

UPM Research Policy

1.0 GENERAL

1.1 Universiti Putra Malaysia's (henceforth, the University) research policy serves as a foundation to encourage research culture. It acts as a quality assurance system for improving the standards of research practice by defining and disseminating the meaning of quality. This policy is one of the mechanisms to ensure that those standards are adhered to.

1.2 Research is defined as any systematic activity that deals directly with the advancement of knowledge through scholarly, scientific and creative activities. This includes works of discovery, interpretation or application of knowledge which are discussed with or evaluated by the wider community of academic peers. These activities are anticipated to contribute toward the discovery of knowledge and human advancement as well as wealth creation and nation building.

- a) A university research project refers to any project under the responsibility or supervision of the university researchers. This includes projects with or without internal (from within the University) or external (from outside the University) funding.

- b) University researchers are the permanent and temporary academic staff or visiting scholars who are involved in research activities.

1.3 It is the policy of the University to:

- a) Continuously strive towards excellence in research to become a leading research university, both nationally and internationally
- b) Encourage its researchers to engage in research and be committed to provide a suitable and conducive environment to facilitate research activities
- c) Achieve an appropriate balance between teaching and research activities engaged by university researchers
- d) Give freedom to the researchers to choose and pursue their research
- e) Ensure all research and research grant applications involving the university researchers are administered and coordinated by the university management through its research management section
- f) Ascertain all research and research grant applications involving the university researchers are registered with the university's research management section and subjected to the policies and regulations enacted by the university

g) Ensure university researchers do not hold research appointments at other institutions without the approval of the university

h) Constantly monitor all research conducted by university researchers through their respective faculties, institutes and academies

i) Ensure all faculties, academies and institutes continuously evaluate the performance of their research staff

j) Disseminate research findings and output in ways that will contribute to the advancement of knowledge

k) Ensure activities involved in the accomplishment of research is sensitive to religious and racial issues

l) Ensure that standard regulations and guidelines regarding safety in research is strictly adhered to and that result and output generated from research be made available to the University and statutory protection (such as patenting) be provided as and when appropriate

m) Ensure ownership of intellectual property created by the university researchers belongs to the university

n) Fully encourage and ensure that the commercialisation of potential inventions benefit both the public and the university

o) Ensure the originator(s) of intellectual property are allocated an equitable proportion of any profit that may arise from the commercialisation process

1.4 This document belongs to the University Senate.

2.0 ETHICAL CONDUCT IN RESEARCH

2.1 General

This section gives explanation on research involving humans, human samples and animals which shall be applicable to all University researchers especially those involved with research pertaining to human and animal subjects.

2.1.1 The objectives are:

a. To be a guideline for research activities involving human and animal specimens.

b. To be a guideline for good research activities in the university.

c. To ensure the university fulfils the ethical guidelines of research sponsors, local and/or international regulating agencies.

2.1.2 The ethical considerations in general are:

a. It is a common assumption that the staff of an institution conducting research possesses high standards of professional practice. University researchers are obliged to ensure that their work enhances the good name of the institution and the profession to which they belong.

b. The university researchers must perform research that only complies with the current existing ethical standards and must be qualified to carry out the research. Should there be any doubt, they ought to seek advice from the University's Ethical Committee.

c. If confidential data is found, for instance an individual record of a patient or a particular survey form, the confidentiality must be preserved and the researchers are not allowed to utilise such information for personal or third party use.

d. Secrecy and disclosure of research findings are necessary for contract research within the time period stipulated in the terms of the contract.

2.1.3 The Research Leader should be formally responsible for directing, coordinating, completing and be actively involved in the research project.

2.1.4 The research supervisors should advise every research student/trainee on the current existing government and/or institutional guidelines concerning the ethical conduct in research, which include ethics of using humans and animals for experiments as well as the regulation of using hazardous or potentially hazardous substances.

2.1.5 Disclosure of any potential conflict of interest in scientific research is essential in ethical conduct of research. It should be in written form and extended to: the Dean; the editors of journals to which papers it will be submitted; and to bodies from which funds are sought.

