER

Pusat Komputer yang berperanan memberikan perkhidmatan teknologi maklumat kepada masyarakat Universiti telah menjalankan beberapa aktiviti termasuk menyediakan dan memperbaiki sistem aplikasi yang dapat membantu pentadbiran Universiti, menyediakan prasarana IT dan juga memberi perkhidmatan sokongan lain seperti makmal pelajar, pemprosesan kad OMR dan mel elektronik untuk pelajar dan kakitangan. Antara aktiviti-aktiviti yang dilakukan ialah :

■ Sistem Kerangka Utama

- Perkhidmatan komputer kerangka utama, sepanjang tahun 1998 telah meneruskan perkhidmatan 24 jam sehari, tujuh hari seminggu untuk kegunaan beberapa aplikasi utama seperti SMPK, SMK, Gaji/Pencen dan lain-lain
- Menaik taraf keserasian tahun 2000 (Y2K) untuk sistem komputer kerangka utama

■ UNIPUTRA PRODUCTION

Officially launched on 18 July 1998, Uniputra Production's main activities since its inception have been:

- Providing assistance to the tele-lecturing system of UPM for teaching & learning purposes
- Assisting IDEAL in providing tele-lecturing facilities for the Distance Learning Programme (PJJ)
- Assisting Akademi Seni Kebangsaan in providing practical training in Film Script Writing (Course III)
- Providing video production and duplication services, editing, filming, voice over and recording
- Production of an album entitled "Puncak Menara" (a recording of songs by UPM graduates and undergraduates in collaboration with a private company, Eka Dagang (MOU)
- Production of several documentaries with assistance from faculties
- Assisting lecturers in carrying out studies related to the use of video (using video as a documentary and reporting visual)
- Collaborated with the Faculty of Educational Studies to produce video clips on Environment
- Production of a video clip on Hari Raya Aidilfitri for RTM

■ COMPUTER CENTRE

The Computer Centre which is responsible for providing IT services to the campus population has instituted several measures to encourage wider application of the network system. It also provides IT facilities such as laboratories, processing of OMR cards and electronic mail services for students and staff. Other activities carried out by the Centre were:

■ The Main-Frame System

- Main-frame Computer Service for 24 hrs a day in 1998, seven days a week for various applications such as SMPK, SMK, salary/pension and others.
- Upgrading of the Mainframe Computer System for Y2K compliance.



■ UPMNET, Rangkaian Komputer Kampus

- Membuat kajian serta cadangan untuk naik taraf sistem rangkaian komputer UPM (UPMNET). Kajian meliputi kemampuan sistem rangkaian yang ada dari segi kelajuan dan jumlah keperluan nodal rangkaian. Bilangan modal sehingga akhir 1998 dianggarkan berjumlah 5000.
- Pembinaan sambungan rangkaian tambahan di Fakulti Rekabentuk, Pusat Islam, Makmal Penyelidikan Pusat dan Institut Biosains (Gemplasma).
- Penyelenggara kerja-kerja perolehan dan penyambungan kembali sistem rangkaian UPM dengan Pejabat Taman Penyelidikan Universiti dengan pembiayaan oleh pihak MTDC.

■ Server dan Stesen Kerja (Workstation)

Menjalankan kerja-kerja membina server-server baru yang melibatkan kerja-kerja seperti pemasangan O/S, DNS, e-mail dan webserver. Server-server baru adalah seperti berikut :

- Putra Environment Centre UPM
- Institut Pengajian Jarak Jauh (IDEAL)
- Pusat Islam UPM
- Pusat Pembangunan Perniagaan
- Bahagian Bendahari
- Jabatan Komunikasi (FEM)
- Jabatan Pengajian Lanjutan (FPP)

■ OMR

Bilangan kad OMR yang diproses sepanjang tahun 1998 ialah 3,827,600.

■ Penggunaan E-mail untuk Pelajar

Mengikut dasar yang ditetapkan, semua pelajar yang mendaftar dengan UPM akan mempunyai akaun untuk penggunaan e-mail. Setakat ini bilangan pendaftaran ialah 25000.

■ Sistem Maklumat Pengurusan Kewangan (SMPK)

- Sistem Akaun Pasca siswazah. Sistem ini dibina untuk menyimpan maklumat perakaunan pelajar ijazah lanjutan di mana yuran dikenakan mengikut kadar jam kredit.



■ UPMNET – Campus Computer Network

- Carried out a study and made a proposal for upgrading the UPM Computer Network (UPMNET). This exhaustive study covered network system capability in terms of speed and total nodal network requirements. The nodal requirement for 1998 is estimated to be 5 000.
- Extending system network to the Faculty of Architecture, Islamic Centre, Main Research Laboratory and the Bioscience Institute (Gemplasma)
- Coordinated the procurement and extension of UPMNET to the office of the University Research Park. This project was financed by MTDC.

■ Server and Workstation

The ground work for new servers was undertaken. This involved the installation of the O/S, DNS, e-mail and webserver. The new servers are at:

- Putra Environment Centre UPM
- Distance Learning Institute (IDEAL)
- Islamic Centre UPM
- Business Development Centre
- The Bursary
- Communications Department (FEM)
- Continuing Education Department (FPP)

■ OMR

A total of 3 827 600 OMR cards were processed in the course of 1998.

■ E-Mail Usage by Students

The University is actively encouraging students to register for e-mail services. So far 25 000 have registered.

■ Financial Management Information System (SMPK)

- Postgraduate Accounting System. This system was formulated to store information on postgraduate

- Sistem Gaji. Sistem Gaji yang digunakan oleh Jabatan Bendahari, UPM telah diubah suai kembali bagi memenuhi keperluan menghadapi masalah "Y2K" bila menjelang tahun 2000.

■ Lotus Notes

Pada tahun 1998 terdapat 26 server Lotus Notes dan 3569 pengguna berdaftar di seluruh Kampus UPM. Sepanjang 1998, proses naik taraf telah melibatkan peningkatan kapasiti RAM dari 128MB kepada 256MB.

■ Sistem Maklumat Pelajar (SMP)

SMP telah mula diimplementasi secara berperingkat mulai Julai 1995 dengan submodul Pendaftaran Pelajar Baru. SMP diimplementasi dengan menggunakan konsep client/server dan menggunakan sepenuhnya kemudahan rangkaian UPM (UPMNET). SMP dibahagikan kepada tiga modul : Modul Akademik, Modul HEP dan Modul Kemasukan Pelajar.

students accounts as they pay fees according to credit hours.

- The Emolument System used by the Bursary has been upgraded to be Y2K compliant.

■ Lotus Notes

In 1998, there were 26 Lotus Notes servers with 3 560 registered users in UPM campus. The upgrading exercise carried out in 1998 involved capacity enhancement from 128MB to 256MB.

■ Student Information System (SMP)

The SMP has been implemented in stages since July 1995 with the introduction of the sub-module on registration of new students. The implementation of SMP is based on a client/server concept and works on the UPM network (UPMNET). SMP is divided into three modules: Academic Module, HEP Module and Students' Registration Module.

Kursus yang Dijalankan oleh Pusat Komputer pada Tahun 1998 Courses Offered by the Computer Centre in 1998

Kursus Courses	Organisasi Organisation
Java for Academics	Software Development (SDI), Jabatan Matematik, UPM
Internet Concept & Usage (NV11)	Institut Penyiaran Tun Abdul Razak, Jabatan Penyiaran Malaysia
Pembinaan Laman Web	Institut Teknologi Perisian
Microsoft Office & Internet	B.P.M International
Pembinaan Laman Web	Pengerusi Jawatankuasa Laman Web, Fakulti Bahasa Moden, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Kejuruteraan, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Ekonomi dan Pengurusan UPM
Kursus WordPro97 Lotus Smart Suite	Pusat Pengajian Matrikulasi UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Ekologi Manusia, UPM
Kursus WordPro97 Lotus Smart Suite	Perpustakaan UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Pengajian Pendidikan, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Pengajian Bahasa Moden, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Rekabentuk dan Senibina, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Perubatan dan Sains Kesihatan, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Kedokteran Veterinar dan Sains Peternakan, UPM
Pembinaan Laman Web, Pengerusi	Pejabat Bendahari dan Pendaftar, UPM
Kursus WordPro97 Lotus Smart Suite	Jawatankuasa Laman Web, Fakulti Bahasa Moden, UPM
Kursus WordPro97 Lotus Smart Suite	Kolej Canselor, Kolej Kediaman Kelima, Kolej Kediaman Rashid, Kolej Tun Dr. Ismail, UPM
Kursus WordPro97 Lotus Smart Suite	Institut Biosains, Institut Pembangunan Perisian, Pengajian Siswazah, IDEAL, Pusat Islam dan Taman Penyelidikan Universiti, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Perhutanan, UPM
Kursus WordPro97 Lotus Smart Suite	Kolej Kediaman Keenam, Kolej Kediaman Ketujuh, Kolej Tun Perak, Pusat Pembangunan, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Sains dan Pengajian Alam Sekitar, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Pertanian, UPM
Kursus WordPro97 Lotus Smart Suite	Fakulti Sains Makanan dan Bioteknologi, UPM



■ PUSAT KEBUDAYAAN & KESENIAN SSAAS UPM

Pusat Kebudayaan dan Kesenian SSAAS yang merangkumi Dewan Besar dan Panggung Percubaan menjalankan aktiviti-aktiviti melalui memberi sumbangan perkhidmatan sokongan, penyediaan tempat dan peralatan bagi aktiviti akademik, aktiviti kebudayaan, pameran kebudayaan dan kesenian, majlis-majlis dan fungsi tertentu terutama Konvokesyen dan menyediakan ruang untuk latihan muzik moden, muzik asli dan nyanyian untuk pelajar dan kakitangan gabungan.

Pusat Kebudayaan juga menyediakan tempat untuk pelajar" pelajar UPM menjalani ujian bulanan dan peperiksaan akhir sepanjang tahun. Tempat kuliah juga disediakan di Panggung Percubaan pada hari Isnin, Selasa, Khamis dan Jumaat mulai jam 8.00 pagi hingga pukul 6.00 petang.

■ PUSAT ISLAM

Pusat Islam UPM telah memperbanyak kegiatannya selari dengan objektif dan misinya "Sebagai Pusat Kecemerlangan dalam Mengembang dan Menyebarkan Agama Islam ke Arah Pembinaan Masyarakat Madani dan Rabbani."

Aktiviti-aktiviti Pusat Islam berbentuk pendidikan, akademik, kebajikan kemasyarakatan dan sebagainya.

■ Aktiviti-aktiviti yang dijalankan sepenuh masa dan bersiri

- Tadika Islam Antarabangsa
- Kelas Pengajian selepas Maghrib
- Kelas Fardhu Ain Kanak-kanak dan Remaja
- Kursus Fardhu Ain Belia
- Kursus Bahasa Arab
- Kursus Pra-Perkahwinan
- Kursus Haji
- Kelas Pengajian Wanita

■ The SSAAS ARTS AND CULTURAL CENTRE

The SSAAS Arts and Cultural Centre consists of the Main Hall and the Experimental Theatre. The Centre conducts various activities and provides support services such as preparation and provision of equipment for academic, arts and cultural events and especially Convocation. It also provides for modern and traditional music and vocal training for both students and staff.

This Centre also serves as a venue for semester and mid-semester examinations throughout the year. The Experimental Theatre serves as a lecture hall on Mondays, Tuesdays, Thursday and Fridays from 8.00 am to 6.00 pm.

■ ISLAMIC CENTRE

The Centre conducts numerous courses in line with its objective and mission to develop into 'A Centre of Excellence for the Spread and Development of Islam towards Building a Caring and Spiritual Society'.

The Centre's activities are education, academic and social service-based.

On-going activities of the Centre include:

- International Islamic Kindergarten
- Religious classes (after Maghrib)
- Fardhu Ain' Classes for children and teenagers
- Fardhu Ain' classes for youth
- Arabic Language classes
- Pre-marital Course
- 'Haj' Course
- Women Studies Courses

■ General Activities

- Commemoration of 'Maulidur Rasul'
- Seminar on 'The Tradition of Knowledge in Islam'
- Forum
- Public Lectures



■ Aktiviti Umum

- Sambutan Maulidur Rasul
- Seminar Tradisi Ilmu dalam Islam
- Forum Perdana
- Ceramah-ceramah Umum

Selain daripada aktiviti di atas, Pusat Islam UPM juga sentiasa memenuhi jemputan dan perkhidmatan dan terlibat dalam memberi nasihat dan bimbingan kerohanian kepada para pelajar dan masyarakat setempat, majlis-majlis rasmi Universiti, sembahyang hajat, urusan jenazah, tahlil dan khidmat tunjuk ajar dan ceramah di Kolej Kediaman, surau-surau persatuan pelajar, fakulti-fakulti di UPM dan masyarakat setempat seperti sekolah, badan NGO dan sebagainya.

■ PENERBIT UNIVERSITI PUTRA MALAYSIA

Apabila UPM dikoperatkan pada tahun 1998, nama Lembaga Penerbit UPM telah ditukar kepada Jawatankuasa Penerbit (JKP). JKP dipengerusikan oleh Timbalan Naib Canselor Hal Ehwal Akademik.

Pada tahun 1998, Penerbit UPM telah menerbitkan sebanyak 14 judul buku yang meliputi pelbagai bidang. Jurnal pula, sebanyak enam isu telah diterbitkan yang mengandungi 45 makalah dari bidang-bidang sains dan teknologi, sains sosial dan kemanusiaan serta sains pertanian. Di samping penerbitan di atas, Penerbit UPM telah menawarkan pelbagai khidmat profesional seperti penyuntingan dalam bahasa Melayu dan bahasa Inggeris, penterjemahan, reka bentuk, mengatur huruf, mencetak dan sebagainya. Antara agensi awam dan swasta yang ditawarkan khidmat sepanjang tahun 1998 ialah MIGHT, MAICSA, HUKM, Jabatan Alam Sekitar, MACPA, EWRF, Jabatan-jabatan dan fakulti-fakulti di UPM. Secara kasar, pendapatan Penerbit telah meningkat kepada RM 1,395,842.90 dan baki sebanyak RM 645,880.95 dapat dibawa ke tahun 1999.

Suatu perkembangan penting untuk Penerbit ialah keputusan pihak pengurusan untuk membenarkan Penerbit mendirikan bangunan sendiri memandangkan Perpustakaan memerlukan ruangan yang diduduki oleh Penerbit kini. Lokasi di sebelah Perpustakaan telah dikenal pasti dan pada akhir tahun 1998, pelan bangunan telah disediakan dan diluluskan. Bangunan tersebut dijangka siap pada akhir tahun 1999.

Apart from the above activities, the Islamic Centre is also very often called upon in be involved in spiritual counselling to students and residents, official university functions, special prayers, burials, sermons and at college, academic and faculty functions. Schools, NGOs and local residents too very often draw on the expertise of the Centre.

■ UNIVERSITI PUTRA MALAYSIA PRESS

When the University was corporatised in 1998, the UPM's Publication Board underwent a name change to Publications Committee (JKP). This Committee is headed by the Deputy Vice Chancellor for Academic Affairs.

In 1998, UPM Press published 14 book on various fields and six issues of journals containing 45 articles on science & technology, social science and humanities and agricultural science. Besides these publications, several agencies including other government departments have commissioned the Press to undertake editing, translation and design of their publications. Faculty reports and publication are being increasingly handled by the Press. The Gross Income of the Press for 1998 was RM1 395 842.90

A very significant development for UPM Press is the move to have its own building. The location has been identified and the architecture plans have been approved. This building is expected to be completed by the end of 1999.



1998

UPM TERENGGANU (UPMT)

Pada sesi 1998/99, UPMT menawarkan lapan program pengajian di peringkat ijazah pertama, satu program pengajian Diploma dan tiga program Matrikulasi. Selain itu, UPMT juga menawarkan program ijazah lanjutan peringkat Master dan Doktor Falsafah. Program-program ini ditunjuk di Jadual 24.

Selain program pengajian sepenuh masa, UPMT juga menawarkan program Master Sains (Pentadbiran Pendidikan) yang ditawarkan secara "francais". Program ini ditawarkan oleh Fakulti Sains dan Sastera Ikhtisas dan dikendalikan pada hujung minggu. Fakulti Sains Gunaan & Teknologi telah memperkenalkan sebuah program baru iaitu Bachelo Sains dalam bidang Pengajian Makanan. Pemeriksa Luar untuk program ini ialah Prof. Dr. J.W. Lewis dari University of London.

For the 1998/99 session, UPMT offered eight degree programmes, one Diploma and three matriculation programmes. Masters and Ph.D programmes are also being offered (Table 24).

Apart from fulltime courses, the Faculty of Professional Science and Arts, UPMT offers a 'franchised' course of Master of Science (Educational Administration) which is conducted during week-ends. The Faculty of Applied Science & Technology has introduced a new course – Bachelor of Science in Food Studies. The external examiner for this course is Prof. Dr. J. W. Lewis from the University of London.

