



**MAHIDOL
UNIVERSITY**
Wisdom of the Land



2010
Annual Report

Contents

Emblem, Motto and Philosophy	3
Message from the President	5
Achievement Highlights 2010	7
Research Highlights 2010	11
Education for the Benefit of Mankind	20
Caring with Heart, Curing with Innovation	30
Academic and Community Services	38
International Activities at Mahidol University	41
People Excellence	45
A Promising Place to Live and Learn with Nature	48
ICT-Based Strategy Towards World-Class University	51
MU Profile	55

PRODUCTION TEAM
Prof. Sansanee Chaiyaroj Vice President for Research and Academic Affairs
Assoc. Prof. Emorn Wasantwisut Vice President for International Relations
Assoc. Prof. Soranit Siltharm Vice President for Policy and Informatics Technology
Dr. Puwat Charukamnoetkanok Assistant to the President for International Relations
Ms. Boonyarat Suwanchinda Director, International Relations Division
Assit. Prof. Surapong Lertsithichai
Ms. Dynaya Bhutipunthu
Mr. Michael Naglis Lecturers - Mahidol University International College
Ms. Suchada Phruthonkul
Mr. Paul Bulcock
Ms. Khanittha Nimon International Relations Division
Ms. Maneerat Chompuk Research Management and Development Division
Mr. Ekkasit Paowattana Division of Planning

Emblem, Motto and Philosophy



The emblem was graciously bestowed on Mahidol University by His Majesty King Bhumibol on 23 July 1969.



The blue color was graciously selected by the late Princess Mother, Somdej Phra Rajajonnani Srisangwan (her title at the time), to be the official color of Mahidol University on 23 June 1969.



Kanphai Mahidol (*Afgekia mahidoliae* B.L. Burt & Cherm Sri) was graciously chosen by HRH Princess Galyani Vadhana Krom Luang Narathiwat Rajanakarin to be the symbolic plant of Mahidol University on 19 February 1999.

Motto:

Do unto others as you would have others do unto you.

Philosophy:

True success is not in learning but in its application to the benefit of mankind.

Determination:

Wisdom of the Land

Vision:

Mahidol University is determined to become a world-class university

Mission:

To excel in health, sciences, arts and innovation for the betterment of Thai society and the benefit of mankind

Mahidol University Core Values and Organizational Culture

Mastery
Altruism
Harmony
Integrity
Determination
Originality
Leadership

Strategies

1. Research Excellence
2. Teaching and Learning Excellence
3. Health Care and Services Excellence
4. Internationalization



Message from the President

We live in a rapidly changing, increasingly unpredictable, and highly interdependent world. To address this complex reality, Mahidol University has set strategic goals for healthcare and service excellence, research excellence, teaching and learning excellence, as well as for internationalization. Clearly, these goals cannot be realized without excellent people – Mahidol's diverse and remarkable team of staff.

As President, my goals are to instill and strengthen Mahidol's core values, and to perpetuate the culture of continuous quality improvement in every aspect of the university. As a learning organization traveling along this path of excellence, Mahidol University aims to transform itself from a distinguished Thai university with a global outlook into a world-class university.

Mahidol University has long been known for its strength in medicine, health and life sciences. In recent years, it has also gradually risen to prominence

in the social sciences, arts and humanities. With such achievements, together with the extraordinary dedication of its staff members, Mahidol University has become a university of choice among students seeking a high quality education.

Only vision with action can change the world. The achievements highlighted in this report would not have been possible without the sacrifice and hard work of every member of Mahidol University. Together, we can be better, stronger and smarter. Together, we must provide the education that is relevant for the global citizens of the 21st century. Together, we will make our university, Thai society, and the world better.

P. Sakol

Clinical Professor Piyasakol Sakolsatayadorn, M.D.
President





Achievement Highlights 2010

International Recognition

Faculty of Tropical Medicine

Prof. Nicholas J. White

1. Prince Mahidol Award 2010 in the field of Medicine
2. 2010 Canada Gairdner Global Health Award from the Gairdner Foundation, Canada

Faculty of Science

Assoc. Prof. Pimchai Chaiyen

2010 Taguchi Prize for Outstanding Research Achievement in Biotechnology

Faculty of Medicine Siriraj Hospital

Lecturer Visith Thongboonkerd

TWAS Prize for Young Scientists in Biomedical Sciences from UNESCO supported Academy of Sciences for the Developing World

Faculty of Information and Communication Technology

Asst. Prof. Thamwadee Sunetnanta

2010 IBM Faculty Award from IBM Corporation, USA

Faculty of Pharmacy

Assoc. Prof. Wandee Gritsanapan

2009 Vice Chancellor's Commendation for International Alumnus of the Year from the University of Queensland, Australia

Faculty of Engineering

BART LAB Rescue Team

First Prize at Robocup Japan Open 2010

Faculty of Social Science and Humanities

Lecturer Saowalee Kaechuay

Gold Medal 4x400 Meters Relay at 25th SEA Games in Vientiane, Laos 2010

College of Music

Mr. Ekachai Jearakul, a 4th year student

First Prize in Guitar Competition at The 3th Culiacan International Guitar Competition, Mexico

Faculty of Tropical Medicine

Mr. Sethavudh Kaenviset

SEAMEO Service Award 2009/2010 from 45th SEAMEO Council Conference and 5th ASEAN Meeting of Education Ministers, Philippines



Notable Events

8 December 2009	30 th Anniversary Celebration of Mahidol-Oxford Tropical Medicine Research Unit, in collaboration with Faculty of Tropical Medicine, Mahidol University; Oxford University (United Kingdom) and Wellcome Trust
18 December 2009	Establishment of Mahidol University's spin-off company: Siam Bioscience Co., Ltd. (SBS) for research, development and production of biopharmaceuticals in collaboration with the Crown Property Bureau Equity Co. Ltd.
29-31 January 2010	Thailand International Jazz Conference 2010 at the MU College of Music
10 March 2010	Establishment of the International Exchange Center between Mahidol University and Chiba University (Japan) at the Faculty of Science

11-25 March 2010	ASEAN in Today's World 2010 at MU International College in collaboration with Kyushu University, Japan
1 April 2010	Establishment of the Mahidol-Osaka Center for Infectious Diseases (MOCID) at Faculty of Tropical Medicine in collaboration with Osaka University (Japan)
6 April 2010	50 th Anniversary Celebration of Faculty of Tropical Medicine
10 June 2010	Signing of the Memorandum of Understanding (MoU) on the development of testing and chemical analysis to promote food safety in pork and chicken products between Mahidol University, the Office of Commission Higher Education, and Betagro Science Center (Betagro Co. Ltd.)
5 August 2010	Opening of Mahidol University Press





Research Highlights 2010

Mahidol University has achieved international status in its research in biomedical science and natural science. Most of the University's science-based research has direct applications in healthcare, therapeutic interventions, environmental management, biotechnology and food technology. In 2010, through the external research evaluation by the Thailand Research Fund (TRF), Ministry attached to the Prime Minister's Office, Mahidol University was given the highest rating in the fields of science, biotechnology, medicine and health sciences. The University continues to develop research capacities in social sciences, arts and humanities and environmental management.

Our research excellence reflects the quality of staff and their activities, and the University's success in attracting and supporting research students to successful completion. The networking of the university central instrument facilities, including a new facility on Salaya Campus, together with our University Library and Resource Center that accommodates the most comprehensive journal database in Thailand, surely help the University's thriving research community. Online databases provide full-text access to more than 32,270 e-journals campus wide. Mahidol University boasts many well-established, high quality research groups providing a strong and supportive environment in which research prospers.



“Rating 5/5”
The Thailand Research Fund Recognizes MU quality research output in Science, Medicine, Health Science and Biotechnology.

Prestigious grants have been received from government funding agencies namely, the National Research Council of Thailand (NRCT), the Thailand Research Fund (TRF), the National Science and Technology Development Agency (NSTDA), the National Health System Research Agency, and the Office of Commission on Higher Education (CHE). These account approximately 70% of the total university research revenue. In 2010, Mahidol University has dedicated a central fund of 78 million baht from its own resources to support capacity building such as fundings of postdoctoral fellows, young staff and their career development. Part of this fund was also allocated to embryonic areas of research which are of the

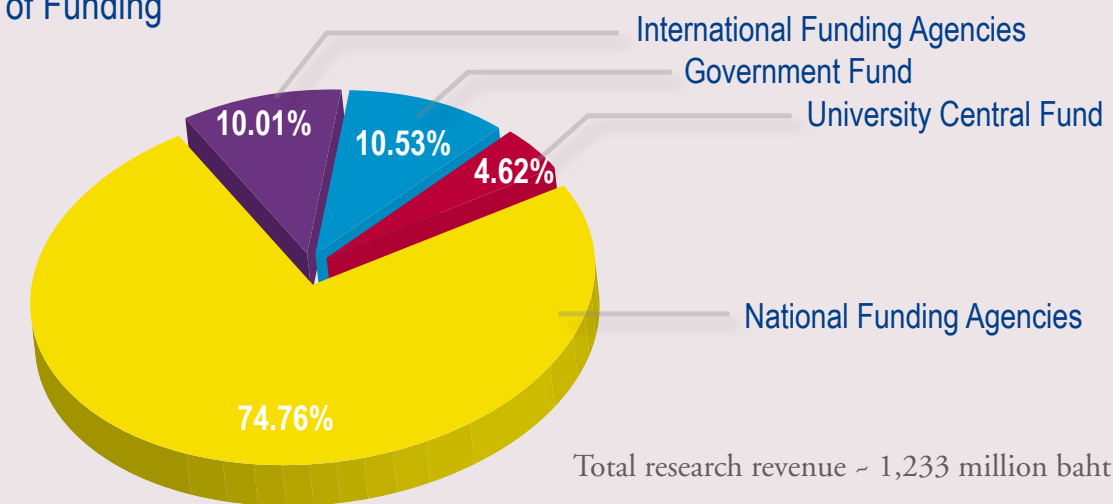
University’s own interest. Through the national and international competitions, Mahidol University received similar amount of research supports from both government fiscal year budget and international funding agencies 2010.