2.2 Ethical Conduct in Research Involving Humans

2.2.1 Research projects involving human and human specimens must ensure that there is a balance between the need for human research and also human dignity. All research must follow the framework of the

World Health Organisation's (WHO) principles of ethics guidelines which are (but not limited to);

- a. Respect for human dignity, privacy and confidentiality
- b. Obtain written approval and license
- c. Minimise damage and maximise gain
- d. Care for vulnerable individuals who need additional protection during research
- e. Subject to review and approval by the University's Ethical Committee or any other bodies recognised by the University

2.3 Ethical Conduct in Research Involving Animals

2.3.1 Research projects involving animals and animal specimens must ensure that there is a balance between the need of animal research and also animal dignity. All research must follow the framework of the 'Office International des Epizooties' (OIE) principles on animal ethics guidelines which are (but not limited to);

- a. Respect for animal welfare by minimising excessive thirst and hunger, pain and injury, fear and distress and allowing animals to express their natural behaviour.
- b. Minimise the number of animals used in research by replacing the animals (whenever possible) with other alternatives.
- c. Improve the techniques engaged during research.
- d. Subject to review and approval by the University's Ethical Committee or any other bodies recognised by the University.

2.4 Storage and Data Management

- a. Data must be recorded in a durable form along with appropriate references
- b. A copy of each original data should be retained in the department or research unit where it may be utilised for at least a period of five years.

2.5 Publication

- a. No unpublished research results should be publicised by any party without the consent of the research leader.

b. Research outputs are strictly to be published only with the permission of the authors.

c. Under a circumstance where there is more than one author in a publication, only one author (agreed by other authors) should formally accept the overall responsibility for coordinating the submission and revision of the manuscript.

d. The coordinating author must keep the signed declaration form and hand in a copy of the form to the respective department or unit when the manuscript is accepted for publication.

e. Only researchers who have contributed significantly to the research deserve to be listed as authors.

2.6 Misconduct in research

a. Data fabrication: proclamation of non-existence study results.

b. Data falsification, which includes altering the existing records.

c. Plagiarism, which includes direct copying of textual materials, and using other individual's data as well as idea without his/her authorisation.

d. Misleading ascription of authorship including the listing of authors without their permission, attributing work to others who have not in fact contributed to the research, and the lack of appropriate acknowledgment of work produced by others involved in the research, such as a research student/trainee or associate.

e. Any misconduct in research shall be dealt with by the University's Management according to the set rules and regulations.

3.0 MANAGEMENT OF RESEARCH

3.1 Research management is vital to ensure that research activities are maintained at the highest standard, which is concurrent with the aspiration of the University to become a primary research university. Thus the objective of research management is to provide a mechanism for achieving high standards in research.

3.2 "Acquisition" refers to the process of research grant applications where the university researchers must submit their proposals for research grant through the research management section of the University.

3.3 Research management is essential to ensure all research projects conducted by the researchers or use of University resources or facilities are

approved by the University and in compliance of the University policies and guidelines, including (but not limited) to:

a) Integrity in research;

b) Suitability of the research activities;

c) Protection of the subjects used in experiment like human, animal as well as environment;

d) Use of the University facilities;

e) Adherence to the staff employment policy

f) Compensation plans;

g) Intellectual properties;

h) Conflicts of interest;

i) Recovery of direct and indirect costs;

j) Insurance liability and indemnification; and

k) Medical malpractice coverage.

3.4 Exceptions to the requirements of submitting proposals through the University may be granted by the Vice-Chancellor under certain circumstances, after considering the above, when it is in the best interest of the University. When an exception is granted, there must be a clear distinction between service to the University and service to the external party; relevant University personnel employment policy shall be followed; the name of the University shall not be used by the external party; and in no case shall the University assume liability for a third party's action without the approval of the Senate.

3.5 Any formal application for research funds (national or international) must be submitted through the Faculty/Institute and research management section of the University, except for classified research.