Program yang ditawarkan di UPMT Programmes Offered at UPMT

Program Programme	Tajuk Topic	
Ijazah Lanjutan Postgraduate Degrees	Doktor Falsafah Ph.D	
	Master Sains Master of Science	
Ijazah Degree	Bac. Sains Komputer Bac. of Computer Science	
	Bac. Sains Perikanan Bac. of Fishery Science	
	Bac. Sains (Samudera) Bac. of Science (Marine)	
	Bac. Pentadbiran Perniagaan Bac. of Business Administration	
	Bac. Sains (Kep) Biologi Bac. of Science (Hon.) Biology	
	Bac. Sains (Kep) Kimia Bac. of Science (Hon.) Chemistry	
	Bac. Pendidikan (Bim. & Kaunseling) Bac. of Education (Counselling & Guidance)	
	Bac. Sains Pendidikan (Kep) Matematik Bac. of Science (Education) (Hon) Mathematics	
	Diploma/Diploma Matrikulasi/ Matriculation	Diploma Perikanan Diploma in Fisheries
		Matrikulasi Sains Matriculation (Science)
		Matrikulasi Perakaunan Matriculation (Accountancy)
		Matrikulasi Peralihan Transitional Matriculation

Jadual 24 ■ Table 24



Pengambilan Pelajar

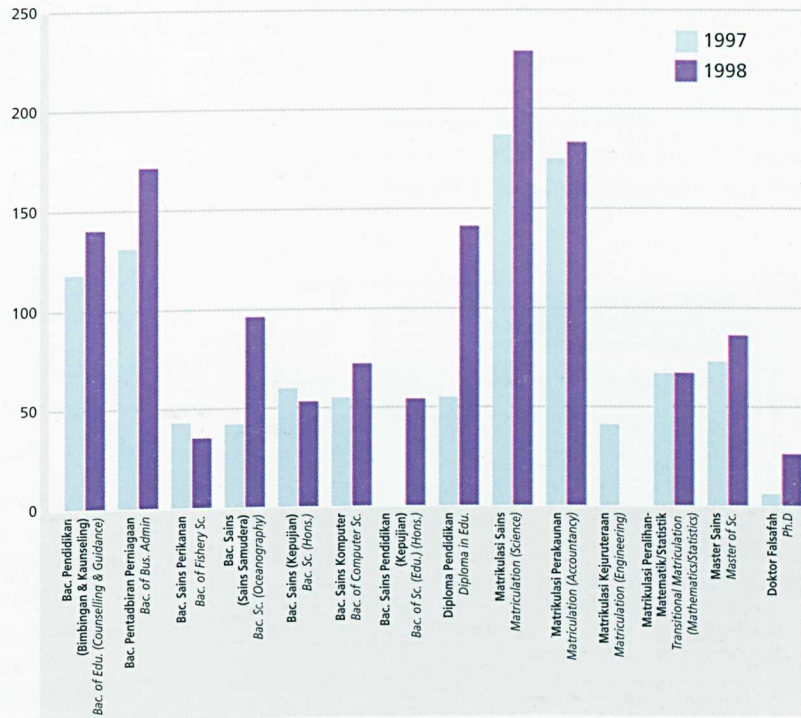
Seramai 1126 pelajar baru telah diambil bagi sesi 1998/99. Pecahan mengikut program adalah seperti di Rajah 6.

Enrolmen Pelajar

Enrolmen pelajar UPMT adalah seramai 2059 orang. Pecahan adalah seperti terdapat di Rajah 7.

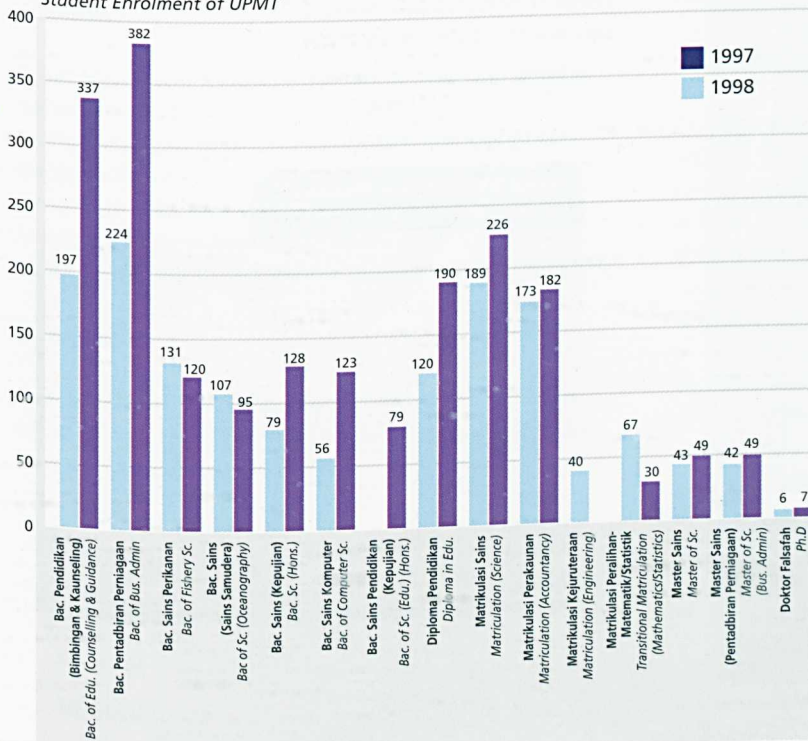
Statistik Pengambilan Pelajar UPMT
UPMT Student Intake Statistics

Rajah 6 ■ Chart 6



Enrolmen Pelajar UPMT
Student Enrolment of UPMT

Rajah 7 ■ Chart 7



Student Intake

For the 1998/99 session, a total of 1 126 students were registered. The breakdown by programmes is shown in Chart 6.

Student Enrolment

Student enrolment at UPMT now stands at 5 059: The breakdown according to programme is shown in Chart 7.

■ Pengajian Siswazah

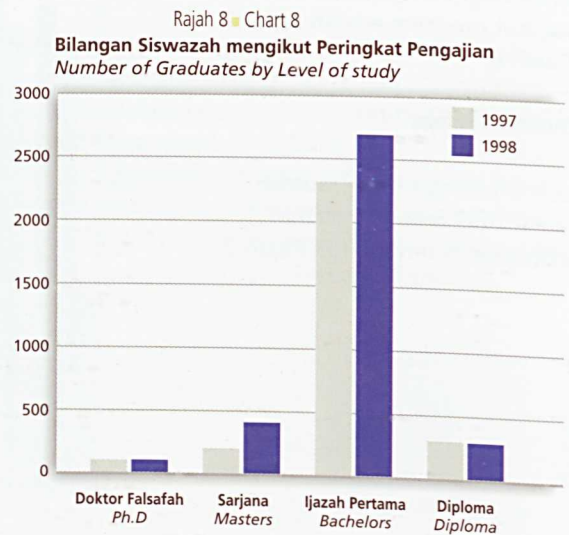
Sejumlah 57 pelajar telah mendaftar untuk sesi 1998. Dengan ini jumlah siswazah pendidikan tinggi adalah 132 orang. Program pengajian dan bidang yang diikuti oleh pelajar siswazah sesi 1998/99 adalah seperti terdapat di Jadual 25. Bilangan siswazah mengikut kategori terdapat di Rajah 8.

Program Siswazah Graduate Programme			
Bidang Pengajian/Field of Study	Peringkat Pengajian/ Level		Jumlah Pelajar No. of Students
	M.S.	Ph.D	
Akuakultur <i>Aquaculture</i>	10	1	11
Pengurusan Sumber Akuatik <i>Aquatic Resource Management</i>	5	-	5
Ekologi Perikanan dan Pengurusan <i>Fishery Ecology & Management</i>	2	1	3
Sains Marin <i>Marine Science</i>	1	1	2
Pencemaran Akuatik/Air <i>Aquatic/Water Pollution</i>	1	2	3
Biologi Marin <i>Marine Biology</i>	2	-	2
Pencemaran Marin <i>Marine Pollution</i>	2	-	2
Biologi Persekitaran <i>Environmental Biology</i>	1	-	1
Sains Samudera <i>Aquaculture</i>	-	1	1
Planktonologi <i>Planktonology</i>	1	-	1
Teknologi Perikanan <i>Fishery Technology</i>	2	-	2
Bioteknologi <i>Biotechnology</i>	4	-	4
Alam Sekitar <i>Environment</i>	3	-	3
Biologi & Pemuliharaan Penyu <i>Biology & Conservation of Sea Turtles</i>	1	-	1
GIS & Kawalan Sensor <i>GIS & Remote Sensing</i>	4	-	4
Hidupan Liar & Pentadbiran Perikanan <i>Wildlife & Fisheries Management</i>	-	1	1
Perikanan & <i>Fish/Hatchery Culture System</i>	1	-	1
Matematik/Pendidikan Matematik <i>Mathematics/Mathematics Education</i>	3	-	3
Pengoptimuman <i>Optimization</i>	1	-	1
Pendidikan/Pendidikan Dewasa <i>Education/Adult Education</i>	1	1	2
Komunikasi/Komunikasi <i>Communication/Human Interaction</i>	1	1	2
Jumlah/Total	48	9	57

Jadual 25 ■ Table 25

■ Graduate Studies

A total of 57 students registered for the 1998 session, thereby increasing the graduate population to 132. The graduate programmes for the 1998/99 session are shown in Table 25 and Chart 8.



■ Foreign Students

The 20 foreign students constitute 15.2% of the total student population. Breakdown of foreign students by country is shown in Table 26.

Negara	Peringkat Pengajian		
	M.S	Ph.D	Jumlah
Thailand	1	2	3
Bangladesh		1	1
Vietnam		3	3
Cambodia	2		2
Indonesia	5		5
India		1	1
Filipina		1	1
Sudan	2		2
Nigeria	1		1
Somalia	1		1
Jumlah	12	8	20

Jadual 26 ■ Table 26

■ Pelajar Luar Negara

Antara pelajar yang mengikuti kursus siswazah 20 merupakan pelajar dari luar negara. Angka ini merupakan 15.2% daripada jumlah pelajar siswazah. Pecahan pelajar siswazah luar negara terdapat di Jadual 26.

■ Hal Ehwal Kemahasiswaan

Pusat Hal Ehwal Kemahasiswaan (HEK) UPMT diwujudkan untuk mengendali dan bertanggungjawab dalam semua urusan yang berkaitan dengan penempatan, kebajikan, persatuan dan kegiatan pelajar, biasiswa/pinjaman kewangan, kesihatan dan tatatertib pelajar.

■ Penempatan Pelajar

Kolej Kediaman terbahagi kepada dua iaitu : Asrama Dalam Kampus dan Asrama Luar Kampus yang merangkumi Taman Permint Makmur dan Asrama Taman Desa Wira II. Asrama Dalam Kampus dan Taman Permint Makmur dapat menampung seramai 834 pelajar manakala Asrama Taman Desa Wira II pula dapat menempatkan seramai 350 orang pelajar.

Sepanjang tahun 1998, beberapa aktiviti dapat dijalankan oleh pihak kolej kediaman dalam membentuk sifat setia kawan serta bertanggungjawab.

■ Biasiswa

Pusat Hal Ehwal Kemahasiswaan dengan kerjasama bahagian Hal Ehwal Pelajar UPM telah mengendalikan permohonan untuk mendapatkan biasiswa dan pinjaman bagi pelajar baru dan lama. Penganjur biasiswa sama seperti yang diberikan kepada pelajar UPM keseluruhan. Bilangan pelajar yang ditaja dan diberi biasiswa/pinjaman adalah 1731.

■ Perjawatan

Dalam tahun 1998 terdapat sebanyak 285 jawatan telah diisi di UPMT. Pembahagian jawatan mengikut kategori adalah seperti berikut:

- 4 Profesor
- 15 Profesor Madya
- 50 Pensyarah
- 23 Tutor
- 19 Guru
- 174 Kakitangan Sokongan

■ Students' Affairs

The Centre for Student Affairs (HEK) UPMT is responsible for all affairs relating to students such as emplace-ment, welfare, activities of students, scholarship/loan, health and discipline.

■ Students Accommodation

These are two categories of residential colleges: Campus Residential Colleges and Non-Campus Resi-dential Colleges such as the ones in Taman Permint Makmur and Taman Desa Wira II. All these residential colleges can accommodate a total of 1184 students. During the year, a number of activities were carried out by the colleges with the theme of 'friendly, responsible college life'.

■ Scholarships

The Students' Affairs Centre with the assistance of HEP, Serdang arranged for scholarships & loans for new and current students seeking financial assistance. A total of 1 731 scholars have been awarded schol-ar-ships/loans so far.

■ Posts

In 1998, 285 posts were filled at UPMT and the details are as follows:

- 4 Professors
- 15 Associate Professors
- 50 Lecturers
- 23 Tutors
- 19 Teachers
- 174 Support staff

■ Penyelidikan

Di bawah program penyelidikan *Intensification of Research in Priority Areas* melalui geran jangka pendek dan sumbangan daripada syarikat dan institusi lain, UPMT telah menerima peruntukan sebanyak RM2,730, 242.94 untuk menjalankan penyelidikan dalam beberapa bidang.

■ Penerbitan

Dari segi penerbitan, pensyarah UPMT telah menghasilkan 47 makalah saintifik dalam jurnal, dua monograf, lima brosur, 15 makalah dalam prosiding dan beberapa laporan dalam majalah tempatan.

■ Pembangunan Kemudahan

Projek-projek pembangunan di bawah peruntukan RMK7 sepanjang tahun 1998 bernilai RM1,182,331.36 dan adalah seperti berikut:

■ Pembelian peralatan pengajaran	RM908,708.06
■ Menaik taraf kelajuan Internet dari 9.6K ke 128K	RM14,987.50
■ Menaik taraf kabel rangkaian komputer	RM62,990.30
■ Menaik taraf HEK, FSGT dan Makmal Bahasa	RM29,156.00
■ Bangunan kafeteria	RM131,637.50
■ Perabot	RM34,852.00

■ Pusat Kesihatan Pelajar (PKP)

Pusat Kesihatan Pelajar(PKP) telah diwujudkan di UPMT pada bulan Jun 1995. Kemudahan dan perkhidmatan yang mampu diberikan oleh Klinik Pelajar termasuklah memberi kemudahan rawatan awal kepada pesakit serta memberi panduan dan pendidikan kesihatan kepada pelajar dan kakitangan. Statistik untuk tahun 1998 menunjukkan bahawa lebih daripada 6843 pelajar dan kakitangan telah menerima rawatan dari PKP.



■ Research

Under the *Intensification of Research in Priority Areas (IRPA)* Programme and short-term grants as well as support from the private sector, UPMT received funding valued at RM2,730,242.94 for its various research projects.

■ Publications

In terms of publications, UPMT academic staff published 45 journal articles, two monographs, five brochures, 15 papers in proceedings and several reports.

■ Infrastructure Development

Under the RMK7 period, UPMT was given an allocation of RM1 182 331.36 for development projects.

■ Purchase of Educational tools	RM 980 708.06
■ Upgrading of Internet speed from 9.6k to 128k	RM 14 987.50
■ Upgrading of cable for Computer HEK, FSGT and Language Laboratories	RM 29 156.00
■ Cafeteria	RM131 637.50
■ Furniture	RM 34 852.00

■ Students' Health Centre (PKP)

This Centre has been in operation in UPMT since 1995. In terms of capacity, the clinic is only able to provide outpatient treatment and guidance and health education to the students and staff. A total of 6 843 patients received treatment at the clinic in 1998.