With the excellent track record in research output both in terms of quantity and quality, Mahidol University is also recognized as one of the nine research universities by the Office of Commission on Higher Education, Ministry of Education. It was nominated from the Ministry of Commerce in September 2010 as the leading university for the establishment of Creative Academies on Traditional Medicine, Performing Arts, and Cultural Tourism.



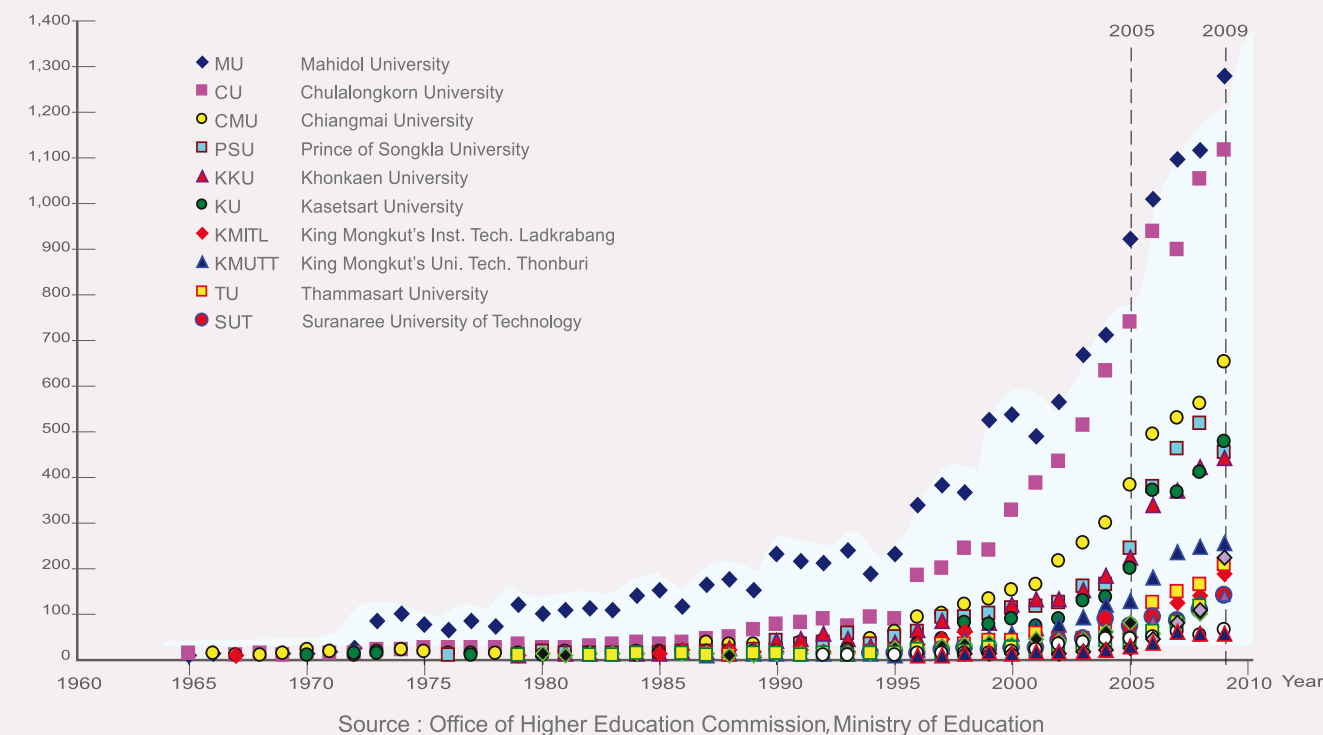
Mahidol University Research Fund 2010

Sources of Funding



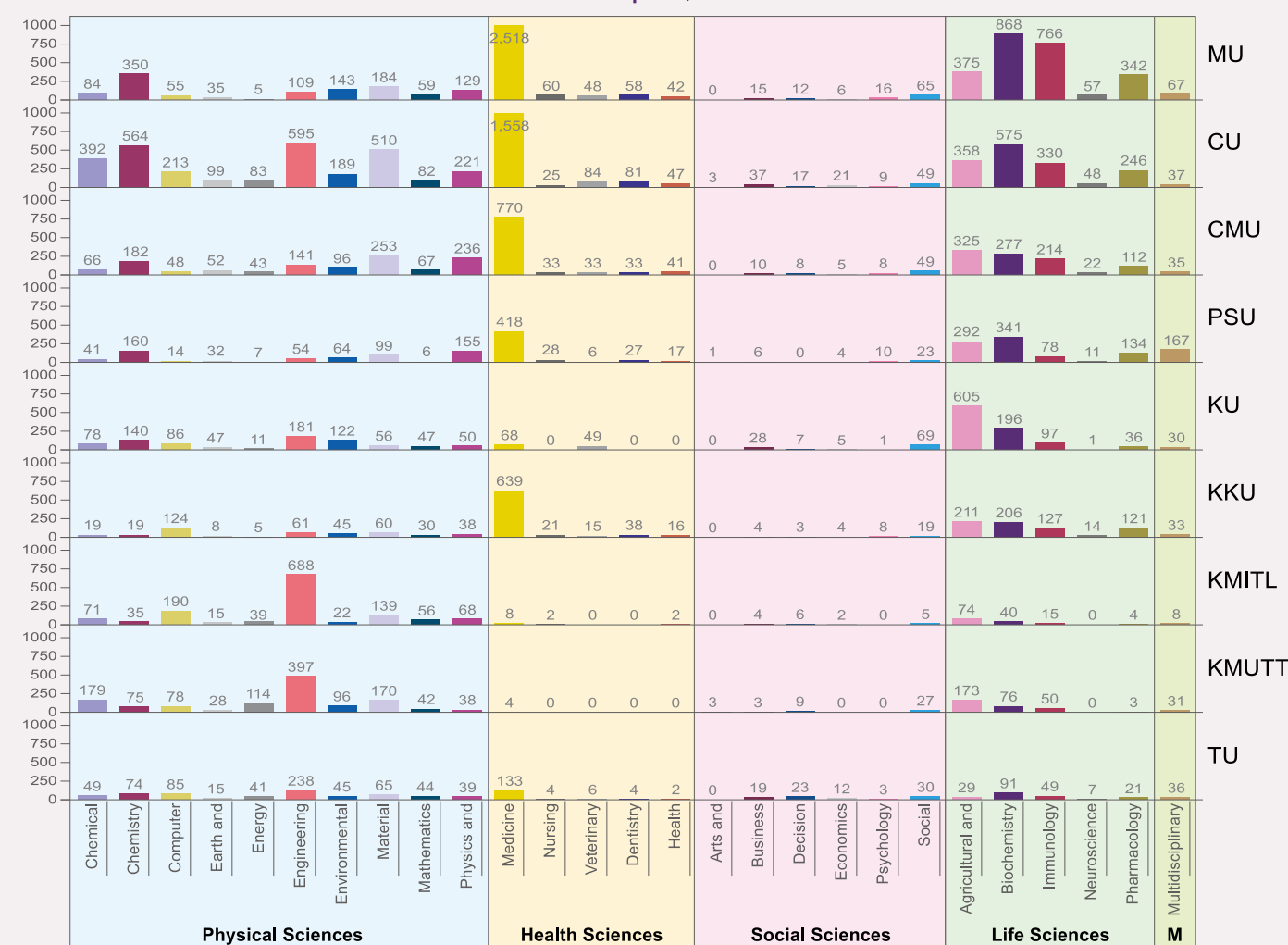
Total research revenue ~ 1,233 million baht

International Research Publications Record of Thai Universities in Scopus Database



Source : Office of Higher Education Commission, Ministry of Education

Fields of Strength of Top 9 Thai Universities Data from Scopus, 2005-2009



Source : Office of Higher Education Commission, Ministry of Education



“Mahidol University, above all, aims to provide high quality research for the real world--research that improves social well-being.”

For this newly launched Creative Academy project, the Ministry expects the leading university to develop a research-driven, knowledge transfer partnership that eventually results in economic value chain creation.

Mahidol University, above all, aims to provide high quality research for the real world-research that improves social well-being. For further information, please see *Research at MU 2010*

“Creative Academy”



National and International Recognition

Mahidol's staff has won the **National Outstanding Scientists** and **National Researcher Awards for 2010**



Prof. Prasert Auewarakul



Dr. Visith Thongboonkerd



Prof. Virapong Prachayasittikul



Prof. Wanpen Chaicumpa



Prof. Somsonge Burusphat



Prof. Pimchai Chaiyen



Prof. Pipop Jirapinyo

National Outstanding Scientist Awardees
Prof. Prasert Auewarakul
Dr. Visith Thongboonkerd

National Researcher Awardees in Chemistry and Pharmacology and in Medical Science, respectively
Prof. Virapong Prachayasittikul
Dr. Visith Thongboonkerd

TRF-CHE Chair Professorship
Prof. Wanpen Chaicumpa

TRF-Senior Research Scholar Award 2010
Prof. Somsonge Burusphat

TRF-CHE-Scopus Researcher Award 2010 and Taguchi Prize for Outstanding Research Achievement in Biotechnology 2010
Assoc. Prof. Pimchai Chaiyen

National Innovation Agency Award for Social Contribution 2010
Prof. Pipop Jirapinyo

Research With Community Outreach

At Mahidol University, we work with the aim to increase community participation in all stages of research, foster research relevant to community needs, form and facilitate research network capabilities, and promote uptake of useful research findings in diverse settings. Community and area-based research approaches are employed by the University's researchers as alternatives to traditional population-based research. Such approaches encourage building trusting relationships through bi-directional discussions between

community members and our academic investigators. The research takes place in community settings and involves community members in the design and implementation of research projects.