3.6 Research applications must be vetted (where appropriate) at the Faculty, Institute and University levels.

3.7 In cases where applicants are notified directly by sponsors, the applicants must notify the Faculty/Institute and research management section of the University

3.8 The Faculty/Institute shall implement mechanisms to monitor the financial and milestone reports of each research project to ensure compliance and avoid difficulties with funding bodies and provide feedback

to the research management section of the University. Recipients of grants must abide by the terms and regulations of the awarding body. Recipients of grants should ensure that spending is in accordance with the project schedule.

3.9 The University shall assess the performance of each research project and provide assessment reports to the research project leader and to the sponsor when and if required. The performance indicators of a research project shall adhere to the requirement of the research project sponsor(s).

4.0 RESEARCH IMPLEMENTATION

4.1 This section covers the aspects of Safety, Contract Research and Mentor/Mentee. The implementation of this policy is vital for creating an appropriate, safe and conducive environment for good research and consultations.

4.2 The objectives are:

a) To provide an appropriate and conducive environment for good research.

b) To guide activities of contract research and consultation of experts in the University.

c) To ensure the University fulfils the safety guidelines of research sponsors and local regulating agencies.

4.3 In this section the various terms used are defined as follows;

a) Hazardous materials shall mean chemical, physical or biological materials, which have the potential to cause harm to living organisms and the environment.

b) University facility shall mean all research related equipment, infrastructure and expertise.

c) Contract research shall mean research that is financed by funds from external parties.

d) New university researchers shall mean university researchers that have 3 years or less research experience.

e) Senior university researchers shall mean university researchers that have 10 years or more teaching/research experience.

f) Mentor shall mean a senior university researcher with a high level of experience in research and development and can provide research leadership.

g) Mentee shall mean a new university researcher [as defined in (d)] who is conducting a research project under the supervision of a mentor [as defined in (f)].

4.4 The safety aspect shall apply to the use of potentially hazardous materials such as oncogenic, infectious or toxic biological materials in all University research projects. In addition, the University shall:

a) Ensure that academic, non-academic staff and students that are exposed to hazardous materials are trained in the handling of these materials, and facilitate the training of such personnel.

b) Assist the research leader in preparing an assessment of his/her facility.

c) Inspect research laboratories to ensure compliance with established health and safety procedures and the correct functioning of safety equipment.

d) Order corrective action for violations of safe practices.

e) Provide advice and assistance to users of hazardous materials. Information maintained will include University guidelines in congruence with existing rules and regulations such as OSHA 1994 and The National Biosafety Act on;

- i) hazardous materials,
 - ii) containment level requirements for hazardous agents and research procedures,
 - iii) safety equipment,
 - iv) personnel training,
 - v) contingency and decontamination procedures, and
 - vi) regulations of research fund granting agencies.
- f) Establish a University Safety Committee to assist in implementing the policy.
- g) Review periodically the Safety Guidelines and develop appropriate additional procedures as and when necessary.

4.5 Contract research places greater legal requirements on the University and it is necessary to clearly state where the consequent responsibility lies within the University. The University must ensure that these greater legal responsibilities of contract research do not conflict with the University's basic commitment to the pursuance of knowledge based on the following;

a) University researchers must obtain prior approval from the University management before formalising any contract research.

b) University has the right to levy a certain percentage of the consultancy fees received by the researcher and allocate the fees appropriately.

c) An agreement must be signed between the University and the parties involved. Ownership of the intellectual property developed from contract research will be bound by the agreement.

d) Disclosure of contract research findings is subject to approval by the the sponsoring organisation.

4.6 University researchers shall receive supplemental compensation for University contract research

4.7 The University shall implement the mentor/mentee programme where new university researchers shall have the opportunity to collaborate with senior university researchers in conducting research. To implement this programme;

a) Faculties shall establish a mentor/mentee system culture.

b) New university researchers shall be assigned to a mentor.

c) Each mentor shall provide leadership in guiding the mentee to excel in conducting research.

5.0 INTELLECTUAL PROPERTY RIGHTS

5.1 Intellectual Property Rights (IPR) provide the necessary protection and incentives to encourage the discovery and development of new knowledge, and its application and transfer for public benefit.