1998

AKTIVITI SEPANJANG TAHUN Major Activities and Events

■ JANUARI

- 24 Majlis Malam Kebudayaan
Sempena Ponggal '98,
Pusat Kebudayaan dan Kesenian Sultan
Salahuddin Abdul Aziz Shah, UPM

■ FEBRUARI

- 11 Majlis Anugerah Sukan UPM,
Kolej Ke-2, UPM
- 14 Majlis Malam Anugerah
Jelapang (MAJ) Sesi 1997/98,
Kolej Canselor, UPM
- 14 Majlis Makan Malam Rasmi Tahunan
Kolej Tun Dr. Ismail UPM
Dewan Sri Siantan,
Kolej Tun Dr. Ismail UPM
- 14 Majlis Jamuan Hari Raya 1998,
Foyer Bangunan Pentadbiran, UPM
- 16 Majlis Pelancaran
Kempen Larangan Merokok,
Dewan Taklimat, Tingkat 1,
Bangunan Pentadbiran, UPM
- 18 Hari Fakulti 1998 -
Fakulti Pengajian Bahasa Moden,
Panggung Percubaan, UPM

■ MAC

- 7 Majlis Malam Sekalung Budi
65 Tahun Alumni UPM,
Classics Ballroom, Holiday Villa,
Subang Jaya, Selangor
- 15 - 21 Majlis Mahasiswa Penyebar
Kemajuan Teknologi,
Felda Air Tawar 2, Kota Tinggi, Johor
- 30 Majlis Makan Malam
Tajaan Naib Canselor UPM,
Nakhoda 3, 3th Floor, Armada Hotel,
Petaling, Selangor



■ JANUARY

- 24 'Ponggal Night '98'
at the SSAAS Cultural & Arts Centre

■ FEBRUARY

- 11 UPM Sports Awards Ceremony,
2nd Residential College
- 14 'Jelapang' Award Night (MAJ),
1997/98 session, Chancellor's College
- 14 Tun Dr Ismail College Annual Dinner Night
Sri Siantan Hall, Tun Dr. Ismail College
- 14 Hari Raya Reception 1998,
Foyer of Admin. Building
- 16 Launch of Anti-Smoking Campaign,
Dewan Taklimat 1st. Floor, Admin. Building
- 18 Faculty Day - Faculty of Modern Languages
Experimental Theatre

■ MARCH

- 7 'Sekalung Budi' Night, 65th Year Alumni
Dinner, Classics Ballroom, Holiday Villa,
Subang Jaya, Selangor
- 15-21 'Graduates as Disseminators of Technological
Development' Function, Felda Air Tawar 2,
Kota Tinggi, Johor
- 30 Vice Chancellor's Dinner, Nakhoda 3,
3rd. Floor, Armada Hotel, Petaling Jaya,
Selangor

■ APRIL

- 3 Penyerahan Cek Sumbangan Projek Malam Fiesta Cahaya Putra '97 (MFCP) Kepada Pihak New Straits Times Berhad Bahagian Hal Ehwal Pelajar, UPM
- 24 Majlis Program Kem Sainitis Muda Peringkat Hulu Langat Negeri Selangor, Kolej Kediaman Kelima, UPM

■ MEI

- 9 - 11 Majlis English Language Camp Jabatan Bahasa Inggeris, Fakulti Pengajian Bahasa Moden, UPM
- 10 Majlis COSA, Kolej Canselor, UPM
- 13 Majlis Pelancaran Buku Panduan Institut Pengajian Tinggi Malaysia, Panggung Percubaan, UPM
- 18 Majlis Bengkel Peningkatan Profesionalisme Kaunselor di IPT Malaysia, IDEAL, UPM
- 21 Upacara Menandatangani Memorandum Of Understanding antara UPM dan Acctrak 21 Sdn. Bhd., The Malaysian SMI Association dan Perwira Affin Merchant Bank Berhad di Dewan Taklimat, Tingkat 1, Bangunan Pentadbiran, UPM
- 23 Majlis Kursus Penanaman Sayuran untuk Keperluan Keluarga, Unit Tanaman Sayuran, Bahagian Ladang, UPM
- 25 Pendaftaran Pelajar-Pelajar Baru Sesi 1998/99 UPM Kolej Canselor, UPM
- 28 Harvard Project for Asian and International Relations 1998, Pusat Dagangan Dunia Putra, Kuala Lumpur
- 29 Upacara Memeterai MOU antara UPM dengan Sekretariat Komanwel. Nirwana Ballroom 2, Hotel Hilton, Kuala Lumpur
- 31 Pertandingan Memancing di Bukit Ekspo, UPM, Kolam Bukit Ekspo, UPM

■ APRIL

- 3 Cheque Presentation - Proceeds from 'The Putra Lantern Festival Night 97' to New Straits Times Berhad, Student Affairs Division
- 24 Young Scientists Camp at Hulu Langat District level, Selangor 5th Residential College

■ MAY

- 17 English Language Camp, English Language Department, Faculty of Modern Languages
- 10 COSA Function, Chancellor's College
- 13 Launching of Guide Book for Institutes of Higher Learning, Malaysia, Experimental Theatre
- 18 Workshop: Enhancing Professionalism of Counsellors in IHLs Malaysia
- 21 Signing of a MOU with Acctrak Co. Ltd., the Malaysian SMI Association and Perwira Affin Merchant Bank Ltd., Dewan Taklimat, 1st Floor, Admin. Building
- 23 Vegetable Growing for Family Needs, Vegetable Farming Unit, The Farm, UPM
- 25 Registration of New Students, Session 1998/99, Chancellor's College, UPM



- 28 Harvard Project for Asian and International Relations 1998 Putra World Trade Centre, Kuala Lumpur
- 29 MOU Ceremony with Commonwealth Secretariat, Nirwana Ballroom 2, Hilton Hotel, Kuala Lumpur
- 31 Fishing Competition at Expo Hill, UPM

■ JUN

- 3 Fakultiku, Rumahku
Dewan Kuliah Ekonomi dan
Pengurusan 1, UPM.
- 13 Clean & Green.
Foyer Bangunan Pentadbiran, UPM
- 18 Managing Interpersonal Communication
in Multicultural Workplace.
Shangri-La Hotel, Kuala Lumpur
- 24 Majlis Kesedaran Kanser '98.
Fakulti Perubatan dan Sains Kesihatan, UPM

■ JULAI

- 12 Flora Hunt '98.
Bukit Ekspo, UPM
- 14 Jasa Putra UPM 1998,
Pusat Kebudayaan dan Kesenian Sultan
Salahuddin Abdul Aziz Shah, UPM
- 23 - 26 Pesta Jualan Sempena
Konvokesyen Ke-22 UPM 1998.
Bukit Ekspo, UPM
- 24 Majlis Ikrar dan Penyampaian Hadiah,
Dewan Syarahan, Fakulti Perubatan
Veterinar, UPM
- 25 Majlis Meraikan Graduan Ke-15 Kolej
Sultan Alaeddin Suleiman Shah, UPM
bertempat di Kolej Sultan Alaeddin Suleiman
Shah, UPM
- 29 Fep Cyber Lounge
Fakulti Ekonomi dan Pengurusan, UPM

■ OGOS

- 4 Pelancaran Akhbar Universiti - *Tribun Putra*,
Foyer Bangunan Pentadbiran, UPM
- 4 Perasmian Fakulti Perubatan dan
Sains Kesihatan, UPM,
Foyer Bangunan Pentadbiran, UPM
- 4 Pelancaran Buku 'Kunci Komputer'
dan 'Stock Pricing In Malaysia'
Foyer Bangunan Pentadbiran, UPM
- 8 Majlis Persamian Ulang Tahun-
Dekad Pertama dan Perasmian
Kedai Mesra Stesen Minyak dan Servis,
Koperasi UPM Bhd.,
Stesen Minyak dan Servis Koperasi UPM
- 12 Majlis Penyampaian Cek Esso
Fakulti Perhutanan, UPM

■ JUNE

- 3 'Our Faculty, Our Home'
Lecture Hall 1, Faculty of
Economics and Management
- 13 'Clean & Green',
Foyer of Admin. Building, UPM
- 18 Managing Interpersonal Communication in
a Multicultural Workplace,
Shangri-La Hotel, Kuala Lumpur
- 24 'Cancer Awareness Campaign 98'
Faculty of Medicine and Health Science

■ JULY

- 12 'Flora Hunt '98', Expo Hill, UPM
- 14 'Jasa Putra UPM 98',
SSAAS Arts & Cultural Centre, UPM
- 23-26 22nd Convocation Fest, 1998
Expo Hill, UPM
- 24 Oath & Award Ceremony,
Dewan Syarahan Faculty of
Veterinary Medicine, UPM
- 25 Graduates of 15th Intake of Sultan Alaeddin
Sulaiman Shah College, UPM
- 29 FEP, Cyber Lounge
Faculty of Economics & Management, UPM

■ AUGUST

- 4 Launch of the University Newspaper -
Tribun Putra
Foyer of Admin. Building, UPM
- 4 Ceremony to mark Official Opening of the
Faculty of Medicine and Health Science,
Foyer of Admin. Building, UPM
- 4 Launch of books, *Kunci Komputer* and
Stock Pricing in Malaysia at Infoport, UPM
- 8 Ceremony to mark First Decade and Opening
Ceremony of 'Your Friendly Petrol Service
Station', Koperasi UPM Ltd.,
at Petronas Petrol Service Station, UPM

- 13 - 15 Program Hari Apresiasi
Drama dan Filem Melayu
Pusat Kebudayaan dan Kesenian
Sultan Salahuddin Abdul Aziz Shah, UPM
- 14 Program Hari Apresiasi
Drama dan Filem Melayu
Dewan Persidangan, IDEAL, UPM
- 15 Majlis Peranan Pengguna dalam
Kegawatan Ekonomi
Dewan Persidangan, Institut Pendidikan
Jarak Jauh dan Pembelajaran, UPM
- 17 Majlis Perasmian
Hadiah Fakulti Sesi 1997/98,
di Fakulti Kejuruteraan, UPM
- 18 Majlis Penyampaian Anugerah Perkhidmatan
Cemerlang Tahun 1997
Pusat Kebudayaan dan Kesenian
Sultan Salahuddin Abdul Aziz Shah, UPM
- 19 Majlis Instalasi Pertubuhan Golden Key
National Honour Malaysia Chapter UPM,
Pusat Kebudayaan dan Kesenian Sultan
Salahuddin Abdul Aziz Shah, UPM
- 19 Majlis Perasmian
Program Latihan ISO 14000.
Makmal Alam Sekitar Putra,
Jabatan Sains Alam Sekitar, Fakulti Sains
dan Pengajian Alam Sekitar, UPM
- 22 - 23 Aktiviti Pusat Islam, UPM,
Masjid UPM
- 24 - 26 Majlis Konvokesyen UPM Ke-22,
Pusat Kebudayaan dan Kesenian
Sultan Salahuddin Abdul Aziz Shah, UPM
- 25 Majlis AMPT '98 International Conference
Mines Beach Resort, Kuala Lumpur
- 26 Update On Aids In Malaysia dan
Update On Drug Treatment for Aids
Fakulti Perubatan dan Sains Kesihatan, UPM
- 12 ESSO Cheque Presentation Ceremony,
Faculty of Forestry, UPM
- 13-15 'Malay Film and Drama Appreciation' Day,
SSAAS Arts and Cultural Centre, UPM
- 14 'Malay Film and Drama Appreciation' Day,
Conference Hall, IDEAL, UPM
- 15 'Role of Consumers during an Economic
Crisis', Conference Hall, IDEAL, UPM
- 17 Faculty Award Ceremony, Session 1997/98
Faculty of Engineering, UPM
- 18 1997 Excellent Service Award Ceremony
SSAAS Arts & Culture Centre, UPM
- 19 Installation Ceremony of the Formation of
Golden Key National Honour Malaysia,
Chapter UPM, SSAAS Arts & Culture Centre,
UPM
- 19 ISO 14000 Training Programme, Putra
Environment Laboratory, Department of
Environment Science, Faculty of Science &
Environmental Studies, UPM
- 22-23 Islamic Centre Activities, Masjid UPM
- 24-26 22nd UPM Convocation, SSAAS Arts &
Cultural Centre, UPM
- 25 AMPT' 98 International Conference, Mines
Beach Resort, Kuala Lumpur
- 26 Update on AIDs in Malaysia and Drug
Treatment for AIDs, Faculty of Medicine &
Health Science, UPM
- **SEPTEMBER**
- 5 University Conservatoire Symphony
Orchestra, Panggung Percubaan, UPM.
- 7 'New Product Day', Faculty of Science and
Environment Studies, Makmal
Pemprosesan Makanan, Faculty of
Food Science and Biotechnology, UPM
- 8 Hari Pengenalan Produk, Fakulti Sains dan
Pengajian Alam Sekitar
Makmal Pemprosesan Makanan,
Jabatan Teknologi Makanan, Fakulti
Sains Makanan dan Bioteknologi, UPM.

■ OKTOBER

- 5 Program Kesedaran Sains Guru-Guru Sains 1998 - 2001, Dewan Putra, UPM
- 8 Pelancaran Varieti Jagung Putra J-58', Fakulti Pertanian, UPM
- 13 Seminar Kimia Industri VI, IDEAL, UPM
- 14 Majlis Perasmian Mesyuarat Ke -11 Pegawai Eksekutif dan Dekan The University Consortium, Dewan Taklimat, Tingkat 1, Bangunan Pentadbiran, UPM
- 20 Seminar on Biocomposite Technology Centre (BTC '98), Palace of the Golden Horses, Kuala Lumpur
- 28 Kursus Sehari Memproses Susu Kacang Soya dan Tauhu Manis, Makmal Pemprosesan Makanan, Jabatan Teknologi Makanan, Fakulti Sains Makanan dan Bioteknologi, UPM

■ NOVEMBER

- 2 - 4 Short Course on Bridge Assessment and Rehabilitation Fakulti Kejuruteraan, UPM
- 3 - 13 Majlis Perasmian Commonwealth Top Management Programme, Bilik Labuan, Tingkat 5, Pusat Dagangan Dunia Putra, Kuala Lumpur
- 10 Majlis Perasmian Bengkel Forestry Economics and Policy: Towards Achieving Sustainable Forest Management, Dewan Kuliah Sains Kayu 1, Fakulti Perhutanan, UPM
- 14 Majlis Perasmian Matlamat Jelas Menjamin Kecemerlangan Pelajar Dewan Serbaguna, Institut Pembangunan

■ OCTOBER

- 5 Programme on Science Awareness for Science Teachers, 1998-2001, UPM
- 8 Official Launch of Corn Variety, *Putra J-58*, Faculty of Agriculture, UPM
- 19 VI Chemical Industry Seminar, IDEAL, UPM
- 20 The 11th Conference of Deans and Executive Officers of the University Consortium, Dewan Taklimat, 1st. Floor, Admin. Building, UPM
- 20 Seminar on Biocomposite Technology Centre (BTC '98) Palace of the Golden Horses, Kuala Lumpur
- 28 One-day Course on Processing Soya Bean & Sweet Tauhu Makmal Pemprosesan Makanan, Department of Food Technology, Faculty of Food Science & Biotechnology, UPM

■ NOVEMBER

- 2-4 Short-course on Bridge Assessment and Rehabilitation, Faculty of Engineering, UPM
- 3-13 Official Launch of Commonwealth Top Management Programme. Labuan Room, 5th. Floor, Putra World Trade Centre, Kuala Lumpur
- 10 Official Launch of Workshop on Forestry Economics and Policy: Towards Achieving Sustainable Forest Management, Dewan Kuliah Sains Kayu I, Faculty of Forestry, UPM
- 14 'Towards Clearly-defined Objectives for Students' Excellence', Dewan Serbaguna, Institut Pembangunan



1998

MEMORANDUM SEFAHAMAN Memorandum of Understanding

■ JANUARI

- 2 Cantho University, Vietnam
- 5 Institut Pengajian Islam (IPI), Kajang
- 15 Institut Sains dan Teknologi Johor Darul Takzim
- 26 Jabatan Bomba dan Penyelamat Malaysia, Kuala Lumpur

■ FEBRUARI

- 17 Yayasan Saad, Kuala Lumpur
- 27 Kolej Unitek Malaysia, Selangor

■ MAC

- 4 Cosmospect Information Technology Institute, Perak
- 5 Institut Teknologi A.N.S, Kedah
- 16 Kolej Antarabangsa Summit, Kuala Lumpur
- 19 Institut Kota Melaka, Melaka
- 23 Kolej Negeri, Kuala Pilah, Negeri Sembilan

■ APRIL

- 1 SUKOM 98'
- 17 Garden International School Sdn. Bhd. & CFBT Education Services Sdn. Bhd., Kuala Lumpur
- 22 BSN Commercial Bank Malaysia Bhd., Kuala Lumpur
- 29 AERO Precision Resources Sdn. Bhd., Shah Alam

■ MEI

- 7 University of Witwatersrand, The Republic of South Africa
- 15 Jabatan Perhutanan Sabah
- 22 Latona Biotechnology Ventures Pte. Ltd. Singapore

■ JANUARY

- 2 Cantho University, Vietnam
- 5 Islamic Studies Institute (IPS), Kajang
- 15 Institut Sains dan Teknologi, Johor Darul Takzim
- 26 Fire & Rescue Department of Malaysia, Kuala Lumpur



■ FEBRUARY

- 17 Saad Foundation, Kuala Lumpur
- 27 Kolej Unitek Malaysia, Selangor

■ MARCH

- 4 Cosmopect Information Technology Institute, Perak
- 5 Institut Teknologi, A.N. S., Kedah
- 16 Kolej Antarabangsa Summit, Kuala Lumpur
- 19 Institut Kota Melaka, Malacca
- 23 Kolej Negeri, Kuala Pilah, Negeri Sembilan

■ APRIL

- 1 SUKOM '98
- 17 Garden International School Sdn. Bhd. & CFBT Education Services Sdn. Bhd., Kuala Lumpur.



■ JUN

- 9 Tenaga Nasional Research & Development Sdn. Bhd., Selangor
- 22 Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
- 25 National Foundation for Management of Education, The Republic of France

■ JULAI

- 13 Metraplas Industries Sdn. Bhd., Kuala Lumpur
- 14 University of Science and Technology, Sana'a, The Republic of Yemen
- 23 Universities in The Hashemite Kingdom of Jordan
- 29 Strategic Crest Sdn. Bhd., Kuala Lumpur

■ OGOS

- 4 Sun Microsystems Sdn. Bhd., Kuala Lumpur. Lotus Sales and Services Sdn. Bhd., Kuala Lumpur. AccTrak 21 Sdn. Bhd., Selangor
- 12 PNB Information Technology Sdn. Bhd., Kuala Lumpur
- 26 Camtech (SA) Pty. Ltd., Australia

22 BSN Commercial Bank Malaysia Bhd. Kuala Lumpur

29 AERO Precision Resources Sdn. Bhd., Shah Alam

■ MAY

- 7 University of Witwatersrand, The Republic of South Africa
- 21 Forestry Department, Sabah
- 22 Latona Biotechnology Ventures Pte. Ltd., Singapore

■ JUNE

- 9 Tenaga National Research & Development Sdn. Bhd., Selangor
- 22 Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
- 25 National Foundation for Management of Education, The Republic of France

■ JULY

- 13 Metraplas Industries Sdn. Bhd., Kuala Lumpur
- 14 University of Science and Technology, Sana'a, The Republic of Yemen
- 23 Universities in The Hashemite Kingdom of Jordan
- 29 Strategic Crest Sdn. Bhd., Kuala Lumpur

■ AUGUST

- 4 Sun Micro Systems Sdn. Bhd., Kuala Lumpur. Lotus Sales & Service Sdn. Bhd., Kuala Lumpur. Acc Trak 21 Sdn. Bhd.
- 12 PNB Information Technology Sdn. Bhd. Kuala Lumpur
- 26 Camtech (SA) Pty. Ltd. Australia.