It is important to note that such research activities should demonstrate respect for the contributions to success which are made by community partners as well as respect for the principle of “doing no harm” to the communities involved.



The following projects have been awarded at the National level in 2010:

- Patani Malay-Thai mother tongue based-bilingual education in Southern Thailand.**
Project Head: *Prof. Suwilai Premsrirat*
- A comparison of classifiers in Tai-Kadai languages.**
Project Head: *Prof. Somsong Burusphat*
- Western region studies project: an integrative study for poverty alleviation.**
Project Head: *Assoc. Prof. Anuchat Pongsomlee*
- Local health communication.**
Project Head: *Assoc. Prof. Duangporn Kamnoonwatana*

Successful Research and Development Achievement

Certain intellectual properties arise from R&D of the University were selected and further developed for commercial value. Licensing technology, business incubation and commercialization are responsible by the Mahidol University Center for Intellectual Property Management (MUCIP). For further information, please see www.ip.mahidol.ac.th.

2010 University Spin-Off Companies

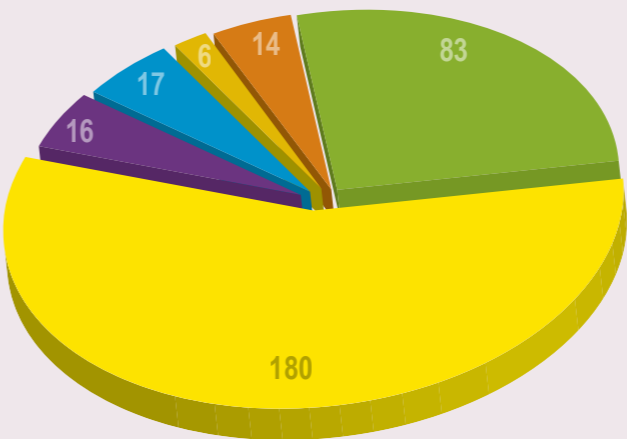


Go Green Co., Ltd.



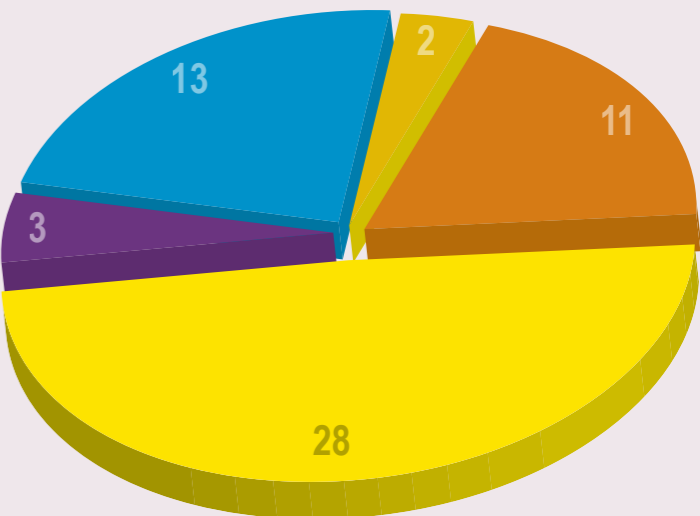
X-Zell Biotec Co., Ltd.

Numbers of Intellectual Properties Registered and Granted



Fiscal Year 1991-2010

- Patent
- Copyright
- Trade Secret
- Petty Patent
- Trademark
- Foreign Patent



Fiscal Year 2010



Education for the Benefit of Mankind

Nurturing the Mahidol Teaching Spirit

At Mahidol University, pursuing the strategic objective of excellence in teaching and learning means we endeavor to produce graduates who exemplify Mahidol's core values and develop the habit of lifelong learning. Strengthening Mahidol teachers' potential and teaching spirit will significantly enhance the students' learning experiences and will enable them to become competent members of the community.

In mid-2010, the university has set up the "Project for Nurturing a Teaching Spirit" to

cultivate a quality learning environment, enhance the teaching capacity and encourage university-wide network. Consequently, the network "Mahidol Teacher Fellowship" was set up among lecturers. Several meetings were organized such as "Towards Happiness and Meaning in the Classroom," followed by classroom visits to observe and exchange best practices in the teaching-learning process with an emphasis on contemplative learning. Mahidol University intends to expand this initiative throughout the whole university.

Fostering Social Responsibility Through General Education Courses

Mahidol University has revised the General Education (GE) courses for undergraduate programs since 2007 to nurture well-rounded graduates to learn and work with societies. Social responsibility, creativity and problem solving are the essential elements in these courses.

More than 200 projects carried out by groups of students were presented each year. The scope of the projects ranged from exploring social problems to proposing remedies or even taking concrete actions to address them and learn about social problems from different perspectives. These projects empowered them to work in group and gain experience in real life such as team work, collaboration, communication, system thinking, creative problem solving, project management, networking, and honoring social contracts and responsibility. The best feature about these subjects was not only to establish friendship among new friends from various fields of study but also to raise social awareness. Hence, the “General Education” of Mahidol University is accepted as a model of teaching and learning for other Thai universities.

Best Practices at Mahidol University International College

Since its inception in 1986, the defining mission of Mahidol University International College (MUIC) has been to offer arts and science curricula, taught in English in accordance with the finest international standards, to a diverse population of full-time students from Thailand and around the world. MUIC seeks not only to prepare students for professional careers in a wide range of fields but also to encourage them to develop a higher sense of moral purpose and social responsibility as well as personal creativity and lifetime learning, all of which are pre-requisite skills for their lives as good citizens and leaders.

MUIC offers a broad spectrum of 22 major programs in arts, business, science and technology both in undergraduate and postgraduate levels.

Recently, MUIC has also developed a variety of combined programs:

- 4+1 year program: MUIC has forged agreements with other faculties at Mahidol University to offer the study in graduate programs for the undergraduates, resulting in shortening the period of study but gaining both Bachelor and Master degrees within 5 years.



- Dual Degree program: the 2nd year MUIC Biomedical students are able to study at the University of Queensland, Australia, for 2 years and receive the degrees from both universities.
- A combined program with the Faculty of Dentistry which enables MUIC Biomedical graduates to continue their studies at the Faculty of Dentistry.

In 2010, the total number of MUIC students was 2,463, an increase of 10.3% from 2009 and 19.8% from 2008. There are 150 students from the College's partner universities at MUIC and 46 MUIC students studied abroad in a variety of outbound exchange programs with more than 42 institutes around the world. In addition, 70 students joined MUIC as short-term visiting students. More recently, the College received the “Best Practice Award” from the Commission on Higher Education, Ministry of Education for its exchange program among Thai and international universities.

The MUIC faculty demonstrates a comprehensive range of international expertise from various parts of the world, including Australia, Britain, Canada, China, Finland, France, Germany, Japan, New Zealand, Singapore, Thailand, and the United States; 62.9% of faculty members are foreign nationalities while 37.1% are Thais.

An important part of the learning experience can be found both inside and outside the classroom. Internship and extracurricular programs in collaboration with regional and international universities and organizations as follows:

- The M-I-T Project is a collaborative program among the Malaysian, Indonesian and Thai governments. In the 1st trimester, MUIC sent 5 students to Malaysia and 5 to Indonesia.
- In 2010 MUIC sent 5 students to internship programs at Rydges Bell City Hotel, Australia; Hotel Mercure Bordeaux Center, Bordeaux, France; and the Opposite House, Beijing, China.
- One student is undergoing an internship at a laboratory at Columbia University, NY, USA.
- Twelve students took courses in entertainment media production programs at University of Chapman, California, USA.
- During the summer session, 41 MUIC students studied languages abroad: 30 in China, 7 in France and 4 in Germany.

Every year MUIC proudly announces a roster of special achievements by its students. Their accomplishments reflect a diversity of interests, including science, sports, social science, communication, business and more. Last year, MUIC students received a total of 57 awards nationally and internationally.

The College also emphasizes quality assurance; it has been accepted for membership in the Association of Asia-Pacific Business Schools (AAPBS) and the Association to Advance Collegiate Schools of Business (AACSB).



The Sirindhorn School of Prosthetics and Orthotics

To address the shortage in skilled professionals, the Sirindhorn School of Prosthetics and Orthotics (SSPO) was officially established in 2002 in the Faculty of Medicine, Siriraj Hospital, Mahidol University, with partial support from the Nippon Foundation. There are three phases of development. In the first phase, the school offered a course for Bachelor of Science in Prosthetics and Orthotics from Mahidol University.

In phase two, the curriculum was revised in 2007 and in March 2009, SSPO was accredited by the International Society of Prosthetics and Orthotics, making it the first and only accredited prosthetics and orthotics school at this level in Southeast Asia.

In phase three, in July 2010, the funding from the Nippon Foundation, enables the school to offer the international course for Bachelor of Prosthetics and Orthotics Program which currently has 10 foreign students enrolled and will continue to accept 10 new foreign students per year. The first international class consists of 2 students from Nepal, 6 from Pakistan, and 2 from Vietnam. To date, a total of 59 prosthetists and orthotists graduated from SSPO.