5.2 The term Intellectual Property (IP) is broadly defined to include inventions, copyrightable works, trademarks, and tangible research property. IP includes, but is not limited to, that which is protected by statute or legislation, such as patents, copyrights, trademarks, trade secrets, and plant variety protection certificates. It also includes, but is not limited to, the physical embodiments of intellectual effort, for example, research proposals, models (including business models), machines, devices, designs, apparatus, instrumentation, circuits, computer programmes, visualisations, biological materials, chemicals, other compositions of matter, and plants.

5.3 University resources means any support administered by or through the University, including the University funds, facilities, equipment or personnel, funds, facilities, equipment, or personnel provided by governmental, commercial, industrial or other public or private organisations which are administered or controlled by the University. University resources are to be used solely in line with the vision, mission and aims of the University. IP that is developed with integral and significant use of the University resources (where its use was essential and substantial rather than incidental) shall be considered to have been created through the use of University resources.

5.4 The University shall be the owner of:

- i. IP created by university researchers in the course of his/her employment by the University;
- ii. IP created by a student in the course of his/her studies, scholarship or research with or at the University (the University has to decide on a case by case basis for self-sponsored and externally sponsored students),
- iii. IP, where the creation of which has been substantially contributed to by the University (or by any third person either on behalf of the University or by virtue of an agreement with the University) by the provision of resources, facilities, apparatus, supervision, salary or other funding,

5.5 That when determining ownership and license rights in IP, the University will construe the provision of office space, on-campus training, library facilities, ordinary access to office computers, workstations and software or networks, or salary as constituting significant use of University resources

5.6 No agreements assigning ownership or rights in IP shall be executed by individuals covered by this policy directly with a sponsoring organisation without the prior written approval of the Vice-Chancellor of the University. The University reserves the sole right to make agreements with sponsoring organisations and to include therein such provisions regarding the ownership and disposition of rights in IP as it deems to be in the interest of the University and the public. For internationally funded projects, the International Research section (refer to Section 7.2, page 25) is applicable.

5.7 This section is subjected to the provisions in the Statute of UPM (Intellectual Property, 1997).

5.8 Royalty Sharing for Intellectual Property

The University standing procedures shall govern the division of all Net Income (gross royalties and other income minus administrative, licensing, legal and other related expenses as well as payments to other entities as may be required by the University's agreements with those entities) resulting from Inventions or copyrightable works.

6.0 DISSEMINATION OF RESEARCH OUTPUTS

6.1 This section covers the activities and issues involved in the dissemination of knowledge and/or tangible results of research or research products.

6.2 Research output shall include, but not limited to knowledge and/or tangible results of research or research products

6.3 Knowledge shall include, but not limited to information and data generated from research activities

6.4 Dissemination of research output shall include, but not limited to any form of methods including any written works, musical or dramatic compositions, photographs, films, transparencies or other visual aids, video or audio tapes and cassettes, sound recordings, computer software, electronic (internet), algorithms, drawings, blueprints or other graphic works.

6.5 Tangible results of research shall include, but not limited to any tangible material other than an invention by any member of the staff. Such tangible material shall include, but not be limited to, antibodies, cell lines, new micro-organisms, plant lines, or progeny thereof; recombinant or

other biological materials; chemical compounds; devices, machines; or models.

6.6 The dissemination of tangible results of research is a primary function of the University and includes the following functions;

a) The University expects university researchers to disseminate freely their research output as long as they do not contravene the University and University Colleges Act (1974).

b) Research output can be disseminated through publication, conferences, exhibitions, oral and poster presentations, interviews, mass media, multimedia and websites.

c) The researcher will be responsible for any research output made through any form of dissemination methods subject to the agreement with the sponsoring organisation.

d) Acknowledgement of financial support by the sponsor shall be made in all publications unless the sponsor requests anonymity.

e) The University shall facilitate the dissemination of research output.

7.0 INTERNATIONAL RESEARCH

7.1 International research is defined as research that is supported by international funds, awards, and through networking and collaboration with international parties.