■ SEPTEMBER

- 25 Global Definition Sdn. Bhd. (Kemayan Corp.) Kuala Lumpur

■ SEPTEMBER

- 25 Global Definition Sdn. Bhd.
(Kemayan Corp.), Kuala Lumpur

■ OKTOBER

- 7 Kementerian Pendidikan Malaysia



- 8 Gabungan Pengusaha Makanan Malaysia (GPMM), Perak. Konsortium Pengusaha Makanan Malaysia (KPM), Perak
- 20 Sabutek (M) Sdn. Bhd., Kuala Lumpur. Institut Penyelidikan Teknologi Nuklear Malaysia (MINT), Selangor
- 27 Lakescape Intergration, Selangor. Inter Sea Fishery (M) Sdn. Bhd, Selangor

■ NOVEMBER

- 13 Lembaga Kemajuan Perhutanan Negeri Sabah (SAFODA)
- 19 ALIF Society, Mauritius.
- 25 Info-House I.T. Sdn. Bhd, Johor Bahru

■ DISEMBER

- 2 Alam Flora (M) Sdn. Bhd, Kuala Lumpur
- 8 International Maritime Organization (IMO), Japan

■ OCTOBER

- 7 Ministry of Education, Malaysia
- 8 Gabungan Pengusaha Makanan Malaysia (GPMM), Perak Konsortium Pengusaha Makanan Malaysia (KPM), Perak
- 20 Sabutek (M) Sdn. Bhd., Kuala Lumpur Nuclear Technology Research Institute (MINT) Sdn. Bhd., Selangor
- 27 Landscape Integration, Selangor Inter Sea Fishery (M) Sdn. Bhd., Selangor

■ NOVEMBER

- 13 Sabah Forest Development Authority (SAFODA)



- 19 ALIF Society, Mauritius
- 25 Info-House I.T. Sdn. Bhd., Johor Bahru

■ DECEMBER

- 2 Alam Flora (M) Sdn. Bhd. Kuala Lumpur
- 8 International Maritime Organisation (IMO), Japan



■ JANUARI

- 15 Delegasi dari Pulau Island, Taipei diketuai oleh Mr. Gibbons John C., Governor, Koror State

■ FEBRUARI

- 16 Lawatan Mr. Pekka Sitari, Editor in Chief "The Kaija Lainen" (Newspaper) dan Mrs. Kaija Sitari, Interlibrary Loan Section, University of Joensuu, Finland
- 21 Lawatan Ms. Carmila Legarda, Compensation and Benefits Section of the British Council Office in London, United Kingdom
- 24 Lawatan Dr. Don Rowlatt, Vice- President, Finance and Operations dan Mr. Trevor Matthews, Special Advisor to the President and Vice-President Administration Emeritus, University of Victoria, Canada

■ MAC

- 13 Lawatan Mr. Geoff Ormandy, Director, International Centre, Lincoln University, New Zealand
- 15-22 Lawatan Ms. Jean Mc. Donald, University of Guelph, Canada



■ JANUARI

- 15 Delegation from Pulau Island, Taipei led by Mr. Gibbon John C, Governor of Koror State

■ FEBRUARI

- 16 Mr. Pekka Sitari, Editor in Chief *The Kaija Lainen* (Newspaper) and Mrs. Kaija Sitari, Interlibrary Loan Section, University of Joensuu, Finland.
- 21 Ms. Carmila Legarda, Compensation and Benefits Section of the British Council Office in London, United Kingdom
- 24 Dr. Don Rowlatt, Vice President, Finance & Operations and Mr Trevor Mathews, Special Advisor to the President & Vice President Administration Emeritus, University of Victory, Canada

■ MARCH

- 13 Mr Geoff Ormandy, Director, International Centre, Lincoln University, New Zealand
- 15-22 Ms Jean Mc Donald University of Guelph, Canada
- 20 Delegation from University of Nancy-Metz, France: Prof. Herbert Nery, Prof. Jean Paul Barbiche, Mr. Rateau Joel, National Foundation for Management Education, Mr. Uhamel, Christian Councillor, Ministry of Education, France and Mr Philippe Liege, Cultural Counsellor, Embassy of the Republic of France in Malaysia
- 21-24 Mr Abdol Majid Eskandari, Deputy Director General, Office of International Relations, University of Tehran, Iran

- 20 Delegasi dari University of Nancy - Metz, France iaitu Prof. Herbert Nery, Prof. Jean Paul Barbiche, Mr. Rateau Joel, National Foundation for Management Education, Mr. Uhamel Christian Counsellor, Ministry of Education, France dan Mr. Philippe Liege, Cultural Counsellor, Embassy of The Republic of France in Malaysia
- 21-24 Lawatan Mr. Abdol Majid Eskandari, Deputy Director General, Office of International Relations, University of Tehran, Iran
- 23 Lawatan Mr. David Akers, Faculty Registrar, Faculty of Economics, Business and Law, University of New England, Australia
- 27 Delegasi dari Tongji Medical University, Wuhan, The People's Republic of China diketuai oleh Prof. Wang Ximing, Vice-President (Student Affairs) Prof. Li Hong Pei, Vice-Dean of Student Admission dan Mr. Yu Zhong, Project Officer, International Exchange Office
- 28-29 Delegasi dari National Economics University, Vietnam diketuai oleh Prof. Nguyen Dinh Phan, Vice-Rector, NEU, Mr. Phan Nguyen Ha, Lecturer, NEU, Interpreter, Assoc. Prof. Dr. Tran Chi Thanh, Head, NEU Academics Affairs Department, Dr. Mao Quoc Chanh, Dean NEU Faculty of Labor and Population, Dr. Dang Thi Loan, Dean NEU Faculty of In-service Training, Mr. Vu Kirn Dung, Director of Center of Business Administration, NEU dan Mr. Vu Huy Tien, Expert NEU Academics Affairs Department
- 30 - 31 Delegasi dari University of Adelaide diketuai oleh Prof. Mary O' Kane, Vice-Chancellor, University of Adelaide, Australia

■ APRIL

- 10 Lawatan Rasmi H.E Amany Mushega, Minister of Education, The Republic of Uganda Mr. B.N Otto, Permanent Secretary, Ministry of Education, Mr. Stephen Maloba, Commissioner for Education dan Mr. Patrick Makumbi, Director, Project Implementation Unit
- 11 Lawatan Delegasi dari Japan International Cooperation Agency (JICA) diketuai oleh Mr. Naohiro Tsutsumi, Assistant Director, Technical Corporation Division, Ministry of Foreign Affairs
- 13 Lawatan Prof. Dr. W.P Davies, Vice-Principal and Professor of Agricultural Systems, Royal Agricultural College, United Kingdom



- 23 Mr David Akers, Faculty Registrar, Faculty of Economics, Business & Law, University of New England, Australia
- 27 Delegation from Tongji Medical University, Wuhan, The People's Republic of China led by Prof. Wang Ximing, Vice-President (Student Affairs), Prof. Li Hong Pei, ViceDean of Student Admission and Mr Yu Zhong, Project Officer, International Exchange Office
- 28-29 Delegation from National Economics University (NEU), Vietnam led by Prof. Nguyen Dinh Phan, Vice-Rector, Mr. Phan Nguyen Ha, Lecturer and Interpreter, Assoc. Prof. Dr. Tran Chi Thanh, Head, Academic Affairs Department, Assoc. Prof. Dr. Mao Quoc Chanh, Dean, Faculty of Labour & Population, Dr. Dang Thi Loan, Dean, Faculty of In-service Training, Mr. Vu Kirn Dung, Director of Centre of Business Administration, and Mr Vu Huy Tien, Expert, Academic Affairs Department
- 30-31 Delegation from University of Adelaide led by Prof. Mary O'Kane, Vice Chancellor, University of Adelaide, Australia

■ APRIL

- 10 Official visit by H. E. Amany Mushega, Minister of Education, The Republic of Uganda, Mr. B. N. Otto, Permanent Secretary, Ministry of Education, Mr. Stephen Maloba, Commissioner of Education and Mr. Patrick Makumbi, Director Project Implementation Unit
- 11 Delegation from Japanese International Cooperation Agency (JICA) led by Mr Naohiro Tsutsumi, Assistant Director, Technical Corporation Division, Ministry of Foreign Affairs
- 13 Prof. W. P. Davies, Vice Principal and Professor of Agricultural Systems, Royal Agriculture College, United Kingdom
- 22 Visit from Universitas Muhammadiyah, Indonesia: Dr. Dalmy Iskandar, Rector, Drs. H. Chairunman Pasaribu, Deputy Rector for Finance and Dr. Mustafa Majnu, Assistant Rector
- 24 Official visit by H. E. Ferhat Ata-man, Ambassador of Turkey and Prof. Turkkaya Ataov, Republic of Turkey

22 Lawatan dari Universitas Muhammadiyah, Indonesia terdiri daripada Dr. Dalmy Iskandar, Rektor, Drs. H. Chairunman Pasaribu, Timbalan Rektor Kewangan dan Dr. Mustafa Majnu, Penolong Rektor

24 Lawatan rasmi H.E. Ferhat Ata-man, Ambassador of Turkey dan Prof. Turkkaya Ataov, Republic of Turkey

■ MEI

5 Lawatan Prof. Chen Naifang, Chancellor, Beijing, Foreign Studies University, Prof. Wu Zong Yu, Director, Malay Language Centre dan Prof. Chen Hangzhu, Director and Coordinator of International Programs, Beijing Foreign Studies University, The People's Republic of China

6 Lawatan Miss Tracey Elkind, Operation Manager, George Brown College, Canada

20 Lawatan dari Danish University Consortium for Environment and Development Industry and Urban Areas (DUCED - 1 & UA) diketuai oleh Prof. Dr. Jens Aage Hansen, Centre Manager of Aalborg University serta delegasi terdiri daripada Assistant Prof. Jorgen Eskemose Anderson, Centre Manager of the Royal Danish Academy of Fine Arts, School of Architecture, Assistant Prof. Dr. Michael W. Hansen, Centre Manager of Copenhagen Business School, Assistant Prof. Jens Christian Tjell, Centre Manager of the Technical University of Denmark, Assistant Prof. Henning Schroll, Centre Manager of Roskilde University dan Ms. Line Jacobsen, DUCED - 1 & UA Secretary

20 Delegasi dari The Government Bodies of Hubei Province, The People's Republic of China diketuai oleh Mr. Xu Fei, Hubei Province Xingrnen Hydro Electric Resources Bureau

■ JUN

2 Lawatan Dr. Abdul Khaleque, Vice Chancellor serta delegasi dari Universities Grant Commission (UGC), The People's Republic of Bangladesh

12 Lawatan Mr. Kim Ostr-up, Chairman of the Danish IT - Council dan Mrs. Anette Steenberg, Danish Ministry of Foreign Affairs, Denmark

19 Lawatan Prof. Ian Watson, Principal (Assistant Vice-Chancellor) of the Massey University Campus in Albany, New Zealand

■ MAY

5 Prof. Chen Naifang, Chancellor, Beijing Foreign Studies University, Prof. Wu Zong Yu, Director of Malay Language Centre and Prof. Chen Hangzhu, Director and Coordinator of International Programmes, Beijing Foreign Studies University, The People's Republic of China

6 Miss Tracey Elkind, Operations Manager, George Brown College, Canada

20 Danish University Consortium for Environment & Development Industry and Urban Areas (DUCED-1&UA) led by Prof. Dr. Jens Aage Hansen, Centre Manager of Aalborg University. Delegation: Assistant Prof. Jorgen Eskemose Anderson, Centre Manager of the Royal Danish Academy of Fine Arts, School of Architecture, Assistant Prof. Dr. Michael W. Hansen, Centre Manager of Copenhagen Business School, Assistant Prof. Jens Christian Tjell, Centre Manager of the Technical University of Denmark, Assistant Prof. Henning Schroll, Centre Manager of Roskilde University and Ms Line Jacobsen, DUCED-1&UA Secretary

20 Delegation from the Government Bodies of Hubei Province, The People's Republic of China led by Mr. Xu Fei, Hubei Province Xingrnen Hydro Electric Resources Bureau

■ JUNE

2 Dr. Abdul Khaleque, Vice Chancellor together with a delegation from Universities Grant Commission (UGC), The People's Republic of Bangladesh

12 Mr Kim Ostr-up, Chairman of the Danish IT-Council and Mrs. Anette Steenberg, Danish Ministry of Foreign Affairs, Denmark

19 Prof. Ian Watson, Principal (Assistant Vice Chancellor) of the Massey University Campus in Albany, New Zealand

23 Delegation from Universities Grant Commission (UGC), The People's Republic of Bangladesh

■ JULY

11 Dr. Dominique Chapelle, Researcher in Scientific Computing, National Research Institute in Computer Science and Automatic Control (INRA) and Dr. Jean-Pierre Puel from the University of Versailles and SMAI, the French Society on Applied Mathematics for Industry, France

- 23 Lawatan Rombongan dari Universities Grant Commission (UGC), The People's Republic of Bangladesh

■ JULAI

- 11 Lawatan Dr. Dominique Chapelle, Researcher in Scientific Computing, National Research Institute in Computer Science and Automatic Control (INRA) dan Pr. Jean - Pierre Puel dari the University of Versailles and SMAI, the French Society on Applied Mathematics for Industry, France
- 13 Lawatan Mr. Alfonso Martinez Cearra, General Director dan Mr. Inigo Atxutegi, International Relations of Bilabao Metropoli-30, Spain 15
- Lawatan Delegasi dari Kementerian Sains, Teknologi dan Alam Sekitar, Vietnam diketuai oleh Mr. Do Bao, Deputy Director of Ministry Office, MOSTE
- 18 Lawatan H.E. Mijhirn Al - Kraisha, Minister of Agriculture and Mr. Jihad Abu Nushref, Director of Projects Department, Ministry of Agriculture, Jordan
- 27 Lawatan dari Miike Agriculture High School, Japan terdiri daripada Mr. Iwaya Kyoji, Mr. Nozaki Masahide, Mr. Kondo Sadaharu, Ms. Noda Emi, Ms. Yoshihara Michiyo, Ms. Nakamura Yoko dan Mr. Ryoichi Miyoshi, Coordinator of OISCA- International
- 28 Lawatan Mr. Yoshio Hideshima, Director, Planning and Coordinator Division, Planning Department, GIFU Prefecture, Japan
- 31 Lawatan Ir. Sjamsu Anuar Asir, Rektor, Universitas Jayabaya, Indonesia

■ OGOS

- 15 Lawatan H.E. Jorge Bayona, Ambassador the Republic of Peru and Prof. Fernando Gonzalez - Vigil, Executive Director to the Economics and Management Program in the Asia Pacific and Coordinator of the Peruvian Network for Asia Pacific Studies, Lima, The Republic of Peru
- 17 Mr. Dawood Auleear, General Secretary, ALIF Society, Mauritius

- 13 Mr. Alfonso Martanez Caerra, General Director and Mr. Inigo Atxutegi, International Relations of Bilabao Metropoli 30, Spain
- 15 Delegation from Ministry of Science, Technology and Environment, Vietnam led by Mr Do Bao, Deputy Director of Ministry Office, Vietnam
- 18 H. E. Mijhirn Al-Kraisha, Ministry of Agriculture and Mr. Jihad Abu Nushref, Director of Projects Division, Ministry of Agriculture, Jordan
- 27 Delegation from Miike Agriculture High School: Iwaya Kyoji, Mr. Nozaki Masahide, Mr. Kondo Sadaharu, Ms Noda Emi, Ms. Yoshihara Michiyo, Ms Nakamura Yoko and Mr Ryoichi Miyoshi, Coordinator of OISCA- International
- 28 Mr. Yoshio Hideshima, Director, Planning and Coordinator Division, Planning Department, GIFU Prefecture, Japan
- 31 Ir. Sjamsu Anuar Asir, Rector, Universitas Jayabaya, Indonesia

■ AUGUST

- 15 H.E. Jorge Bayona, Ambassador of the Republic of Peru and Prof. Fernando Gonzalez-Vigil, Executive Director to the Economics & Management Programme in the Asia Pacific & Coordinator of the Peruvian Network for Asia Pacific Studies, Lima, The Republic of Peru
- 17 Mr Daewood Auleear, General Secretary, ALIF Society, Mauritius.