Bachelor of Science Degree Program in Actuarial Science (International Program)

Actuarial Science of Mahidol University is the only international program in Thailand that collaborates with foreign university (Curtin University of Technology, Australia). The program offers trainings in Mathematics, Statistics, Finance, Economic, Accounting, Law, Computing Demographics and English. The program produces graduates for organizations that need financial advisors in risk management, such as insurance, superannuation, banking, other financial institutions and government agencies.

A double degree from Mahidol University and Curtin University of Technology will be granted. About 50 students are admitted annually.



Scholarships and Awards

A number of scholarships for outstanding students is available from Siam Commercial New York Life Insurance Public, Ocean Life Insurance Co., Ltd. Muang Thai Life Assurance Co., Ltd. and The American International Assurance Company. This helps to ensure the prominent worldwide career path of the graduates.

Towards Quality Graduate Education: Goodness, Proficiency and Public Mindfulness

The Faculty of Graduate Studies' participatory active learning curricular and highly competent faculty members are the key factors that motivate our students to academic excellence. There are more than 200 programs in various fields, including science and technology, clinical medicine, public health, social sciences, education, liberal arts, languages, culture, music, religious studies and environment. Graduate programs in 2010 are highlighted below:

- The Master of Arts Program in Population and Social Gerontology represents a collaboration between the Institute for Population and Social Research, Mahidol University, and University of Miami, U.S.A. Graduates receive a degree certificate, signed by the Presidents of both Universities. The program meets the needs of an aging society: a pressing challenge globally. Our graduates will be equipped with skills to conduct research on the economics, social, cultural and health aspects of the aging population
- The Master of Arts Program in Human Rights and Democratization is offered by the Center of Human Rights and Social Development, Mahidol University in collaboration with the University of Sydney, Australia; Gadjah Mada University, Indonesia; Purbanchal University, Nepal; and the University of Colombo, Sri Lanka. Under this collaboration, students must spend their first semester at the University of Sydney and the second semester at one of the partner universities of their choice.



- The Master of Arts Program in Contemplative Education is the responsibility of the Contemplative Education Centre, Mahidol University. The program emphasizes learning and elevating the students' minds and understanding about life and nature. The program also focuses on practices for the benefit of others within a societal and cultural context.
- The Master of Engineering Program in Enterprise Architecture (a special program) is administered by Faculty of Engineering. This program focuses on the integration of information technology, telecommunication, and systematic organization management, leading to increased productivity and better services.



The Thailand Qualification Framework (TQF) for Higher Education announced on 2nd July, 2009, by the Ministry of Education, provides guidelines to support the implementation for quality assurance at all levels of higher education. The learning outcomes must be identified and include domains of learning: ethical and moral development; knowledge and cognitive skills; interpersonal skills and responsibility; analytical and communication skills; as well as the use of information and communication technology. Faculty of Graduate Studies has developed software programs to help organize the content and offer a "curricular clinic" to provide consultation. The Faculty of Graduate Studies aims to complete the revision of curriculum by the academic year 2012-13.





Values of Lifelong Learning with Student Affairs

Mahidol University is determined to produce graduates with the University's core values: Mastery, Altruism, Harmony, Integrity, Determination, Originality and Leadership, as well as the value of lifelong learning. To achieve this goal, three main approaches have been introduced:

“Playing is Learning”

Various student activities have been organized through Contemplative Learning, i.e., the MU Leadership Development Program. Moreover, the Activity Transcript was initiated to support their participation in extracurricular activities.

“Physical and Mental Alert for Health”

Students are encouraged to become physically, mentally and emotionally healthy through a variety of activities, including the “MU White Bike Project” that provides 300 public bicycles for use on campus; a 24-hour hotline service and web board; the self-awareness projects through peer group and student counseling services.

“Live and Learn with Nature”

In order for students to live and learn in a pleasant, comfortable and safe environment, the university landscape has been improved as a green campus; MU student dormitories have been transformed into MU Homes with 7 new multipurpose rooms for extracurricular activities.



Caring with Heart, Curing with Innovation

Healthcare Services at the Faculty of Medicine, Ramathibodi Hospital

Development Wellness Potentials of Thai People

A government budget of 20 million Baht was granted to the Faculty of Medicine, Ramathibodi Hospital, Mahidol University, to create a holistic approach to elevate well-being of Thai people by means of a changing life style and improving health-care. This is the first “human potential improvement” project ever funded by the Royal Thai Government. The final outcome includes a roadmap of knowledge and innovation to be distributed to all government agencies responsible for human resource development, guiding them towards synergistic and holistic activities to improve the human potential of all Thai citizens.

So far, the project has produced one health screening model for school-aged children (a guideline for school nurses and teachers) and 8 published manuals/guidelines. The project also helps to create 8 networks involving 39 government agencies that share the project’s goals. Several models are in the planning stage, including 11 holistic health approaches such as weight control and reduction. Knowledge distribution was conducted through lectures, trainings, and symposia for public and other agencies.

The plan for 2011 is to continue to improve the guidelines and expand the network and activities, especially in the areas of school health and weight reduction/management for obese individuals.

Cardiovascular and Metabolic Center

Ramathibodi Hospital

The Cardiovascular and Metabolic Center (CVMC) is a center of excellence for service, research and training for cardiovascular and metabolic diseases in Thailand. The center offers state-of-the-art medical technologies, including comprehensive prevention, diagnosis and treatment. Our physicians and staff are committed to providing the best care for their patients. Modern information technology and financially innovative administration have been introduced to support this comprehensive, one-stop service center, which is not only more transparent but also more accountable. The units under the supervision of the center are as follows:

- Premium Clinic
- Non-Invasive Cardiovascular Laboratory
- Cardiac Catheterization Laboratory and Coronary Care Unit
- Medical Services Outsourcing
- CPR Training Center
- Medical Convention Promotion Center
- Thai International Health Care Standard Training Center

CVMC has been a pioneer in surgical treatment of Atrial Fibrillation in Asia in collaboration with the University of California, Los Angeles, and the University of Columbia. This treatment was propagated with the new therapeutic procedural technique of a very small surgical site from a 7-millimeter laparoscope. Within two weeks, patients will be able to get back to their daily lives. Moreover, CVMC is the regional center for training in advanced therapeutic techniques, services and research involving patients with cardiac arrhythmia.



Thailand Medical Hub Pilot Project

Activities of the Medical Hub project are:

1. Design the framework and sign the Academic and Services Cooperation Agreements between Ramathibodi Hospital and 17 leading hospitals such as Siriraj Hospital, Phayathai 2 Hospital, Ramkamhang Hospital, Mahachai Hospital, Rama9 Hospital, Phiyavate Hospital, in order to promote academic and clinical cooperation.
2. Signed cooperation agreements in medical information system through HL7 standard with government and private organizations such as Ministry of Public Health, Ministry of Information and Communication Technology, Office of the Higher Education Commission and Faculty of Medicine Ramathibodi Hospital.
3. Organize international conference in Thailand to enhance the international recognition, e.g., Obesity Summit 2010; Bangkok International Neonatology Symposium 2010; Challenges in Urology Summit Conference 2010; and International Urogynecology Conference 2010.
4. Establish research collaboration with The Siam Cement Public Company Limited to develop medical innovation and technology in order to reduce dependence on imported products.

Healthcare Services at the Faculty of Medicine, Siriraj Hospital

Successful revascularization with intraoperative venous drainage of ischemic limbs through hemodialysis in severe acute saddle aortic embolism

Reperfusion injury is a life threatening complication of acute limb ischemia resulting in severe metabolic disturbance, multiple organ failure and death. Immediate major amputation is usually inevitable in this condition to prevent further disastrous complications.

Traditionally, controlled limb reperfusion was used to ameliorate the metabolic disturbance in this situation by adjusting the flow rate, the perfusion pressure and the temperature of arterial blood circulating into the unilateral ischemic lower extremity during the revascularization procedure. The treatment required infusion of the special perfusate into the distal artery to neutralize the accumulated anaerobic metabolic products. This complex and sophisticated system is not always available to patients who need the treatment.

The team from Siriraj hospital has originated a simple system for the treatment of severe reperfusion injury in the prolonged bilateral lower extremity ischemia. The principle of this technique is the drainage of venous blood from bilateral ischemic lower extremities through the hemodialysis and the return of the dialyzed blood into the systemic circulation during the revascularization process.

A successful treatment was carried out in a 60-year-old lady suffering from saddle aortic embolism for 22 hours with severe reperfusion injury. There was no evidence of hypotension, cardiac arrhythmia, myoglobinuria and metabolic disturbance. The level of potassium and pH from venous blood extremities and systemic circulation were regularly monitored during the procedure. Postoperatively, the patient remained in a stable hemodynamic status and experienced early recovery of multiple organ dysfunctions, including the lower extremities.

The drainage of venous blood from the severely ischemic lower extremities through hemodialysis may be an effective treatment of reperfusion injury, leading to successful limb salvage and life-saving of patients with acute extensive arterial occlusive disease.

Important Clinical Trials at the Faculty of Tropical Medicine

Phase III Prime-Boost HIV Vaccine Trial

As part of its growing role in clinical trials, the Faculty of Tropical Medicine is involved in the Phase III Prime-Boost HIV Vaccine Trial. The main objective is to see if using two different candidate vaccines to strengthen the body's immune system can protect volunteers living in Chonburi and Rayong Provinces. The project is the world's largest HIV vaccine study, with 16,000 volunteers.

The official announcement of the outcome of this Phase III HIV Vaccine Trial was made on 24 September 2009, at the Department of Disease Control, Ministry of Public Health. It was found that the vaccine was 31.2% efficacious in reducing the risk of HIV infection. The outcome represents a breakthrough in HIV vaccine development because for the first time there is evidence that an HIV vaccine has preventive efficacy. Although the efficacy level was not yet high enough, the knowledge gained from this important clinical trial can be used to improve HIV vaccine efficacy in the future.