7.2 The following is applicable for international research activities;

a) The university researchers shall obtain the approval of the University (the Vice-Chancellor, or the University Senate, or the University Management, or those empowered by the University) before a research agreement is concluded;

b) The University shall respect and abide by the rules and regulations, including the legal system stipulated by the awarding body, as long as it does not contravene with the national interest;

c) The university researchers shall register the project with the research management section of the University,

d) There shall be equal benefit sharing between the university researchers and the awarding body but subject to the provisions of the contractual agreement between the interested parties.

CHRONICLE OF THE PREAMBLE OF RESEARCH POLICY

1. The Formation of the Research Policy Ad-Hoc Working Committee

a. University Research Meeting on 14 November 2003, Minute 132/9 stated all the members agreed upon the establishment of a Research Policy Ad-Hoc Working Committee.

b. Chairman – Prof. Dr. Muhamad Awang

c. 10 members

i. Prof. Dr. Abu Bakar Salleh

ii. Assoc. Prof. Dr. Tengku Aizan Hamid

iii. Prof. Dr. Mohd Yusof Sulaiman

iv. Prof. Madya Dr. Ramlan Mahmud

v. Prof. Dr. Ahmad Zubaidi Baharumshah

vi. Assoc. Prof. Dr. Ab. Rahim Bakar

vii. Assoc. Prof. Dr. Mohd Shahwahid Haji Othman

viii. Assoc. Prof. Dr. Sidek Abdul Aziz

ix. Assoc. Prof. Dr. Zulkifli Idrus

d. The first meeting was held on 09 January 2004

e. Purpose(s): Planning and complying with the policy and guidelines established at the university level.

2. Institution of Research Policy Mini Working Committee

a. Was proposed in the Research Policy Ad-Hoc Working Committee on 09 January 2004

b. Officially launched on 29 January 2004

c. 5 Members:

i. Assoc. Prof. Dr. Fakhru'l-Razi Ahmadun (from 17 August 2005)

Assoc. Prof. Dr. Zulkifli Idrus (until 16 August 2005)

ii. Assoc. Prof. Dr. Muhamad Nazrul Hakim Abdullah

iii. Assoc. Prof. Dr. Loh Teck Chwen

iv. Dr. Faridah Qamaruz Zaman

v. Dr. Samsilah Roslan

vi. Mrs. Elistina Abu Bakar (from 29 September 2005)

d. 17 August 2005 – Handing over the chairman's authority to Assoc. Prof. Dr. Fakhru'l-Razi Ahmadun following the appointment of Prof. Dr. Zulkifli Idrus as the Director of RMC

e. 29 September 2005 - Mrs. Elistina Abu Bakar was appointed as a member because of her sound background in IPR legislation.

f. 20 January 2006 - First draft of Research Policy was distributed for the first time for MOSTI reference purposes.

g. March 2006 – First draft of Research Policy was handed to Prof. Dr. Abu Bakar Salleh (DVC,R&I) for final revision.

h. July 2006 – Research Policy Final Revision Workshop held at Palm Garden Hotel, IOI Resort to get feedback from Senior UPM Officers on the Research Policy draft.

i. 13 October 2006 – Handing in the second draft of Research Policy, after it was revised during Research Policy Final Revision Workshop held at the Palm Garden Hotel, IOI Resort, to Prof. Dr. Abu Bakar Salleh (DVC,R&I) who acted as the Chairman of Research Policy Ad-Hoc Working Committee.

j. 26 January 2007 - Handing in the third draft of Research Policy, after it was revised and amended by the head of Research Policy cluster to Prof. Dr. Abu Bakar Salleh (DVC, R&I) who acted as the Chairman of Research Policy Ad-Hoc Working Committee.

k. 28 March 2007 – Discussed in the 259th PPU Meeting (PPU Document No. 259/1). There were several amendments suggested and RMC was asked to prepare the policy in Bahasa Malaysia.

l. 18 April 2007 – RMC received the minute of the 259th PPU Meeting as well as the suggestion for amendments and instruction to translate the document.

m. 20 June 2007 – Amendments and translation of the document were ready.

n. 15 November 2007 – Presentation and discussion at the UPM's 504th Senate Meeting.

o. 7 January 2007 – Suggestion of the amendments from the 504th Senate Meeting was completed.

p. 29 January 2007 – The first edition of the Malay language version is printed.