■ SEPTEMBER

- 1 Assoc. Prof. Jonathan Baldry, Assoc. Dean, Department of Economics, Faculty of Economics, Business & Law, University of New England, Australia
- 7 Dr. Richard Scott, Faculty of Civil Engineering, University of Durham, United Kingdom

■ SEPTEMBER

- 1 Lawatan Assoc. Prof. Jonathan Baldry, Associate Dean, Department of Economics, Faculty of Economics, Business and Law, University of New England, Australia
- 7 Lawatan Dr. Richard Scott, Faculty of Civil Engineering, University of Durham, United Kingdom

■ OKTOBER

- 1 Lawatan Kementerian Pendidikan The People's Republic of China diketuai oleh Mr. Sun Ye Xiae, Diplomat. Rombongan terdiri daripada Prof. She Pei Hua, Qing Hua University, Mr. Wang Wei Guc, Ministry of Education dan Ms. Wong Yun Fei, Ministry of Education
- 3 Lawatan Mr. K.M. Abul Kalam, Deputy Secretary, Ministry of Agriculture and Dr. Wais Kabir, Principal Technical Officer, Bangladesh Agriculture Research Council, Farmgate, Dhaka, The People's Republic of Bangladesh
- 22 Lawatan rombongan dari Sichuan Association for Science & Technology (SAST), The People's Republic of China. Rombongan diketuai oleh Mr. Wang Xiao Cai, Engineer Chairman, Neijiang City, SAST

■ NOVEMBER

- 16 Lawatan dari The Department of Trade & Industry and Industry's International Technology Service (ITS). Rombongan terdiri daripada Dr. Ian Hardson, Deputy Director, Management Best Practice Directorate, Dr. Suran Goonatilake, Mr. Charlie Kwong dan Prof. Philip Treleven
- 18 Lawatan DYMM Sultan Selangor sempena Majlis Penyerahan Land Rover
- 19 Lawatan Mr. Dawood Auleear, General Secretary, ALIF Society, Mauritius
- 25 Lawatan Prof. Wang Jianjun dan Prof. Gao Luduan dari Beijing Huijian Private School, The People's Republic of China

■ OCTOBER

- 1 Ministry of Education of the People's Republic of China led by Mr. Sun Ye Xiae, Diplomat. Delegation consisted of Prof. She Pei Hua, Qing Hua University, Dr. Wang Wei Guc, Ministry of Education and Ms. Wong Yun Fei, Ministry of Education
- 3 Mr K. M. Abul Kalam, Deputy Secretary, Ministry of Agriculture & Dr. Wais Kabir, Principal Technical Officer, Bangladesh Agriculture Research Council, Farmgate, Dhaka, The People's Republic of Bangladesh
- 22 Delegation from Sichuan Association for Science & Technology (SAST), The People's Republic of China led by Mr Wang Xiao Cai, Engineer Chairman, Neijiang City, SAST

■ NOVEMBER

- 16 The Department of Trade & Industry and International Technology Service (ITS). Delegation consisted of Dr. Ian, Hardson, Deputy Director, Management Best Practice Directorate, Dr. Suran Goonetilake, Mr Charlie Kwong and Prof. Philip Treleven
- 18 DYMM Sultan Selangor in conjunction with the official 'Landrover Handing-over Ceremony'
- 19 Mr Dawood Auleear, General Secretary, ALIF Society , Mauritius
- 25 Prof. Wang Jianjun and Prof. Gao Luduan from Beijing Huijian Private School, The People's Republic of China

■ PERBELANJAAN MENGRUS

Pada tahun kewangan yang berakhir pada 31 Disember 1998, jumlah pendapatan mengurus Universiti ialah RM200.3 juta, meningkat sebanyak 22.03% dari tahun 1997 yang berjumlah RM164.1 juta.

Pendapatan Mengurus/Operating Income				
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Pemberian Kerajaan Government Grants	167.3	83.53	134.1	81.72
Pelbagai Yuran Fees	30.9	15.40	27.6	16.82
Pendapatan Lain Other Income	2.1	1.07	2.4	1.46
Jumlah/Total	200.3		164.1	

Jadual 27 ■ Table 27

Daripada jumlah pendapatan ini, sebanyak RM167.3 juta atau 83.53 % adalah pemberian Kerajaan dan bakinya, RM33 juta atau 16.47% adalah daripada sumber pelbagai seperti yuran pengajian, sewa dan pelbagai pendapatan lain.

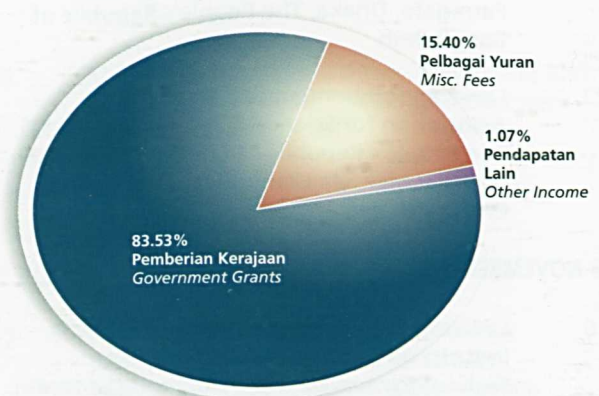
Perbelanjaan mengurus Universiti meningkat sebanyak 4.21 % daripada RM161.5 juta pada tahun 1997, kepada RM168.4 juta pada tahun 1998. Pembayaran emolumen merupakan perbelanjaan yang paling besar iaitu atas kadar 68.33% dari keseluruhan perbelanjaan untuk tahun 1998. Perbelanjaan emolumen telah meningkat sebanyak 6.99% berbanding tahun 1997 dan bagi pembayaran bukan emolumen, perbelanjaan telah menurun pada kadar 1.34%.

■ OPERATING EXPENDITURE

For the financial year ending 31 December 1998, the total allocation for operating expenditure saw a 22.03% rise that is from RM164.1 million in 1997 to RM200.3 million in 1998.

Of this amount, RM167.3 million or 83.53% represented government grant while the balance of 16.47% was raised from other sources such as tuition fees, rentals and other income.

Rajah 9 ■ Chart 9
Punca Pendapatan Mengurus 1998
Source of Operating Income for 1998



Perbelanjaan Mengurus
Operating Expenditure

	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Emolumen Emoluments	115.0	68.33	107.5	66.56
Perbelanjaan selain Emolumen Expenditure other than Emoluments	53.4	31.67	54.0	33.44
Jumlah/Total	168.4		161.5	

Jadual 28 ■ Table 28

Perbelanjaan Mengurus
Operating Expenditure

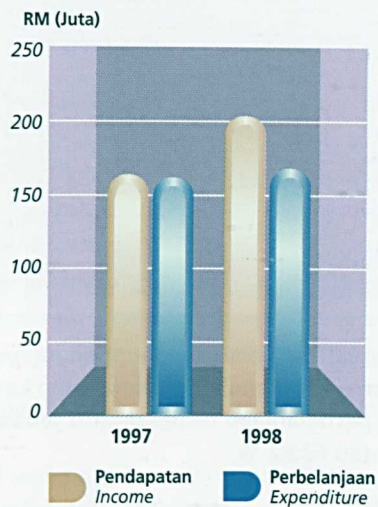
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Emolumen <i>Emoluments</i>	115.0	68.33	107.5	66.56
Bekalan & Bahan-Bahan <i>Equipment & Supplies</i>	23.0	13.66	25.7	15.91
Penyelenggaraan & Pembaikan <i>Maintenance & Repairs</i>	7.2	4.26	6.3	3.91
Perkhidmatan Iktisas & Lain-Lain <i>Professional & other Services</i>	13.9	8.24	16.1	9.97
Aset Tetap <i>Fixed Assets</i>	9.3	5.51	5.9	3.65
Jumlah/Total	168.4		161.5	

Jadual 29 ■ Table 29

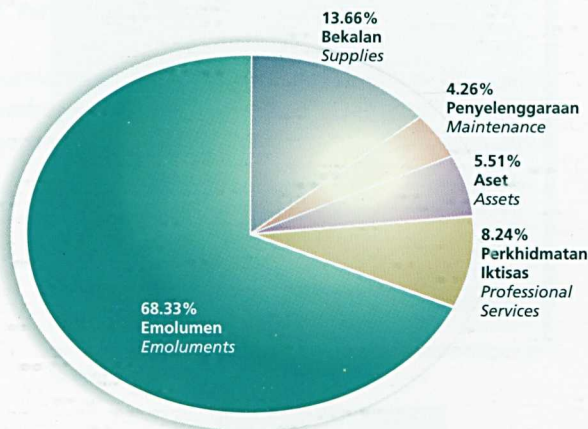
The operating expenditure saw a 4.21% increase, that is from RM161.5 million in 1997 to RM168.4 million in 1998. Emolument payouts constituted the largest operating item representing 68.33% of the total expenditure for the year 1998. However, there was a 6.99% increase in expenditure compared to 1997 and other expenditure excluding emoluments, saw a 1.34% decline.

Rajah 10 ■ Chart 10

Perbandingan Pendapatan dan Perbelanjaan Mengurus
Comparison between Operating Income and Expenditure

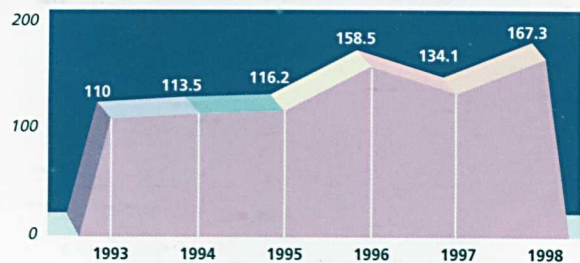


Rajah 11 ■ Chart 11
Pecahan Perbelanjaan Mengurus 1998
Breakdown Operating Expenditure for 1998



Rajah 12 ■ Chart 12

Pemberian Kerajaan untuk Perbelanjaan Mengurus 1993-1998
Government Grants for Operating Expenditure 1993-1998



■ PERBELANJAAN PEMBANGUNAN

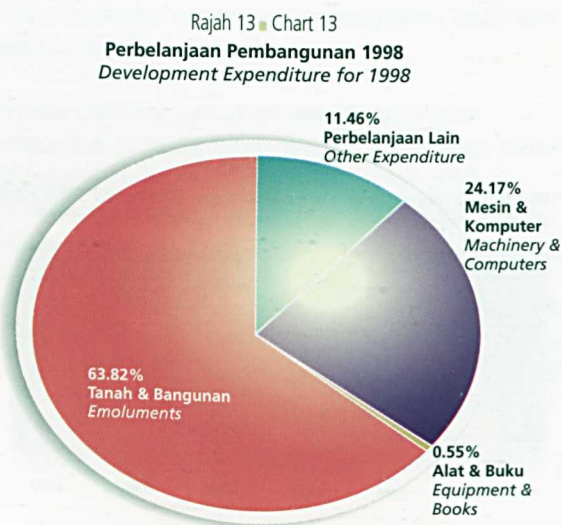
Jumlah yang diterima daripada Kerajaan untuk Perbelanjaan Pembangunan bagi tahun 1998 ialah sebanyak RM35.6 juta di mana sejumlah 71.49 % adalah untuk membiayai projek-projek baru RMK-7 dan 28.51% adalah untuk meneruskan projek-projek sambungan RMK6.

Pemberian daripada Kerajaan merupakan peratusan terbesar iaitu 90.33% daripada keseluruhan pendapatan untuk tahun 1998.

Pendapatan Pembangunan Development Income				
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Pemberian Kerajaan Government Grants	35.6	90.33	32.6	96.45
Pendapatan Lain Other Income	3.8	9.67	1.2	3.55
Jumlah/Total	39.4		33.8	

Jadual 30 ■ Table 30

Daripada jumlah perbelanjaan Pembangunan, perbelanjaan untuk tanah, bangunan dan kemudahan merupakan perbelanjaan terbesar iaitu sebanyak RM12 juta atau 63.82 %.



■ DEVELOPMENT EXPENDITURE

In 1998, the total grant received from the Government for Development Expenditure was RM35.6 million. Of this amount 71.49% was to finance new projects under the 7th Malaysian Plan while 28.51% was for the continuation of projects initiated under the 6th Malaysian Plan.

The Government's allocation for development accounted for 90.33% of total amount received in 1998.

Perbelanjaan Pembangunan Development Expenditure				
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Tanah, Bangunan & Kemudahan Land, Buildings & Infrastructure	12.0	63.82	18.3	62.25
Alat, Kelengkapan & Buku Equipment & Books	0.1	0.55	0.7	2.38
Mesin & Komputer Machinery & Computers	4.6	24.17	2.0	6.80
Perbelanjaan-Perbelanjaan Lain Other Expenditure	2.2	11.46	8.4	28.57
Jumlah/Total	18.9		29.4	

Jadual 31 ■ Table 31

Expenditure for Land, Building & Infrastructure was the major expense item accounting for RM12.0 million or 63.82% of the total expenditure on development.

■ PERBELANJAAN IRPA

Jumlah pemberian Kerajaan bagi Perbelanjaan IRPA pada tahun 1998 adalah sebanyak RM29.5 juta yang mana RM2 juta telah diperuntukkan untuk membiayai projek-projek jangka pendek.

■ Pendapatan IRPA

Pemberian Kerajaan merupakan sumbangan terbesar iaitu sebanyak 89.11% daripada keseluruhan jumlah pendapatan dan sebanyak 10.89% adalah pelbagai pendapatan lain.

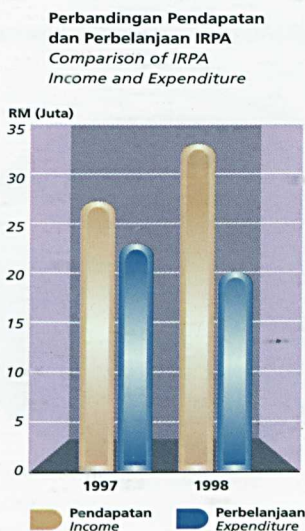
Pendapatan IRPA IRPA Income				
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Pemberian Kerajaan Government Grants	29.5	89.11	25.6	94.46
Pendapatan Lain Other Income	3.5	10.89	1.5	5.54
Jumlah/Total	33.0		27.1	

Jadual 32 ■ Table 32

■ Perbelanjaan IRPA

Jumlah perbelanjaan IRPA untuk tahun 1998 telah berkurangan sebanyak 10.06% iaitu RM20.0 juta berbanding dengan RM23.0 juta pada tahun 1997.

Rajah 14 ■ Chart 14



■ IRPA ALLOCATION

For the year 1998, the total government allocation for IRPA was RM29.5 million. Of this, RM2 million was reserved for short-term projects.

■ IRPA Income

The government was the major contributor towards IRPA contributing 89.11% of the total allocation. Only 10.89% was from other sources.

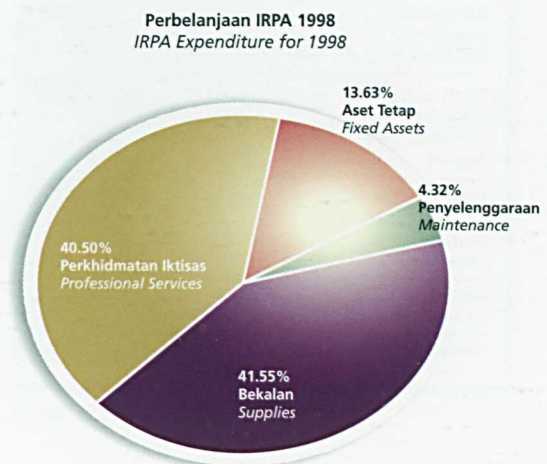
	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Bekalan & Bahan-Bahan Supplies & Materials	8.3	41.55	6.5	28.26
Penyelenggaraan & Pembaikan Maintenance & Repairs	0.9	4.32	0.9	3.92
Perkhidmatan Iktisas & Lain-Lain Professional & Other Services	8.1	40.50	8.2	35.65
Aset Tetap Fixed Assets	2.7	13.63	7.4	32.17
Jumlah/Total	20.0		23.0	

Jadual 33 ■ Table 33

■ IRPA Expenditure

The total expenditure incurred for IRPA saw a 10.06% decline i.e from RM23.0 million in 1997 to RM20.0 million in 1998.

Rajah 15 ■ Chart 15



Pendapatan Kolej Kediaman
Income of Residential Colleges

	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Yuran Kolej Kediaman/ Hostel Fees	9.5	83.00	10.3	85.12
Pelbagai Yuran Misc. Fees	0.5	4.56	0.5	4.14
Pendapatan Lain Other Income	1.4	12.44	1.3	10.74
Jumlah/Total	11.4		12.1	

Jadual 34 ■ Table 34

■ **PERBELANJAAN KOLEJ KEDIAMAN**

Sumber utama pendapatan Kolej Kediaman adalah daripada kutipan yuran kolej kediaman dan selebihnya hasil dari pelbagai pendapatan. Pada tahun 1998 hasil kutipan yuran telah merosot kepada RM9.5 juta atau 7.26 % berbanding dengan RM10.3 juta pada tahun 1997. Kekurangan ini adalah disebabkan pelajar hanya membayar yuran penginapan dan tidak membayar yuran makanan kerana penyediaan makanan telah diswastakan.