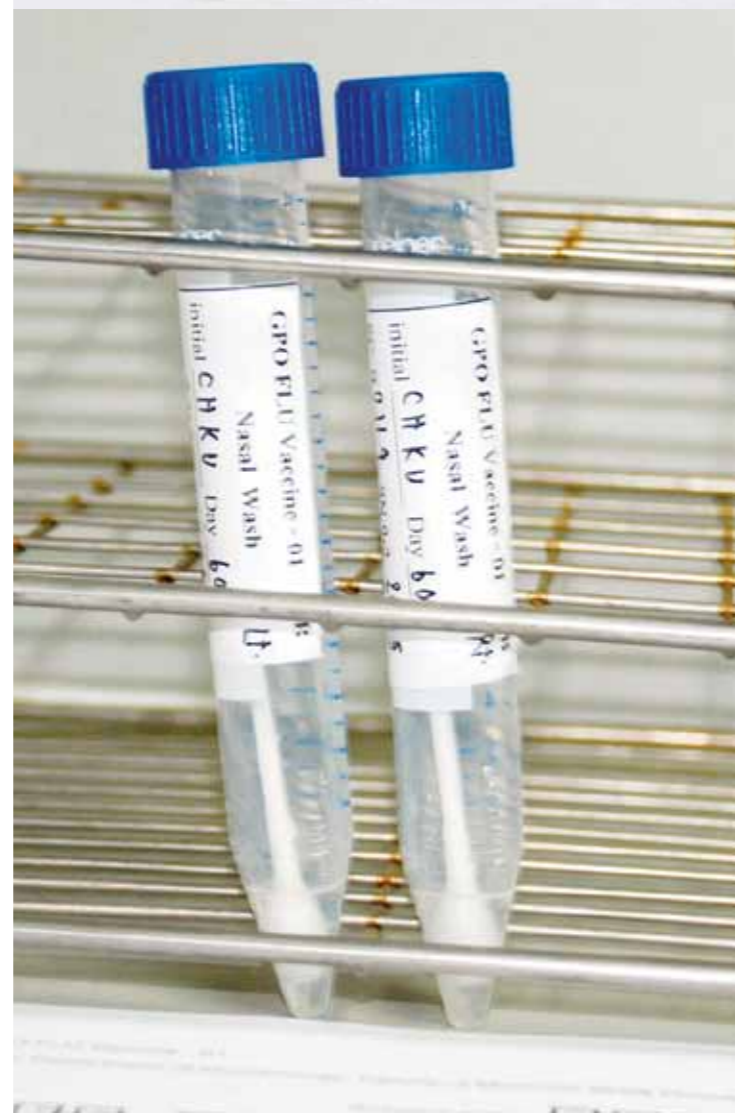
Phase I/II of Pandemic H1N1 live attenuated flu vaccine (Fluvac®) study in Thais

Vaccine Trial Centre,
Faculty of Tropical Medicine

The Thai Government Pharmaceutical Organization (GPO), with technical support from WHO, is prepared to produce its own pandemic live attenuated vaccine for the Thai population. The trade name of this nasal spray product manufactured by the GPO (Thailand) is **"Fluvac®"**. Safety and immunogenicity "Fluvac" has been evaluated in a clinical trial at the Vaccine Trial Centre, Faculty of Tropical Medicine, Mahidol University, entitled "Phase I/II safety and immunogenicity of pandemic live attenuated influenza vaccine (PLAIV) candidate strain A/17/

CA/2009/38 (H₁N₁) in healthy Thais". The study has been monitored by WHO TDR and will be completed by March 2011.

Production and pharmacovigilance plans are the responsibility of the GPO, Thailand. The GPO has submitted a filing for licensure for age >18-49 years.



Excellent Dental Care at the Faculty of Dentistry HRH Princess Maha Chakri Sirindhorn Dental Mobile Unit

HRH Princess Maha Chakri Sirindhorn kindly gave her gracious permission to establish the Dental Mobile Unit by the Faculty of Dentistry, Mahidol University, in 1998 to provide oral healthcare services for over 200,000 villages in Thailand as a vital part of the royal development plan to enhance the quality of life of the underprivileged in remote rural areas. Under her generous guidance, the Unit has also provided treatment to the neighboring countries of Lao PDR and Cambodia. In the 2010 fiscal year, 13,456 patients were treated.

Notable Success in 2010

1. The project named "Teeth You Care For" and The Royal Project to provide acrylic partial dentures to the elderly at the Royal Project School in Nakorn Nayok Province, reduce the severity of oral diseases and support dental health promotion projects in the school and communities.
2. After the flood in Phra Nakorn Si Ayutthaya Province, the special Project, "HRH Maha Chakri Sirindhorn Leading the Way," was undertaken to help alleviate the problems in the disaster stricken area and improve the oral health conditions of the locals.

Future Direction

Faculty of Dentistry will establish the HRH Maha Chakri Sirindhorn Mobile Dental Services Unit at the Nakorn Nayok Province branch in 2012 to serve approximately 3000 children and young adults at 20 Royal Project Schools, including the local population in the surrounding areas. The Center will provide academic services, support teaching-learning activities and conduct research in community dental health.



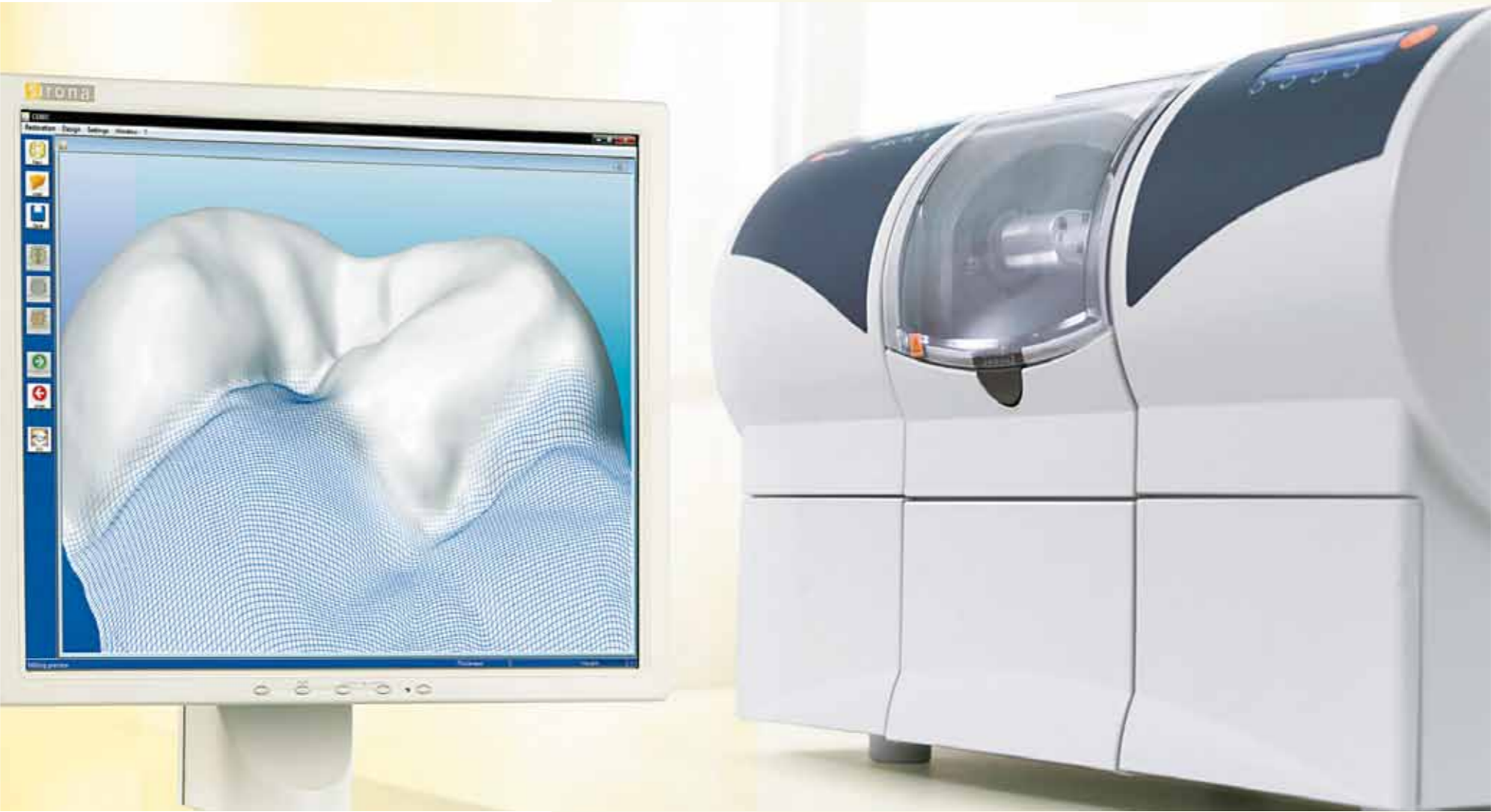
Healthcare Services (Fiscal Year 2010)

Service Center	beds	inpatient	outpatient
Siriraj Hospital	2,223	81,041	2,851,465
Ramathibodi Hospital	906	35,069	1,384,307
Tropical Medicine	250	1,827	124,314
Golden Jubilee Medical Center	28	829	237,057
Faculty of Dentistry	-	-	335,757
Faculty of Physical Therapy	-	-	86,006
Total	3,407	118,766	5,018,906

CAD/CAM for Dentistry

Faculty of Dentistry employs the latest technology in CAD/CAM dentistry to restore carious teeth into functional aesthetically pleasing teeth. The CEREC AC CAD/CAM has the latest technology in optical scanning with an advanced blue ray beam which can provide a highly precise representation of the preparation without the need to take an impression. The optical image is sent to the acquisition center where a 3D model of the restoration is processed. The dentist can optimize and design the final restoration with ease and precision. Once the dentist is satisfied with his creation, the information is sent to the milling machine where the ceramic restoration is milled into the final product. The whole process, from taking the optical impression to the final restoration, takes only 2-4 hours — saving valuable time compared to the more traditional method where the patient needs to come back for placement of the final restoration.