Jumlah perbelanjaan mengurus Kolej Kediaman bagi tahun 1998 adalah sebanyak RM7.9 juta atau 29.42% kurang daripada jumlah perbelanjaan bagi tahun 1997 iaitu RM11.2 juta. Kekurangan ini adalah disebabkan tiada perbelanjaan penyediaan makanan pelajar yang telah diswastakan sepenuhnya dalam tahun 1998.

Perbelanjaan Kolej Kediaman
Expenditure of Residential Colleges

	Tahun/Year 1998		Tahun/Year 1997	
	(RM juta)	(%)	(RM juta)	(%)
Bekalan & Bahan-Bahan Supplies & Materials	3.9	49.43	5.3	47.32
Penyelenggaraan & Pembaikan Maintenance & Repairs	2.3	29.40	2.0	17.86
Perkhidmatan Iktisas & Lain-Lain Professional & Other Services	1.4	17.24	3.6	32.14
Aset Tetap Fixed Assets	0.3	3.93	0.3	2.68
Jumlah/Total	7.9		11.2	

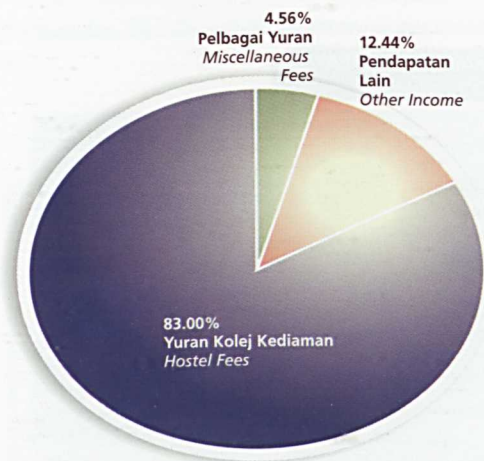
Jadual 35 ■ Table 35

■ **RESIDENTIAL COLLEGES EXPENDITURE**

Collection of hostel fees was the major source of income for the Residential Colleges, with the remainder coming from other sources. Hostel fee collection decreased from RM10.3 million in 1997 to RM9.5 million in 1998 amounting to 7.26% decline. This decline can be attributed to fee collection for accommodation only, as food catering has been privatised.

Rajah 16 ■ Chart 16

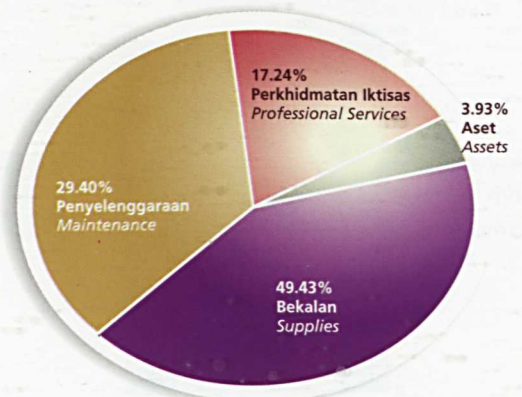
Sumber Pendapatan Kolej Kediaman Tahun 1998
Source of Income of Residential Colleges for 1998



The total operating expenditure for Residential Colleges for 1998 amounted to RM7.9 million or a 29.42% decrease over the expenditure of RM11.2 million in 1997. This decline was due to food catering service being privatised in 1998.

Rajah 17 ■ Chart 17

Pecahan Perbelanjaan Kolej Kediaman Tahun 1998
Breakdown of Expenditure of Residential Colleges for 1998



RINGKASAN KEDUDUKAN KEWANGAN DAN PRESTASI TAHUN 1998 (Setelah Diaudit) A Brief Overview of Financial Status and Performance for the Year 1998 (Audited)

Nama Agensi / Name of Agency: **Universiti Putra Malaysia**

Perangkaan Kewangan Yang Penting Important Financial Details

		(Sebenar) Actual 1998	1997 (RM)	Perbezaan (%) Difference + (-)
I	Pendapatan / Income			
	- Pengurusan / Operation	200,311,538	164,143,541	22.03
	- Pembangunan / Development	39,416,278	33,896,049	16.29
	- Jumlah / Total	<u>239,727,816</u>	<u>198,039,590</u>	21.05
II	*Perbelanjaan / Expenditure			
	- Pengurusan / Operation	168,373,505	161,577,107	4.21
	- Pembangunan / Development	18,944,272	29,398,443	(35.56)
	- Jumlah / Total	<u>187,317,777</u>	<u>190,975,550</u>	(1.92)
III	Lebihan/Kurangan / Excess/Deficit			
	- Pengurusan / Operation	31,938,033	2,566,434	1,144.45
	- Pembangunan / Development	-20,472,006	4,497,606	355.18
	- Jumlah / Total	<u>52,410,039</u>	<u>7,064,040</u>	641.93
IV	Lebihan/Kurangan Terkumpul / Cummulative Excess/Deficit			
	- Pengurusan / Operation	239,292,513	178,652,318	33.94
	- Pembangunan / Development	49,978,633	44,743,537	11.70
	- Jumlah / Total	<u>289,271,146</u>	<u>223,395,855</u>	29.49
V	Harta Tetap / Fixed Assets	202,905,267	192,641,605	5.33
VI	Harta Semasa / Current Assets	346,168,083	218,210,468	58.64
VII	Tanggungjawab Semasa / Current Liabilities	65,129,092	40,385,449	61.27
VIII	Tanggungjawab Jangka Panjang / Longterm Liabilities	-	-	-
IX	Harta Bersih / Net Assets	281,038,991	177,825,019	58.04
X	Nisbah Kewangan / Financial Ratio			
	- Harta Semasa/Tanggungjawab Semasa / - Current Assets/Current Liabilities	5.32	5.40	
	- Harta Mudah Cair/Tanggungjawab Semasa / Liquid Assets/Current Liabilities	4.57	4.72	
	- Jumlah Hutang/Jumlah Harta / Total Debts/Total Assets	0.09	0.07	
	- Modal Digunakan/Jumlah Tanggungan / Used-up Capital /Total Liabilities	-	-	
	- Modal Digunakan/Harta Tetap / Used-up Capital/Fixed Assets	-	-	

*Perbelanjaan meliputi bayaran untuk: / Expenditure Includes Payment for:

	Pengurusan / Operation	Pembangunan / Development
Barangan dan aset tidak dimodalkan / Goods and assets not capitalised	6,834,587	786,941
Asset dipermodalkan untuk tahun 1998 Assets capitalised for the year 1998	9,284,246	36,047,935

LAPORAN KEWANGAN Financial Report



U NIVERSITI **P** UTRA **M** ALAYSIA

KANDUNGAN Contents

- 85** SIJIL KETUA AUDIT ■ Auditor General's Certification
- 86** PENYATA LEMBAGA PENGARAH ■ Board of Director's Statement
- 87** AKUAN BERKANUN ■ Statutory Declaration
- 88** KUNCI KIRA-KIRA PADA 32 DISEMBER 1998 ■ Balance Sheet as at 31 December 1998
- 89** PENYATA PENDAPATAN DAN PERBELANJAAN BAGI TAHUN BERAKHIR 31 DISEMBER 1998 ■
Statement of Income and Expenditure for the Year Ended 31 December 1998
- 90** PENYATA ALIRAN TUNAI BAGI TAHUN BERAKHIR 31 DISEMBER 1998 ■
Cash Flow Statement for the Year Ended 31 December 1998
- 91** NOTA-NOTA KEPADA AKAUN ■ Notes to Accounts

**SIJIL KETUA AUDIT NEGARA MENGENAI
AKAUN UNIVERSITI PUTRA MALAYSIA
BAGI TAHUN BERAKHIR 31 DISEMBER 1998**

Akaun yang dinyatakan di muka surat 3 hingga 23 telah diperiksa oleh Tetuan Aljeffri & Co, Akauntan Awam, di bawah arahan saya mengikut Akta Audit 1957, berpandukan standard pengauditan yang diterima umum.

PENDAPATAN

- Pelbagai Yuran RM60,700,056

2. Bertentangan dengan Standard Perakaunan Antarabangsa Bil. 1, Universiti tidak mengambil kira RM9,138,062 yuran pengajian bagi tahun 1998 yang belum diterimanya sebagai pendapatan. Oleh itu, pelbagai yuran dan pelbagai penghutang pada akhir tahun 1998 telah masing-masingnya terkurang dinyatakan dengan jumlah yang sama.

3. Tertakluk kepada pemerhatian saya di perenggan 2 di atas, pada pendapat saya:

- (a) Akaun tersebut menunjukkan satu kenyataan yang benar dan saksama mengenai kedudukan kewangan Universiti Putra Malaysia pada 31 Disember 1998 dan hasil kendalian berkaitan dengannya serta perubahan kedudukan kewangan bagi tahun berakhir pada tarikh itu; dan
- (b) rekod-rekod perakaunan serta daftar-daftar berkaitan telah diselenggara dengan memuaskan.



(HJ. AB. RAHMAN BIN MOHAMMED)
b.p. KETUA AUDIT NEGARA

KUALA LUMPUR
23 JULAI 1999



1998

PENYATA LEMBAGA PENGARAH
Board of Directors' Statement

Kami, DATUK RAMLY BIN AHMAD dan PROFESOR DATO' DR. SYED JALALUDIN BIN SYED SALIM yang merupakan Pengerusi dan salah seorang Ahli Lembaga Pengarah UNIVERSITI PUTRA MALAYSIA, dengan ini menyatakan bahawa, pada pendapat Majlis, 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 1998 dan hasil kendaliannya serta aliran tunai bagi tahun yang berakhir pada tarikh tersebut.

We, DATUK RAMLY BIN AHMAD and PROFESSOR DATO' DR. SYED JALALUDDIN BIN SYED SALIM, as Chairman and a Member of the Board of 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 Statement of Cash Flow taken together with the Notes represent a true and fair view of the financial position of UNIVERSITI PUTRA MALAYSIA as at 31 December 1998 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

Bagi pihak Lembaga Pengarah
On behalf of the Board of Directors



(DATUK RAMLY BIN AHMAD)

Pengerusi Lembaga Pengarah
Chairman, Board of Directors



(PROFESSOR DATO' DR. SYED
JALALUDIN BIN SYED SALIM)

Naib Canselor/Vice-Chancellor

Tarikh: 3 Mac 1999/3 March 1999
UPM Serdang

Date: 3 Mac 1999/ 3 March 1999
UPM Serdang

AKUAN BERKANUN
Statutory Declaration

Saya, NOORMAH BT. 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 BT HAJI MOHAMED, the principal officer responsible for the financial management of UNIVERSITI PUTRA MALAYSIA, sincerely declare that the 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 Declaration Act 1960.

(Sebenarnya dan sesungguhnya diakui oleh penama di atas di Bangi pada 3 Mac 1999)

(Truly and solemnly declared by the above mentioned person at Bangi on 3 March 1999)



(NOORMAH BT MOHAMED)
(Pemangku Bendahari / Acting Bursar)

Di hadapan saya,
In the presence of,



AHMAD DARDIRI B. HJ. ANUAR

1998

KUNCI KIRA-KIRA PADA 31 DISEMBER 1998
Balance Sheet as at 31 December 1998

	NOTA / NOTE	1998 RM	1997 RM
ASET TETAP/FIXED ASSETS	2	185,146,314	157,176,045
PEMBINAAN DALAM KEMAJUAN/WORKS IN PROGRESS	3	11,148,289	26,396,581
PELABURAN/INVESTMENTS	4	6,610,662	9,068,979
ASET SEMASA/CURRENT ASSETS			
Pelbagai Penghutang/Sundry Debtors	5	48,509,294	27,710,124
Simpanan Tetap/Fixed Deposits	6	247,484,898	189,467,293
Wang di Tangan dan di Bank /Cash in Hand and Bank	7	50,173,891	(6,976,379)
		346,168,083	210,201,038
LIABILITI SEMASA/CURRENT LIABILITIES			
Pelbagai Pemiutang/Sundry Creditors	8	65,129,092	32,376,019
		65,129,092	32,376,019
ASET SEMASA BERSIH/NET CURRENT ASSETS		281,038,991	177,825,019
		483,944,256	370,466,624
Dibiayai oleh: / Financed by:			
Kumpulanwang Am Terkumpul / General Accumulated Fund	9	239,292,511	178,652,318
Kumpulanwang Kolej Kediaman / Residential College Fund	10	13,304,465	8,894,295
Kumpulanwang Pembangunan / Development Fund	11	49,978,633	44,743,537
Kumpulanwang Tabung Penyelidikan / Research Fund	12	44,541,140	32,552,403
Kumpulanwang Tabung Pusingan / Revolving Fund	13	4,773,359	4,705,694
Kumpulanwang Amanah Lain / Other Trust Fund	14	23,261,316	22,402,052
Kumpulanwang Penginapan & Rekreasi / Accommodation & Recreation Fund	15	5,805,236	5,574,436
Kumpulanwang Pelaburan / Investment Fund	16	67,181,456	47,840,860
Kumpulanwang Kursus, Seminar, Konferensi dan Lawatan Sambil Belajar / Course, Seminar, Conference and Study Visit Fund	17	20,806,140	10,101,029
Kumpulanwang Pinjaman Komputer dan Pinjaman Kenderaan / Computer and Vehicle Loan Fund	18	15,000,000	15,000,000
JUMLAH KUMPULANWANG / TOTAL FUNDS		483,944,256	370,466,624

Sila lihat nota-nota yang mengiringi akaun-akaun ini
The Accounts are to be read with accompanying Notes

1998

PENYATA PENDAPATAN DAN PERBELANJAAN BAGI TAHUN BERAKHIR 31 DISEMBER 1998
Statement of Income and Expenditure for the Year Ended 31 December 1998

	NOTA / NOTE	1998 RM	1997 RM
PENDAPATAN / INCOME			
Pemberian Kerajaan / Government Grants		234,705,261	200,874,087
Pelbagai Yuran/ Fees		60,700,056	51,351,489
Sumbangan Luar / Contributions		21,674,602	17,507,532
Faedah dan Keuntungan Saham / Interest & Share Proceeds		23,570,639	13,530,820
Keuntungan atas Jualan Aset / Proceeds from Sale of Assets		0	850,633
Pelbagai Sewa / Sundry Rentals		728,121	1,342,316
Pendapatan Ladang / Income from Farm Operations		381,512	974,181
Pelbagai Pendapatan / Miscellaneous Income		18,919,750	12,780,368
		360,679,941	299,211,426
TOLAK: PERBELANJAAN / LESS: EXPENDITURE			
Emolumen / Emoluments		115,206,891	108,706,404
Perjalanan / Travel		3,802,421	5,610,098
Pengangkutan / Transportation		167,463	187,782
Perhubungan / Communication		882,171	889,019
Utiliti / Utilities		8,152,301	8,351,230
Sewaan / Rentals		3,028,674	3,013,747
Bekalan dan Bahan-bahan / Supplies		27,700,108	31,428,957
Penyelenggaraan dan Pembaikan / Maintenance & Repair		12,177,649	15,467,106
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services		40,033,204	36,495,431
Pemberian dan Kenaan Bayaran Tetap / Grants & Fixed Payments		9,618,438	9,127,379
Perbelanjaan-perbelanjaan Lain / Other Expenses		2,329,352	2,008,125
Susutnilai / Depreciation	2	23,897,525	24,283,171
Pelupusan Aset Tetap / Fixed Assets Written-off		2	3,740
Pelunasan Tanah / Amortization of Land	2	92,889	92,889
Hutang Lapuk / Bad Debts		226,267	347,005
Peruntukan Rosotnilai Saham / Provision for Diminution of Shares		1,215,224	3,063,528
		248,530,579	249,075,611
LEBIHAN PENDAPATAN / SURPLUS INCOME		112,149,362	50,135,815
KUMPULANWANG TERKUMPUL			
DIBAWA KE HADAPAN / BALANCE OF FUND BROUGHT FORWARD			
- Seperti yang Dinyatakan Terdahulu / As Previously Stated		370,466,624	320,697,103
- Pelarasan Tahun Lalu / Prior Year Adjustment	20	1,328,270	(366,294)
		371,794,894	320,330,809
KUMPULANWANG TERKUMPUL /			
DIHANTAR KEHADAPAN/BALANCE OF FUND BROUGHT FORWARD		483,944,256	370,466,624

Sila lihat nota-nota mengiringi akaun-akaun ini
The Accounts are to be read with accompanying Notes

1998

PENYATA ALIRAN TUNAI BAGI TAHUN BERAKHIR 31 DISEMBER 1998
Cash Flow Statement for the Year Ended 31 December 1998

	NOTA / NOTE	1998 RM	1997 RM
TUNAI DARI AKTIVITI OPERASI /			
CASH GENERATED FROM OPERATING ACTIVITIES			
Lebihan Pendapatan / Surplus Income		112,149,362	50,135,815
Pelarasan ke Atas: / Adjustments to:			
Susutnilai / Depreciation		23,897,525	24,283,171
Pelunasan Tanah / Amortization		92,889	92,889
(Untung) / Rugi Atas Jualan Aset Tetap / (Profit) / Losses Incurred from Sale of Fixed Asset		(316,388)	3,740
Kerugian Atas Jualan Saham / Losses Incurred from Sale of Shares		1,468,692	972,313
Peruntukan Rosotnilai saham / Provision for Diminution in Value of Share		1,215,224	3,063,528
Keuntungan Operasi Sebelum Perubahan Modal Kerja /		138,507,304	78,551,456
Operating Profits before Working Capital Adjustments			
(Penambahan - Penghutang / (Increase) - Debtors		(20,799,170)	(4,925,578)
Penambahan Pemiutang / Increase - Creditors		32,753,073	10,142,528
Pelarasan Akaun / Adjustment to Accounts	20	1,328,270	(366,294)
Tunai Bersih Dihasilkan dari Aktiviti Operasi /		151,789,477	83,402,112
Cash Generated from Operating Activities			
TUNAI DARI AKTIVITI PELABURAN / CASH GENERATED FROM INVESTMENT ACTIVITIES			
Pembelian Aset Tetap / Purchase of Fixed Assets		(51,960,685)	(53,018,061)
Pembinaan dalam Kemajuan / Works in Progress		15,248,292	15,414,206
Jualan Aset Tetap / Sale of Fixed Assets		316,390	3,608,036
Jualan Saham / Sale of Shares		8,887,992	11,277,407
Pembelian Saham / Purchase of Shares		(9,113,591)	(12,069,900)
Tunai Bersih Dihasilkan dari Aktiviti Pelaburan /		(36,621,602)	(34,788,312)
Cash Generated from Investment Activities			
Penambahan Bersih Dalam Jumlah Tunai dan Kesetaraan Tunai/		115,167,875	48,613,800
Net Increase in Cash and Cash Equivalents			
Jumlah Tunai dan Kesetaraan Pada Awal Tahun /		182,490,914	133,877,114
Cash and Cash Equivalents at Beginning of Year			
Jumlah Tunai dan Kesetaraan Pada Akhir Tahun /		297,658,789	182,490,914
Cash and Cash Equivalents at End of Year			
Tunai dan Kesetaraan Tunai Diwakili Oleh: / Cash and Cash Equivalents represented by:			
Simpanan Tetap / Fixed Deposit		247,484,898	189,467,293
Wang di Tangan dan di Bank / Cash in Hand and Bank	7	50,173,891	(6,976,379)
		297,658,789	182,490,914

Sila lihat nota-nota yang mengiringi akaun-akaun ini
 To be read with accompanying Notes

1. DASAR-DASAR PERAKAUNAN PENTING / ACCOUNTING POLICY**a) Am / General**

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

All accounting policies are similar to those used in previous years.

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 an accrual basis.

d) Hutang Lapuk dan Hutang Ragu / Bad Debts & 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 didefinisikan 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 stated at cost after deduction of depreciation, and are defined as tangible assets that have an economic usage of more than 12 months, and are valued at or more than RM3000 each.

Tanah dipermodalkan mulai tahun 1993. Susutnilai tidak diperuntukkan bagi tanah milik bebas manakala tanah pajakan dilunaskan mengikut jangkamasa pajakan.

Land has been capitalised from the year 1993. Depreciation is not allocated for freehold land whereas leasehold is amortized 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 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 & Machinery	20
Perabot dan kelengkapan / Furniture & Fittings	20
Mesin dan komputer / Machinery & Computers	20

f) **Pembinaan Dalam Kemajuan / Works in Progress**

Pembinaan dalam kemajuan seperti bangunan yang sedang dibina dinilai mengikut kos dan susutnilai tidak diperuntukkan. Apabila siap, kos pembinaan dipindahkan ke aset tetap yang berkenaan.

In the case of buildings under construction, they are valued at cost and no provision is made for depreciation. On completion, the cost of construction is transferred to the relevant fixed asset.

g) **Pelaburan / Investment**

Pelaburan dinyatakan pada kos ditolak rosotan nilai pelaburan berkenaan yang kekal.

Investment is stated at cost less the depreciation value of a permanent investment.

2. ASET TETAP / FIXED ASSETS

	Pada awal tahun Beginning of Year RM	Pindahan/ tambahan Transfers/ Increase RM	Penjualan/ pelupusan Sales/ Write-off RM	Pada akhir tahun Year- end RM	Nilai Buku Bersih Net Book Value RM
1998					
KOS / Cost					
Tanah Pajakan / Leased Land	8,739,246	0	0	8,739,246	
Tanah Milik Kekal / Freehold Land	8,962,151	0	0	8,962,151	
Bangunan / Buildings	98,356,332	31,301,984	0	129,658,316	
Infrastruktur dan Kemudahan / Infrastructure & Facilities	17,136,930	1,853,976	0	18,990,906	
Kenderaan dan Jentera / Vehicles & Machinery	14,504,293	276,514	(3,244,124)	11,536,683	
Perabot dan Kelengkapan / Furniture & Fittings	5,791,904	1,490,205	0	7,282,109	
Mesin dan Komputer / Machinery & Computers	145,308,881	17,038,005	0	162,346,886	
	298,799,737	51,960,684	(3,244,124)	347,516,297	

SUSUTNILAI TERKUMPUL / ACCUMULATED DEPRECIATION

Tanah Pajakan / Leased Land	2,041,563	92,889	0	2,134,452	6,604,794
Tanah Milik Kekal / Freehold Land	0	0	0	0	8,962,151
Bangunan / Buildings	10,102,707	2,713,530	0	12,816,237	116,842,079
Infrastruktur dan Kemudahan / Infrastructure & Facilities	2,297,099	1,217,802	0	3,514,901	15,476,005
Kenderaan dan Jentera / Vehicles and Machinery	11,224,004	1,328,682	(3,244,122)	9,308,564	2,228,119
Perabot dan Kelengkapan / Furniture & Fittings	4,114,379	832,984	0	4,947,363	2,334,746
Mesin dan Komputer / Machinery & Computers	111,843,939	17,804,527	0	129,648,466	32,698,420
	141,623,691	23,990,414	(3,244,122)	162,369,983	185,146,314

Termasuk di dalam tambahan harta tetap adalah sejumlah RM32,999,935 (1997: RM40,955,536) yang merupakan pindahan dari pembinaan dalam kemajuan yang telah siap dalam tahun semasa. Included are the increase in fixed assets totaling RM32,999,935 (1997) : RM40,955,536) which represents transfers from completed Works in Progress during the Current Year.

	Pada awal tahun Beginning of Year RM	Pindahan/ tambahan Transfers/ Increase RM	Penjualan/ pelupusan Sales/ Write-off RM	Pada akhir tahun Year- end RM	Nilai Buku Bersih Net Book Value RM
1997					
KOS/COST					
Tanah pajakan / Leased Land	8,739,246	0	0	8,739,246	
Tanah milik kekal / Freehold Land	8,962,151	0	0	8,962,151	
Bangunan / Building	66,863,104	31,493,228	0	98,356,332	
Infrastruktur dan kemudahan / Infrastructure & Facilities	10,916,346	6,220,583	0	17,136,929	
Kenderaan dan jentera / Vehicle & Machinery	13,505,693	1,102,723	(104,124)	14,504,292	
Perabot dan kelengkapan / Furniture & Fittings	4,836,281	950,765	0	5,787,046	
Mesin dan komputer / Machinery & Computers	132,062,977	13,250,762	0	145,313,739	
	245,885,798	53,018,061	(104,124)	298,799,735	

SUSUTNILAI TERKUMPUL / ACCUMULATED DEPRECIATION

Tanah pajakan / Leased Land	1,948,674	92,889	0	2,041,563	6,697,683
Tanah milik kekal / Freehold Land	0	0	0	0	8,962,151
Bangunan / Buildings	8,014,660	2,088,046	0	10,102,706	88,253,626
Infrastruktur dan kemudahan / Infrastructure & Facilities	1,419,486	877,613	0	2,297,099	14,839,830
Kenderaan dan jentera / Vehicle & Machinery	9,211,901	2,089,674	(83,299)	11,218,276	3,286,016
Perabot dan kelengkapan / Furniture & Fittings	3,437,723	675,686	0	4,113,409	1,673,637
Mesin dan komputer / Machinery & Computers	93,298,485	18,552,152	0	111,850,637	33,463,102
	117,330,929	24,376,060	(83,299)	141,623,690	157,176,045

3. PEMBINAAN DALAM KEMAJUAN / WORKS IN PROGRESS

	Pada awal		Pelarasan Adjustment	Pindahan Transfers	Pada akhir tahun Year- end
	Tahun Beginning of Year	Tambahan Increase			
1998	RM	RM	RM	RM	RM
Bangunan /Building	21,050,727	11,674,317	0	31,195,409	1,529,635
Kemudahan Riadah / Recreation Facilities	4,465,884	1,837,674	3,281,785	1,804,526	7,780,817
Lain-lain / Others	879,970	1,039,151	0	81,284	1,837,837
	<u>26,396,581</u>	<u>14,551,142</u>	<u>3,281,785</u>	<u>33,081,219</u>	<u>11,148,289</u>

1997

Bangunan / Buildings	30,040,252	22,434,583	0	31,424,108	21,050,727
Kemudahan Riadah / Recreation Facilities	10,844,826	1,671,013	0	8,049,955	4,465,884
Lain-lain / Others	925,709	1,435,734	0	1,481,473	879,970
	<u>41,810,787</u>	<u>25,541,330</u>	<u>0</u>	<u>40,955,536</u>	<u>26,396,581</u>

Pada tahun semasa pembinaan dalam kemajuan sebanyak RM 32,999,935 (RM 40,955,536) telah dipindahkan ke aset tetap dan sebanyak RM 81,284 telah dipindahkan ke inventori.

In current year Works in Progress totaling RM32,999,935 (RM40,999,935) was transferred to Fixed Assets and RM81,284 was transferred to Inventory.

4. PELABURAN / INVESTMENTS

	1998 RM	1997 RM
Pelaburan tersiarharga - di Malaysia, pada kos / Quoted price of investment - in Malaysia, at cost	10,889,414	12,132,507
Tolak: Peruntukan rosotnilai pelaburan /	(4,278,752)	(3,063,528)
Less: Provision for diminution in investment	<u>6,610,662</u>	<u>9,063,979</u>
Nilai pasaran pelaburan tersiarharga - di Malaysia / Market value of quoted price of investment - in Malaysia	<u>6,610,662</u>	<u>6,005,450</u>

5. PELBAGAI PENGHUTANG / SUNDRY DEBTORS

	1998 RM	1997 RM
Kumpulanwang Am / General Fund	34,159,101	14,419,118
Kumpulanwang Kolej Kediaman / Residential College Fund	2,374,616	1,760,703
Kumpulanwang Pembangunan / Development Fund	0	624,350
Kumpulanwang Pinjaman Kenderaan / Vehicle Loan Fund	10,499,893	9,646,973
Kumpulanwang Pelaburan / Investment Fund	1,079,326	1,098,862
Kumpulanwang Pinjaman Komputer / Computer Loan Fund	<u>1,387,519</u>	<u>1,474,332</u>
	49,500,455	29,024,338
Tolak : Peruntukan Hutang Ragu / Less: Provision for Doubtful Debts	991,161	1,314,214
	<u>48,509,294</u>	<u>27,710,124</u>

Jumlah pelbagai penghutang tidak termasuk hutang denda pecah kontrak perkhidmatan UPM. Sehingga 31 Disember 1998, jumlah denda tersebut adalah RM 1,654,383 (RM 1,365,844).

The total debts does not include the fines for breach of service contracts with UPM. As at 31 December 1998, total value of fines is RM1,654,383(RM1,365,844).

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

The amount owed to UPM is computed as the net value less adjustments to balance the contra items in the accounts of the Debtors and the Creditors.

6. SIMPANAN TETAP / FIXED DEPOSITS

	1998 RM	1997 RM
Simpanan dengan institusi kewangan berlesen: Deposits with Licensed Financial Institutions		
Bank / Bank	163,384,898	79,467,293
Syarikat kewangan / Financial Institutions	84,100,000	110,000,000
	<u>247,484,898</u>	<u>189,467,293</u>

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

	1998 RM	1997 RM
Wang di tangan: / Cash in Hand		
Kumpulanwang Am / General Fund	56,873	62,926
Kumpulanwang Kolej Kediaman / Residential College Fund	8,000	6,500
	<u>64,873</u>	<u>69,426</u>
Wang di bank: / Cash in Bank		
Kumpulanwang Am / General Fund	48,232,174	(8,009,430)
Kumpulanwang Kolej Kediaman / Residential College Fund	1,672,808	846,346
	<u>49,904,982</u>	<u>(7,163,084)</u>
Wang dalam perjalanan: / Cash in Transit		
Kumpulanwang Am / General Fund	154,889	117,279
Kumpulanwang Kolej Kediaman / Residential College Fund	49,147	0
	<u>204,036</u>	<u>117,279</u>
Jumlah wang di tangan dan di bank / Cash in Hand and Bank	<u>50,173,891</u>	<u>(6,976,379)</u>

8. PELBAGAI PEMIUTANG / SUNDRY CREDITORS

	1998 RM	1997 RM
Kumpulanwang Am / General Fund	64,852,616	1,148,713
Kumpulanwang Kolej Kediaman / Residential College Fund	276,476	1,227,306
	<u>65,129,092</u>	<u>32,376,019</u>

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

The amount in Sundry Creditors represents the net value less adjustments to the contra items of the Debtors and Creditors Accounts.

9. KUMPULANWANG AM / GENERAL FUND	1998 RM	1997 RM
PENDAPATAN / INCOME		
Pemberian Kerajaan / Government Grants	167,316,608	134,150,350
Pelbagai Yuran / Fees	30,854,833	27,600,105
Pendapatan-pendapatan Lain / Other Income	1,494,525	1,138,766
Pelbagai Sewa / Sundry Rentals	264,061	280,139
Pendapatan Ladang / Income from Farm Operations	381,511	974,181
	<u>200,311,538</u>	<u>64,143,541</u>
TOLAK : PERBELANJAAN / LESS: EXPENDITURE		
Emolumen / Emoluments	115,049,117	107,528,381
Perjalanan / Travel	1,052,921	2,073,275
Pengangkutan / Transportation	162,807	156,917
Perhubungan / Communication	650,814	689,580
Utiliti / Utilities	6,287,267	6,912,837
Sewaan / Rentals	1,693,807	2,178,299
Bekalan dan Bahan-bahan / Supplies	13,145,740	13,676,147
Penyelenggaraan dan Pembaikan / Maintenance & Repair	7,171,576	6,334,247
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	9,025,600	9,180,810
Pemberian dan Kenaan Bayaran Tetap / Grants & Fixed Payments	3,236,551	4,163,860
Perbelanjaan-perbelanjaan Lain / Other Expenses	1,578,059	1,949,835
Susutnilai / Depreciation	23,665,551	24,099,551
Pelupusan Aset Tetap / Fixed Assets Written-off	2	3,740
Pelunasan Tanah / Amortization of Land	92,889	92,889
Hutang Lapuk / Bad Debts	133,934	322,791
Pindahan Peruntukan Antara Kumpulanwang / Transfers between Funds	35,000	834,820
	<u>182,981,635</u>	<u>180,197,979</u>
(KURANGAN)/LEBIHAN PENDAPATAN / (DEFICIT)/SURPLUS INCOME	17,329,903	(16,054,438)
BAKI KUMPULANWANG DIBAWA KE HADAPAN / BALANCE OF FUND BROUGHT FORWARD		
- Seperti yang Dinyatakan Terdahulu / As Previously Stated	178,652,318	152,726,588
- Pelarasan Tahun Lalu/ Prior Year Adjustment	488,641	(3,969)
	<u>179,140,959</u>	<u>152,722,619</u>
- Seperti yang Dinyatakan Semula / As Re-stated		
Pindahan dari/(ke): / Transfer from/(to):		
Kumpulanwang Pembangunan / Development Fund	36,047,935	39,591,369
Kumpulanwang Penyelidikan / Research Fund	4,945,334	5,746,077
Kumpulanwang Lain / Other Funds	1,343,080	1,464,774
Kumpulanwang Pelaburan / Investment Fund	485,300	167,100
Kumpulanwang Amanah / Trust Fund	0	169,100
Kumpulanwang Pinjaman Kenderaan / Vehicle Loan Fund	0	(3,000,000)
Kumpulanwang Kolej Kediaman / Residential College Fund	0	(2,154,283)
	<u>239,292,511</u>	<u>178,652,318</u>
BAKI KUMPULANWANG DIHANTAR KE HADAPAN / BALANCE CARRIED FORWARD		

10. KUMPULANWANG KOLEJ KEDIAMAN / RESIDENTIAL COLLEGE FUND

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Yuran Kolej Kediaman / Residential Fees	9,525,675	10,271,434
Yuran-yuran Lain / Miscellaneous Fees	523,776	626,947
Faedah / Interest	764,630	429,432
Sewa / Rental	63,590	105,252
Pendapatan-pendapatan Lain / Other Income	1,484,408	1,883,231
	<u>12,362,079</u>	<u>13,316,296</u>
TOLAK : PERBELANJAAN / LESS: EXPENDITURE		
Perjalanan / Transport	22,136	50,782
Perhubungan / Communication	34,156	22,540
Utiliti / Utilities	1,511,433	1,358,387
Sewaan / Rental	243,442	296,928
Bekalan dan Bahan-bahan / Supplies & Materials	2,097,183	5,296,506
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	2,321,243	2,029,605
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	1,426,375	1,779,399
Perbelanjaan-perbelanjaan Lain / Other Expenditure	145,519	10,542
Susutnilai / Depreciation	231,974	183,620
Hutang Lapuk / Bad Debts	92,333	24,214
	<u>8,125,794</u>	<u>11,052,523</u>
LEBIHAN PENDAPATAN / SURPLUS INCOME	4,236,285	2,263,773
Baki Kumpulanwang Dibawa Kehadapan / Balance Carried Forward		
- Seperti yang Dinyatakan Terdahulu / As Previously Stated	8,894,295	4,469,989
- Pelarasan Tahun Lalu / Previously Year Adjustment	173,885	6,250
	<u>9,068,180</u>	<u>4,476,239</u>
- Seperti yang Dinyatakan Semula / As Re-stated		
Pindahan dari/(ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	<u>0</u>	<u>2,154,283</u>
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward	<u>13,304,465</u>	<u>8,894,295</u>