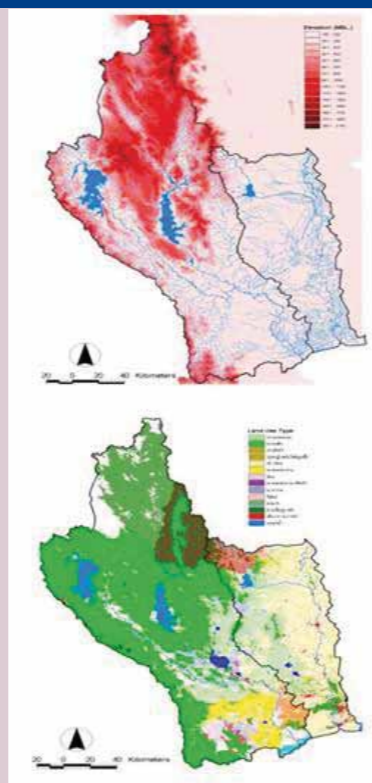
The Advanced Dental Clinic began to offer the CAD/CAM dental restoration service to our patients in the last months of 2010. The use of this new technology requires adaptation of different modes of skills needed for the many procedures that the machine offers.



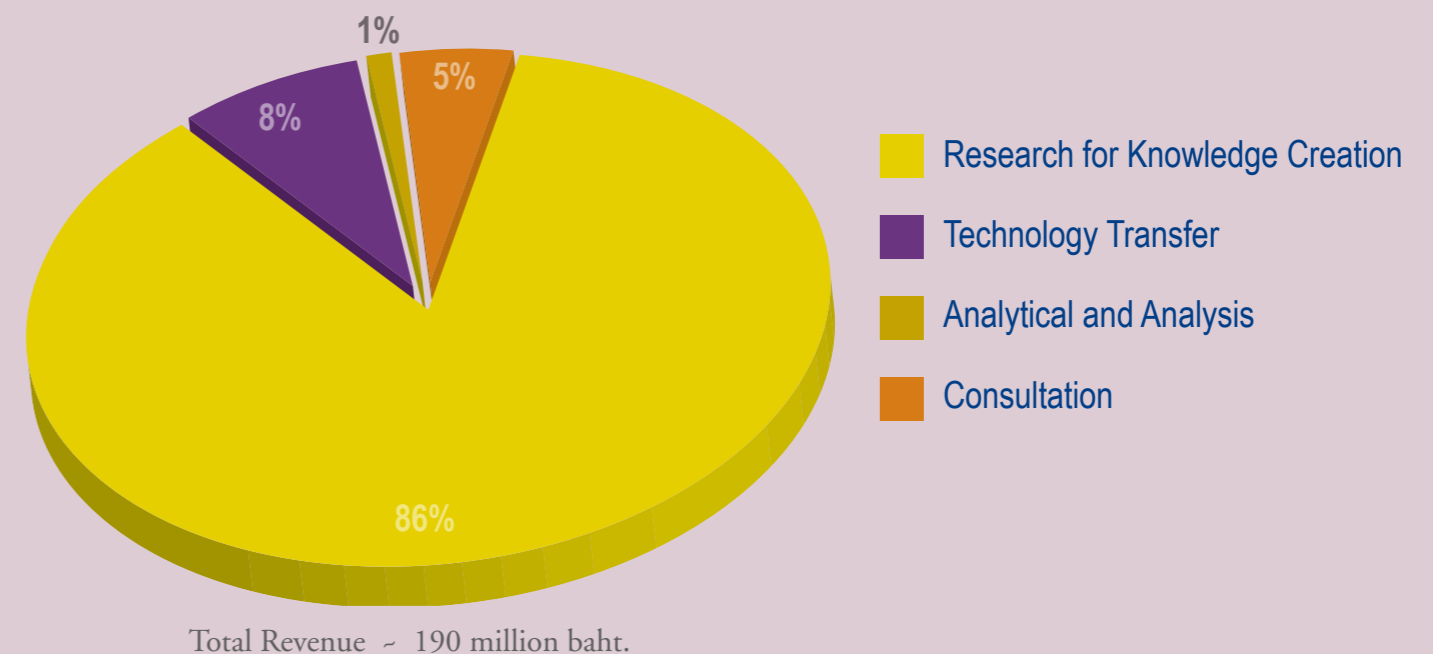


Academic and Community Services

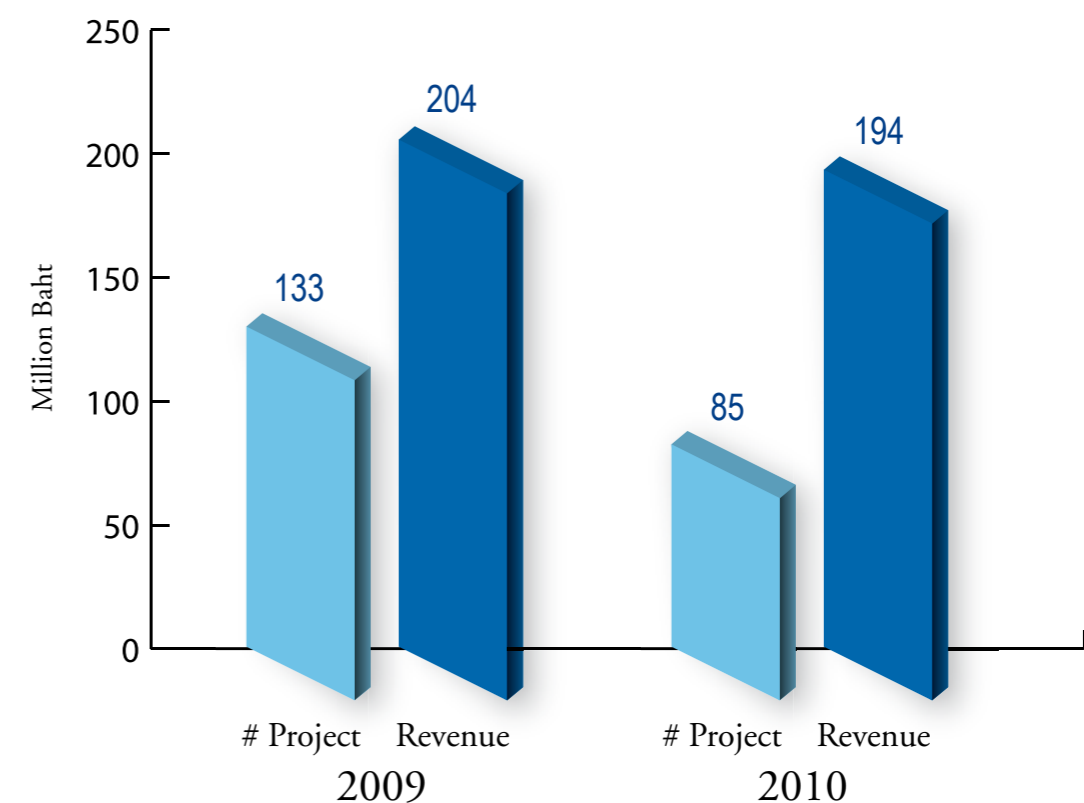
In 2009, Mahidol University had restructured its organization with an aim to improve its services for Thai community, public and private sectors. The current services are offered through the Mahidol University “Wisdom Application Center” and therefore characterized by high reliability, customer-orientation and proximity to customers. MUWAC operates as a one-stop resource center to provide instant access to the university staff’s expertise and services provided. Training workshops and laboratory analytical packages can be organized and customized to meet the need of our clients. Other activities include the provision of good advice to its important clients as well as conducting quality research by the University’s experienced staff. For further information, please see www.muwac.mahidol.ac.th



Total University Revenue From Academic Service 2010



Number of Projects and Revenue from Academic Service 2009 and 2010



International Activities at Mahidol University

October 2009 to September
2010

Throughout 2010 Mahidol University has continued to expand its horizons and strive toward becoming a “world-class” institution. As such, Mahidol University has engaged in numerous activities to establish and enhance collaborations with international partners (*Strategic International Collaboration*), and enhance its visibility and preparedness on the global academic stage (*Internationalization*). Highlights of these endeavors include:

Strategic International Collaboration

Joining the World University Rankings.

In 2010, Mahidol University was placed at 228th in the QS World University Rankings and 306th in the Time Higher Education (THE) World University Rankings, making it one of the top universities in Thailand. In addition, the QS Asian Rankings placed Mahidol University 28th in the region and 1st in Thailand. Since 2008, Mahidol University has also been the only Thai university to appear among the top 500 Universities in the Performance Ranking of Scientific Papers for World Universities by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT).

Encouraging inbound and outbound student and staff exchange. During 2010 Mahidol University continued to send students to train or study overseas at institutions in North America and Europe including, the University of Wisconsin-Madison, USA and the University of Liverpool, UK. Demonstrating Mahidol University's commitment to closer ties with countries under the ASEAN +3 region, students were also placed at universities in Japan and South Korea including Hokkaido University and Seoul National University. Representatives from Mahidol University also participated in numerous international activities, including the Asia Pacific Leader Program and the 8th ASEAN Youth Cultural Forum. In addition, several universities including Kunming Medical University, China and Johns Hopkins University, USA, sent their students and staff to train at Mahidol University under short-term programs.