11. KUMPULANWANG PEMBANGUNAN / DEVELOPMENT FUND

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Pemberian Kerajaan / Government Grants	35,606,000	32,647,000
Sumbangan Luar / Other Donations	3,626,241	1,141,700
Pendapatan-pendapatan Lain / Other Income	184,037	107,348
	<u>39,416,278</u>	<u>33,896,048</u>
TOLAK: PERBELANJAAN / LESS: EXPENDITURE		
Emolumen / Emoluments	58,800	124,320
Perjalanan / Travel	0	78
Bekalan dan Bahan-bahan / Supplies & Materials	786,941	1,607,589
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	133,814	4,709,108
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	1,206,491	2,687,568
	<u>2,186,046</u>	<u>9,128,663</u>
LEBIHAN PENDAPATAN / SURPLUS INCOME		
Baki Kumpulanwang Di Bawa Ke Hadapan / Balance Carried Forward	37,230,232	24,767,385
- Seperti yang Dinyatakan Terdahulu / As Previously Stated	44,743,537	59,112,621
- Pelarasan Tahun Lalu / Prior Year Adjustment	3,350,491	(6,600)
- Seperti yang Dinyatakan Semula / As Re-stated	<u>48,094,028</u>	<u>59,106,021</u>
Pindahan dari/(ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	(36,047,935)	(39,591,369)
Kumpulanwang Pelaburan / Investment Fund	702,308	461,500
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward	<u>49,978,633</u>	<u>44,743,537</u>

12. KUMPULANWANG TABUNG PENYELIDIKAN / RESEARCH FUND

	1998 RM	1997 RM
PENDAPATAN/INCOME		
Pemberian Kerajaan / Government Grants	30,416,518	25,561,936
Pelbagai Yuran / Fees	51,196	86,675
Sumbangan / Other Donations	9,631,008	5,513,843
Faedah Simpanan Tetap / Interest from Fixed Deposits	9,653	4,684
Pelbagai Sewa / Rental	103,969	49,794
Sumbangan Universiti / Contributions from University	160,000	305,200
Pendapatan-pendapatan Lain / Other Income	2,239,267	715,265
	42,611,611	32,237,397
TOLAK: PERBELANJAAN/LESS: EXPENDITURE		
Emolumen / Emoluments	33,333	0
Perjalanan / Travel	1,686,056	1,911,244
Pengangkutan / Transport	3,731	27,349
Perhubungan dan Utiliti / Communication & Utilities	153,909	63,631
Sewaan / Rentals	357,564	336,030
Bekalan dan Bahan-bahan / Supplies & Materials	9,346,410	7,875,930
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	1,120,593	1,030,727
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	11,537,447	10,505,583
Perbelanjaan-perbelanjaan Lain / Other Expenditure	473,696	13,180
	24,712,739	21,763,674
LEBIHAN PENDAPATAN/SURPLUS INCOME	17,898,872	10,473,723
Baki Kumpulanwang Dibawa Ke Hadapan / Balance Carried Forward		
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	32,552,403	27,895,046
- Pelarasan Tahun Lalu / Prior Year Adjustment	(964,801)	0
	31,587,602	27,895,046
Pindahan Dari/(Ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	(4,945,334)	(5,746,077)
Kumpulanwang Tabung Pusingan / Revolving Fund	0	(70,289)
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward	44,541,140	32,552,403

13. KUMPULANWANG TABUNG PUSINGAN / REVOLVING FUND

	1998	1997
	RM	RM
PENDAPATAN / INCOME		
Yuran / Fees	241,289	346,214
Sumbangan / Contributions	176,821	114,796
Faedah Simpanan Tetap / Interest from Fixed Deposits	824,355	276,494
Pendapatan-pendapatan Lain / Other Income	443,876	1,092,910
	<u>1,686,341</u>	<u>1,830,414</u>
TOLAK: PERBELANJAAN / LESS: EXPENDITURE		
Perjalanan / ravel	12,680	12,481
Perhubungan dan Utiliti / Communication & Utilities	4,186	4,631
Sewaan /Rental	6,725	13,620
Bekalan dan Bahan-bahan / Supplies & Materials	198,318	676,975
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	53,253	129,577
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	625,249	595,083
Perbelanjaan-perbelanjaan Lain / Other Expenditure	0	2,480
	<u>900,411</u>	<u>1,434,847</u>
LEBIHAN PENDAPATAN / SURPLUS INCOME		
Baki Kumpulanwang Dibawa Ke Hadapan	785,930	395,567
Balance Carried Forward		
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	4,705,694	4,593,995
- Pelarasan Tahun Lalu/Prior Year Adjustment	<u>(651,891)</u>	<u>(53,820)</u>
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	<u>4,053,803</u>	<u>4,540,175</u>
Pindahan Dari/(Ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	(66,374)	(230,048)
Baki Kumpulanwang Dihantar Ke Hadapan /	<u>4,773,359</u>	<u>4,705,694</u>
Balance Carried Forward		

14. KUMPULANWANG AMANAH LAIN / OTHER TRUST FUNDS

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Pemberian Kerajaan / Government Grants	1,366,135	8,514,801
Yuran / Fees	6,382,300	1,895,624
Sumbangan / Contributions	5,359,514	7,890,605
Sumbangan Universiti / Contributions from University	0	624,020
Faedah Simpanan Tetap / Interest from Fixed Deposits	759,172	226,858
Pelbagai Sewa / Rental	76,957	55,542
Pendapatan-pendapatan Lain / Other Income	5,750,296	3,490,559
	<u>19,694,374</u>	<u>22,698,009</u>
TOLAK: PERBELANJAAN / LESS: EXPENDITURE		
Emolumen / Emoluments	3,521	198,292
Perjalanan / Travel	221,818	214,420
Perhubungan / Communication	53,169	48,990
Utiliti / Utilities	3,241	0
Sewaan / Rental	408,881	58,476
Bekalan dan Bahan-bahan / Supplies & Materials	1,086,839	763,145
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	244,844	690,755
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	9,287,145	5,999,012
Pemberian dan Kenaan Bayaran Tetap / Grants & Fixed Payments	6,381,887	4,963,519
Perbelanjaan-perbelanjaan lain / Other Expenditure	30,167	12,583
	<u>17,721,512</u>	<u>12,949,192</u>
LEBIHAN PENDAPATAN/SURPLUS INCOME	1,972,862	9,748,817
Baki Kumpulanwang Dibawa Ke Hadapan / Balance Carried Forward		
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	22,402,052	12,806,112
- Pelarasan Tahun Lalu / Prior Year Adjustment	(373,198)	(1,346)
	<u>22,028,854</u>	<u>12,804,766</u>
- Seperti Yang Dinyatakan Semula / As Re-stated		
Pindahan Dari/(Ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	(740,400)	(810,490)
Kumpulanwang Pelaburan / Investment Account	0	658,959
	<u>23,261,316</u>	<u>22,402,052</u>
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward		

15. KUMPULANWANG PENGINAPAN & REKREASI / ACCOMMODATION & RECREATION FUND

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Pelbagai Yuran / Miscellaneous Fees	0	5,680
Sumbangan Universiti / Contributions from University	6,348	245,400
Pelbagai Sewa / Rental	131,469	837,057
Pendapatan-pendapatan Lain / Other Income	2,109,173	2,882,294
	<u>2,246,990</u>	<u>3,970,431</u>
TOLAK: PERBELANJAAN / LESS: EXPENDITURE		
Emolumen / Emoluments	38,539	151,810
Perjalanan / Travel	17,140	76,594
Perhubungan / Communication	2,127	4,348
Utiliti / Utilities	59,780	0
Sewaan / Rental	5,730	23,541
Bekalan dan Bahan-bahan / Supplies & Materials	371,385	603,869
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	719,950	330,893
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	734,346	514,288
Perbelanjaan-perbelanjaan lain / Other Expenditure	13,179	6,802
	<u>1,962,176</u>	<u>1,712,145</u>
LEBIHAN PENDAPATAN / SURPLUS INCOME		
Baki Kumpulanwang Dibawa Ke Hadapan / Balance Carried Forward	284,814	2,258,286
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	5,574,436	3,491,649
- Pelarasan Tahun Lalu/Prior Year Adjustment	(12,694)	(13,422)
- Seperti Yang Dinyatakan Semula / As Re-stated	<u>5,561,742</u>	<u>3,478,227</u>
Pindahan Dari/(Ke) :/ Transfer from/(to): Kumpulanwang Am / General Fund	(41,320)	(162,077)
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward	<u>5,805,236</u>	<u>5,574,436</u>

16. KUMPULANWANG PELABURAN / INVESTMENT FUND

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Faedah, Dividen dan Keuntungan Saham / Interest, Dividends, Profits from Shares	20,942,099	12,584,229
Pelbagai Sewa / Rental	0	2,932
Pendapatan Lain / Other Income	327	4,228
Keuntungan Atas Jualan Aset Tetap / Sale of Fixed Assets	0	850,633
	<u>20,942,426</u>	<u>13,442,022</u>
TOLAK : PERBELANJAAN / LESS: INCOME		
Perkhidmatan Iktisas / Professional & Hospitality Services	29,691	75,620
Peruntukan Rosotnilai Saham / Provision for Diminution in Value of Shares	1,215,224	3,063,528
	<u>1,244,915</u>	<u>3,139,148</u>
LEBIHAN PENDAPATAN/SURPLUS INCOME		
Baki Kumpulanwang Dibawa Ke Hadapan/ Balance Carried Forward	19,697,511	10,302,874
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	47,840,860	39,004,045
- Pelarasan Tahun Lalu/Prior Year Adjustment	(316,196)	(278,500)
	<u>47,524,664</u>	<u>38,725,545</u>
Pindahan Dari/(Ke): / Transfer from/(to):		
Kumpulanwang Pembangunan / Building Funds	(702,308)	(461,500)
Kumpulanwang Rekreasi / Recreation Funds	0	100,000
Kumpulanwang Am / General Fund	(485,300)	(167,100)
Kumpulanwang Amanah / Trust Fund	0	(658,959)
Kumpulanwang Seminar dan Konferensi / Seminar & Conference Fund	1,146,889	0
	<u>67,181,456</u>	<u>47,840,860</u>
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward		

17. KUMPULANWANG KURSUS, SEMINAR KOMFERENSI DAN LAWATAN SAMBIL BELAJAR / COURSE, SEMINAR, CONFERENCE & STUDY VISIT GRANT

	1998 RM	1997 RM
PENDAPATAN / INCOME		
Yuran / Fees	13,120,987	10,518,810
Sumbangan / Contributions	2,874,670	2,846,588
Sumbangan Universiti / Contributions from University	0	484,200
Faedah Simpanan Tetap / Interest from Fixed Deposits	270,730	9,123
Pelbagai Sewa / Rentals	88,075	11,600
Pendapatan-pendapatan Lain / Other Income	5,053,841	641,767
	<u>21,408,303</u>	<u>14,512,088</u>
TOLAK: PERBELANJAAN / LESS: EXPENDITURE		
Emolumen / Emoluments	23,581	703,281
Perjalanan / Travel	789,670	1,271,544
Pengangkutan / Transport	925	3,516
Perhubungan / Communication	102,946	135,305
Utiliti / Utilities	171,444	0
Sewaan / Rental	312,525	106,853
Bekalan dan Bahan-bahan / Supplies & Materials	667,292	928,796
Penyelenggaraan dan Pembaikan / Maintenance & Repairs	412,376	212,194
Perkhidmatan Iktisas dan Hospitaliti / Professional & Hospitality Services	6,160,860	5,158,068
Perbelanjaan Lain / Other Expenditure	53,732	12,703
	<u>8,695,351</u>	<u>8,532,260</u>
LEBIHAN PENDAPATAN / SURPLUS INCOME		
Baki Kumpulanwang Dibawa Ke Hadapan / Balance Carried Forward	12,712,952	5,979,828
- Seperti Yang Dinyatakan Terdahulu / As Previously Stated	10,101,029	4,597,058
- Pelarasan Tahun Lalu/Prior Year Adjustment	(365,967)	(44,598)
	<u>9,735,062</u>	<u>4,552,460</u>
- Seperti Yang Dinyatakan Semula / As Re-stated		
Pindahan Dari/(Ke): / Transfer from/(to):		
Kumpulanwang Am / General Fund	(494,985)	(431,259)
Kumpulanwang Pelaburan / Investment Account	(1,146,889)	0
	<u>20,806,140</u>	<u>10,101,029</u>
Baki Kumpulanwang Dihantar Ke Hadapan / Balance Carried Forward		

18. KUMPULANWANG PINJAMAN KENDERAAN DAN KOMPUTER / VEHICLES & COMPUTER LOANS FUND

	1998 RM	1997 RM
Kumpulanwang Pinjaman Kenderaan / Vehicle Loan Funds		
Baki Kumpulanwang Dibawa Ke Hadapan / Balance Carried Forward	13,000,000	10,000,000
Pindah dari/(ke) :/ Transfer from/(to): Kumpulanwang Am / General Funds	<u>0</u>	<u>3,000,000</u>
Baki Kumpulanwang dihantar Ke Hadapan / Balance Carried Forward	<u>13,000,000</u>	<u>13,000,000</u>
Kumpulanwang Pinjaman Komputer / Computer Loan		
Baki Kumpulanwang dibawa dan dihantar Ke Hadapan / Balance Carried Forward	<u>2,000,000</u>	<u>2,000,000</u>
Jumlah Baki Kumpulanwang Dihantar Ke hadapan / Total Balance Carried Forward	<u>15,000,000</u>	<u>15,000,000</u>

19. PENGLIBATAN MODAL / CAPITAL INVOLVEMENT

	1998 RM	1997 RM
Perbelanjaan Modal Diluluskan Tetapi Tidak Diperuntukan di dalam akaun: / Capital Expenditure was Approved but not Provided for in the Accounts		
- dikontrakkan / Contracted	1,024,724	10,316,873
- tidak dikontrakkan / Not Contracted	88,277,972	87,026,169
	<u>89,302,696</u>	<u>97,343,042</u>

Peningkatan jumlah penglibatan modal dari RM87,026,169 kepada RM88,277,972 adalah kerana pertambahan kelulusan bagi projek bangunan fakulti Perubatan dan Sains Kesihatan untuk Rancangan Malaysia Ketujuh- RMK7.

The increase in value of capital expenditure from RM87,026,169 to RM88,277,972 was due to approval of the Faculty of Medicine and Health Science Building Project under the 7th Malaysian Plan.

20. PELARASAN TAHUN LALU / PRIOR YEAR ADJUSTMENT

	1998 RM	1997 RM
Kerja-kerja Tanah Sintetik Trek D Diakaunkan Semula ke Akaun Pembinaan Dalam Kemajuan / Ground Works for Synthetic Track D Accounted for in the Accounts of Work in Progress	3,350,491	0
Selaras Peruntukan Hutang Lapok / Adjustments to Provision of Bad Debts	554,100	0
Bayaran Balik Pinjaman Antara Kumpulanwang Repayment of Loans Between Funds	675,000	110,250
	<u>4,579,590</u>	<u>110,250</u>
TOLAK:LESS		
Pindah Baki Akaun Unit Ayam ke Akaun Taman Penyelidikan UPM / Transfer of Balance in the Chicken Unit to the Accounts of UPM Research Park	627,390	0
Faedah Simpanan Tetap Terakru Terlebih Diambilkira dalam Tahun 1997 / Surplus Interest Accrued from Fixed Deposits Accounted for in 1997	463,764	0
Selaras Transaksi Salah Caj / Adjustments to Wrongly Charged Transactions	2,160,166	476,544
	<u>3,251,320</u>	<u>476,544</u>
Baki pada 31 Disember 1997/98 / Balance as at 31 Disember 1997/98	<u>1,328,270</u>	<u>(366,294)</u>

21. LIABILITI KONTINGENSI / CONTINGENCY LIABILITIES

Tindakan undang-undang diambil oleh Syarikat Juta Yakin terhadap UPM dengan mengemukakan tuntutan saman sebanyak RM240,000 yang berkaitan dengan Projek Membina dan Menyiapkan Bangunan Markas Palapes. Legal action taken by Syarikat Juta Yakin against UPM with a summons claim of RM240,000 in connection with the construction of Palapes headquarters buildings.

22. ANGKA - ANGKA PERBANDINGAN / COMPARITIVE FIGURES

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

A portion of prior year comparative figures have been transferred for adjustment to this year's presentation.