Hosting many international conferences and symposia. These include the 6th Seminar on Food- and Water-borne Parasitic Zoonoses (FBPZ6), in co-operation with the 3rd International Meeting on Gnathostomiasis (2–4 December 2009) and the International Symposium, “Regional Network Development for the Future of Primary Health Care Research and Teaching Imperatives,” (17 June 2010).



Developing international capacity and skills under Memorandums of Understanding. For example, the SNU-Woonglin Student Exchange Program Scholarship, the Mahidol-Liverpool Stang Mongkolsuk Scholarship, the Hokkaido University Short-Term Exchange Program and the FrontierLab@OsakaU Program.

Establishing a new collaborative research center: the Mahidol-Osaka Center for Infectious Diseases (MOCID) at the Faculty of Tropical Medicine.

Internationalization

Welcoming many high ranking university executives and administrators to its campuses. Examples of these include the President of Osaka University, Japan, Prof. Kiyokazu Washida; the President of the University of Groningen, Netherlands, Prof. Dr. Sibrand Popem; the Executive Pro-Vice Chancellor of the University of Liverpool, U.K., Prof. Stephen Holloway; the President of the University of Malaya, Malaysia, Prof. Ghauth Jasmon; and the Vice Chancellor of Pokhara University, Nepal, Prof. Dr. Keshar Jung Baral.

Organizing Mahidol University International Day (MUID) 2010. Held on 30 June 2010, MUID once again provided an opportunity for international students and staff to share aspects of their cultures and their experiences at Mahidol University. This year MUID expanded its activities to include a special address by a distinguished alumnus and a panel discussion on international education issues. During the special address, H.E. Naveen Prakash Jung Shah, Nepalese Ambassador to Thailand, shared his memories of studying for a Master of Public Health. Later representatives of Fulbright, Nuffic Neso, the British Council and European Union came together to give advice to students on securing overseas scholarships in a panel discussion entitled “*International Scholarship Resources*.” In the evening, an international-style dinner was attended by over 500 staff members, students and guests, representing 35 countries.

Publishing articles and advertisements about Mahidol University in several well-known print media, both at the local and international levels. Examples of these include the Scientific American Magazine, British Airways Media, the Scientist Magazine, the International Program by

FTC (Thailand), and Spectrum (Mahidol University's international newsletter).

Creating a greater understanding of what constitutes “internationalization” and sharing the international perspective and policies of Mahidol University via the Mahidol University International Networking Meeting. The meeting was attended by representatives from all of Mahidol University's faculties, colleges and institutes.

Co-organizing the Prince Mahidol Award Conference 2010: Global Health Forum, held in Bangkok from 27-30 January 2010. Mahidol University also received the honor of hosting a prestigious luncheon reception for the 2009 Prince Mahidol Laureates. (Prof. Anne Mills, The Prince Mahidol Awardee in Medicine and Mr. Mechai Viravaidya and Dr. Wiwat Rojanapithayakorn, the Prince Mahidol Awardees in Public Health).



People Excellence

Human Resource Development

Mahidol University has placed a focus on human resource development by specifying a human resource road map for the efficient operation of university staff in addition to conforming to all 4 university strategies. Moreover, it emphasizes the development of Core Competency which is based on Mahidol's Core Values, Functional Competency and Managerial Competency. All of these are aimed at mastery for university staff members through whom the university expects to be able to adapt knowledge and adjust concepts on the path to become a leading university.

Mahidol University not only promotes human resource development but also supports and offers opportunities for staff to take part in field visits within Thailand and abroad in order to broaden their views, understand alternative viewpoints and experience exchanges which bring about improvement and development for individuals,

the faculties and institutes, the university and the nation. Examples of such activities are visits to the URA Center and to NEWATER, Singapore.

In fiscal year 2010, Mahidol University offered 3 Mahidol Scholarships for doctorate or equivalent degrees. Each scholarship offers up to 1,500,000 Thai baht per year over 3 years. During the last fiscal year, two scholarships have been awarded to Miss Suthathip Thirakunkovit, a lecturer at the Faculty of Liberal Arts, and Mr. Juckrit Charoensook, a lecturer at the College of Music.

Moreover, Mahidol University places importance on morality, ethics and a positive attitude so that the university staff can contribute to the university and society within the 'MAHIDOL' core values framework, with an emphasis on learning by doing or an action learning process.



List of Development Programs during 2010:

Program	Participants
1. Advanced Management Program class 2	24
2. MU Executive Development Program class 6&7	89
3. MU Supervisory Level class 1&2	136
4. Orientation for New Staff	257
5. Orientation for New Academic Staff	80
6. Post Training for Retired Staff	40
7. Mentoring System	40
8. Panel Discussion to inspire staff career development on "How to write a good article"	400
9. Community of Practice for HR Networking	106
10. Mahidol Core Values Training Program	3,132

Performance Evaluation

Mahidol University has set up a performance evaluation system which is fair, transparent and accountable. Performance agreements for faculty levels have been carried out for different personnel positions. Individual performance agreements have been adapted to be suitable for various types of operation: routine, strategic work, development and special assignments.

Performance agreements at the faculty level serve as the ideal tool for management and allow faculty members to get to know one another. Such interactive discussion may help identifying areas to enhance capacity of the staff as well as provide useful suggestions to administrators.

Based on its Human Resource Strategy, Mahidol University places an emphasis on staff development in alignment with Mahidol's core values.

"A more efficient, smarter and happier Mahidol Community is our goal."



A Promising Place to Live and Learn with Nature

Salaya Green Campus

Mahidol University is committed to providing its students and staff with a healthy environment that not only inspires creativity and innovation but also supports ecological sustainability. Therefore, the university has developed a Master Plan of Salaya Campus (2008-2023) with an aim to create “a promising place to live and learn with nature.”

This current master plan is designed to engender harmony among three major dimensions: the physical infrastructure, the environment, and its social ambience. The master plan contains carefully considered strategies for renovation of

existing structures and well thought-out guidelines for new construction. The plan calls for at least 70% of green areas which serve as a natural classroom, a healthy space for campus activities and a best practice site for energy conservation and environmental sustainability. Many innovative projects have been initiated to enhance social interaction and well-being among members of the university and the surrounding community, such as organic vegetable farms, a retraining shelter for stray dogs, a natural-gas tram service, a white bicycle project and a garbage recycling bank.



MU

ICT-Based Strategy Towards World-Class University

In 2010, the Division of Information Technology (MUIT), Office of the President (OP), Mahidol University (MU), developed the MU ICT Master Plan 2010-2012 to support MU in achieving its vision of becoming a world-class university by implementing strategic resources for an ICT-based university, as evidenced by the following.

In order to guarantee high speed, stable and secure network connectivity, the MU Campus

Network (MUC-Net) has expedited the Gigabit Ethernet with 2.95 Gbps internet and 10 Gbps intranet accesses between campuses, and changed from multimode to single mode fiber optic cabling. An intrusion prevention system has also been implemented. An additional 210 access points (APs) have been installed, including 30 high speed Wi-Fi-n APs (300 Mbps) over the key function areas, such as the OP and libraries, totaling 1,010 APs and creating a wireless-campus environment.



A number of big changes have been made to the computer system development, including (i) an increase of mail box size from 200 MB to 1 GB, (ii) the extension of free e-mail service to nearly every employee of MU, (iii) a new and more user-friendly MU Web-Mail program, (iv) providing students' emails at Live@Edu with 10 GB mail box, and (v) providing the Virtual Private Network (VPN) to enable users working outside the University to access intranet services, such as e-Journal, IPTV, Enterprise Resource Planning (MUERP), Faculty Information System (MUFIS), Shared Information System (MUSIS), etc. These facilitate users' flexibility to work anywhere, any-time, and in a more convenient way.

To reach our goal in teaching and learning as well as research, licensed software has been provided such as Microsoft Operating Systems (Windows 7 and XP), Office software, web authoring and multimedia production tools (Adobe Creative Suite 5 Design Premium), teaching tools (Mathematica), research tools (SPSS v.18 and EndNote X4), e-Learning and Learning Management Software (LMS), and utility programs (ESET antivirus program). There were more than 28,000 downloads over the past year.

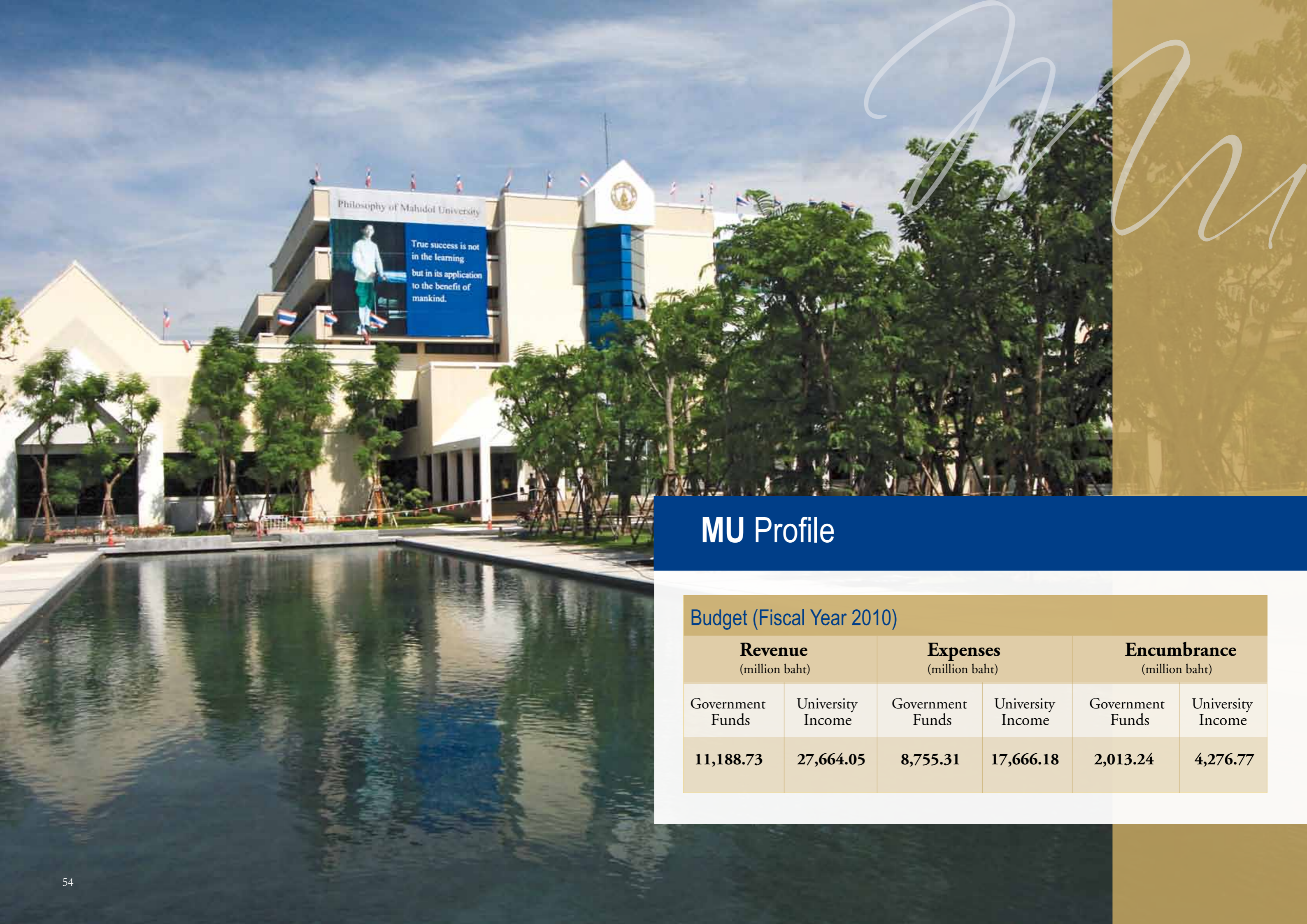
To facilitate service and administrative excellence, and resource optimization, 3 main programs have been implemented: MUERP, MUFIS, and MUSIS. These programs enable

more efficient and effective internal communication, management, quality development and assurance. In addition, the intranet social network of MU-wiki has been developed to manage and share MU's valuable knowledge, which is expected to be extended, and to share on the internet whose home page is wisdom.in.th, representing Wisdom of the Land, in 2011.

To achieve the goals of internationalization and human capital, a number of web development seminars and/or workshops have been held for MU staff members in order to enhance their IT literacy and proficiency, such as a workshop on how to develop web pages in order to comply with the requirements of the Webometrics World

Ranking, as well as seminars on the MU Cyber Club and MU Cyber Crime.

In summary, MUIT has been doing its best by utilizing ICT-based strategy to bring MU to the forefront as a university with the most updated technologies, to support the implementation of the MU strategies in becoming a world-class university.



MU Profile

Budget (Fiscal Year 2010)

Revenue (million baht)		Expenses (million baht)		Encumbrance (million baht)	
Government Funds	University Income	Government Funds	University Income	Government Funds	University Income
11,188.73	27,664.05	8,755.31	17,666.18	2,013.24	4,276.77

Academic Programs (June 2010 - May 2011)

Programs Offered	Total
Mahidol University Programs	330
Certificate Programs	13
Bachelor Degree	79
Master Degree	162
Doctorate Degree	68
Graduate Diploma	4
Higher Graduate Diploma	4
Certificate of Proficiency Board Programs	210
Medical Residency Training	62
Medical Specialty	66
Fellowship Programs	54
Dental Residency/Specialty Training	8
Nursing Specialty	20
Total	540

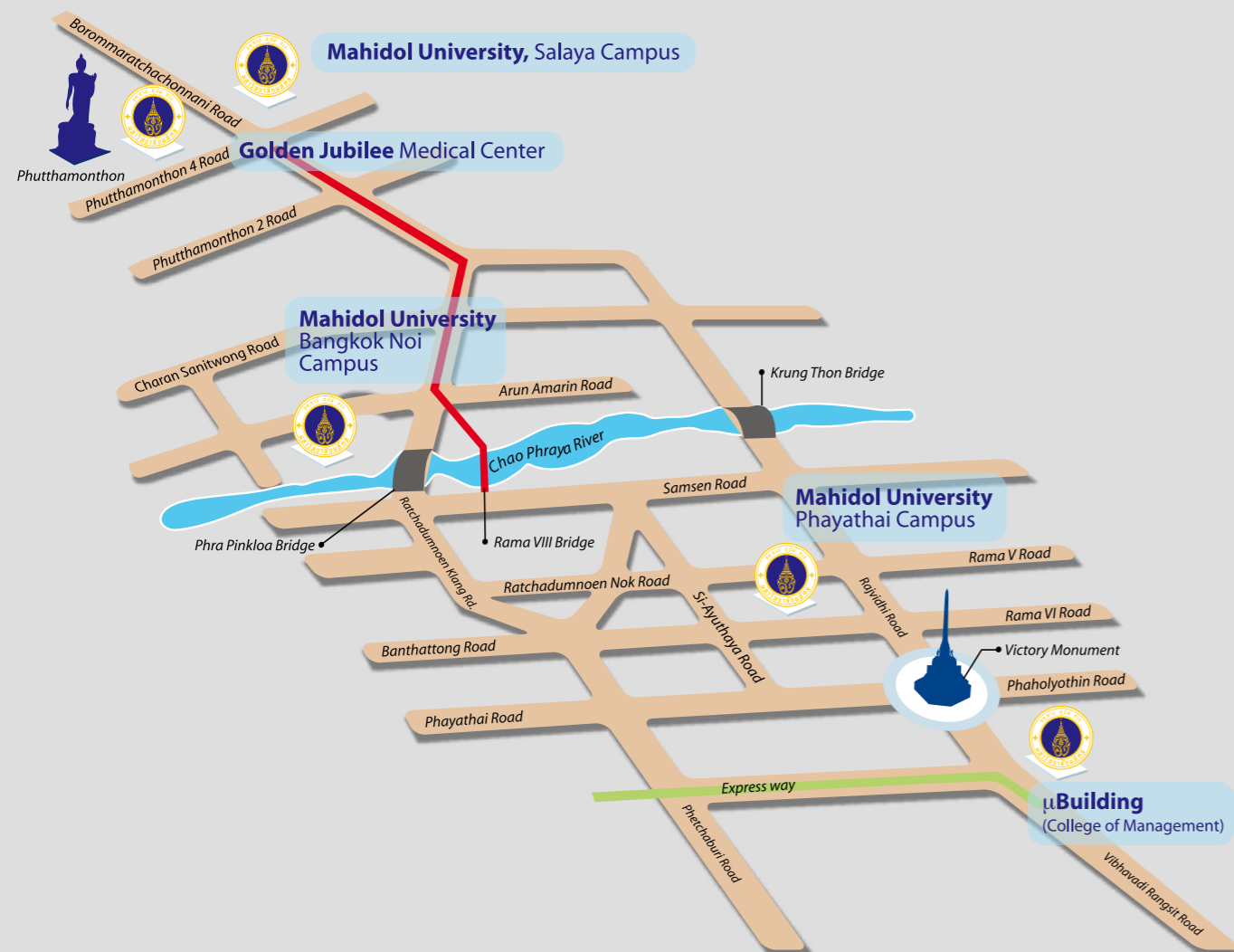
Remark : 150 International Programs

Students (as of November 2010)

Programs Offered	Students	Graduates
Mahidol University Programs	27,020	5,927
Certificate Programs	649	535
Bachelor Degree	18,004	3,319
Master Degree	6,443	1,605
Doctorate Degree	1,566	168
Graduate Diploma	68	29
Higher Graduate Diploma	290	271
Certificate of Proficiency Board Programs	2,299	1,057
Medical Residency Training	1,334	374
Medical Specialty	258	119
Fellowship Programs	62	47
Dental Residency/Specialty Training	109	31
Nursing Specialty	536	486
Total	29,319	6,984

Staff (Fiscal Year 2010)

Government Officers	3,926
University Staff (Former Government Officers)	3,328
University Staff (from Government Fund)	4,403
University Staff (from University Income)	7,477
Staff of Faculties and Institutes (Faculty and Institute Income)	662
Permanent Employees (from Government Funds)	2,287
Permanent Employees (from University Income)	6,755
Staff of Faculties and Institutes (from Research Funds)	79
Total	28,917



Contact Us

Mahidol University

Bangkok Campus: 227 Rama VI Road, Ratchathewi,
Bangkok 10400, Thailand

Salaya Campus: 999 Phuttamonthon 4 Road, Salaya,
Nakhon Pathom 73170, Thailand

Tel. +66 (0) 2354 0999 Fax. +66 (0) 2800 2909

www.mahidol.ac.th

Printed in Thailand by:
Amarin Printing and Publishing PLC.
65/16 Chaiyaphruk Road, Taling Chan, Bangkok 10170
Tel: 66-2422-9000, Fax: 66-2433-2742
www.amarin.com

272 Rama VI Road, Ratchathewi, Bangkok 10400, Thailand. (Bangkok Office)

999 Phuttamonthon 4 Road, Salaya, Nakhon Pathom 73170, Thailand.

Tel : 66 (0) 2354-0999 Fax: 66 (0) 2800-2909

www.mahidol.ac.th