



UNIVERSITI MALAYA
Research Cluster Office

Towards Impactful Interdisciplinary Research

GUIDELINES

**Universiti Malaya
Impact-Oriented Interdisciplinary Research
Grant Programme (IIRG)**

First published 2019
by the Research Cluster Office, Universiti Malaya

© Research Cluster Office, Universiti Malaya 2019

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without prior written permission from the authors and publisher, except in the case of brief quotations embodied in critical reviews and certain other non-commercial uses permitted by copyright law. For permission requests, write to:

Research Cluster Office
Level 7, Research Management & Innovation Complex,
Universiti Malaya
50603 Kuala Lumpur
researchcluster@um.edu.my

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

PART 1 – GRANT APPLICATION

1.1 Background of the Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme (IIRG)

The Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme aims to change the research culture within UM to a more integrated interdisciplinary approach.

*Interdisciplinary research can be defined as a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts and/or theories from **two or more disciplines or bodies of specialized knowledge** to advance fundamental understanding or to solve problems **whose solutions are beyond the scope of a single discipline or area of research practice.***

(https://www.nsf.gov/od/oia/additional_resources/interdisciplinary_research/definition.jsp)

In the context of the IIRG, researchers must come from at least two (2) different disciplines and two (2) different faculties.

1.2 Type of Research Grant

1.2.1 The Universiti Malaya IIRG

Open to groups of researchers who are inclined to embark in an interdisciplinary research programme.

The Programme Leader (PL) must possess a good research track record. Focus will be given to the PL's achievements over the last five (5) years (2014 – 2019) in a field related to the IIRG programme applied.

Roles and Responsibilities of PL:

- Coordinate programme as a whole
- Monitor overall progress of research programme, including all sub-programmes
- Ensure good rapport between all members of the research programme

Roles and Responsibilities of Sub-PL:

- Coordinate research activities and expenditure of their respective sub-programme
- Report progress of sub-programme to PL according to the dates/timeline stated in the offer letter

The PL must lead one of the subprogrammes.

A researcher can only be a Principal Investigator (PI) for one sub-programme at any given cycle.

A researcher who is currently attached to any other grant (eg: UMRG, etc.) is **eligible** to apply for the Universiti Malaya Impact Oriented Interdisciplinary Research Programme.

Existing PI (programme leader and sub-programme leader) of IIRG grants are not eligible to apply.

1.3 Objectives of the Research Grant

The specific objectives of the Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme:

- To strengthen **niche** areas and nurture emerging **thrust** areas in UM
- To encourage interdisciplinary research among UM researchers
- To drive impact oriented research within UM

1.4 Scope and Area of Research

Research fields are based on the each Clusters themes / focus:

Clusters	Niche Areas	Thrust Areas
Frontiers of the Natural World	<ul style="list-style-type: none"> • Nature-Inspired Technology (Driving Drug Discovery) 	<ul style="list-style-type: none"> • Curiosity-driven Fundamental
Health & Well-Being	<ul style="list-style-type: none"> • Active Aging • Cancer 	<ul style="list-style-type: none"> • Innovative Health • Mental Well Being • Lifestyle Disease
Innovative Industry & Sustainability Science	<ul style="list-style-type: none"> • Material • Energy 	<ul style="list-style-type: none"> • Sustainable Living • Water & Environment • IR4.0
Social Advancement & Happiness	<ul style="list-style-type: none"> • Cultural, Heritage & Civilization • Behavioral Studies 	<ul style="list-style-type: none"> • Smart Society • Education for the Future

1.5 Grant Application and Criteria

1.5.1 General Criteria

Open to all University academic staff (Professor, Associate Professor, Senior Lecturer, and Lecturer) with permanent or contract status.

For contractual academic staff, a minimum appointment of twelve (12) months is required and the application must include at least one (1) permanent academic staff as a co-researcher.

The application must consist of at least one (1) co-researcher who is a University academic staff. A co-researcher can only be co-researcher for one sub-programme in a programme.

1.5.2 Specific Criteria

Criteria	Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme
Eligibility	University academic staff (Professor, Associate Professor, Senior Lecturer, and Lecturer) with permanent or contract status
No. of Sub-Programmes	A minimum of 3
Grant Ceiling	Science : RM 300,000 per program for 2 years Non-Science : RM 200,000 per program for 2 years
Duration (Months)	24
Research Field	The research must interdisciplinary in nature
Stakeholders' Engagement	<p>Researchers are required to show the evidence of active engagement with stakeholders during preparation of the proposal and throughout the project.</p> <p>However, this is bonus criteria that will not disqualify the proposal from being evaluated.</p>

1.6 Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme Pre-screening Form

All the applications must attached the following details as listed in the Pre-screening Form:

- Curriculum Vitae (CV) (for the past 5 years and MUST be relevant to the proposed programme) of
 - i. Programme Leader & Sub- Programme Leader
 - ii. Co-researcher(s) (Internal & External)
- Researchers' Profile of Programme Leader & Sub- Programme Leader (maximum 1 page)
- Commitment Letter (for External Co-Researcher/s)
- Gantt Chart of Research Activities including Milestones
- Flow Chart of Research Activities
- Justification/ Details of Proposed Budget
- Graphical Abstract (maximum 1 page)
 - i. Summary
 - ii. Sub- Programme

All the applications must have the following elements as listed in the Pre-screening Form:

- Interdisciplinary Research
- SMART Objectives

1.7 Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme Proposal Format

Proposal must include the following:

1.7.1 Executive Summary

The summary must demonstrate the interdisciplinary nature of the research and should include, but not limited to background of research, objectives, problem statement and brief methodology.

1.7.2 Linkages between sub-programmes

The outline of the entire research programme must clearly show the interconnection between every sub-programme involved.

1.7.3 Quality of Researchers

The research team's track record, including that of external collaborators (national/international) / stakeholders that are directly relevant to the proposed research must be stated.

1.7.4 Targeted Research Output

The expected research output must be clearly specified (both academic output and non-academic output). There must also be clear statement of research impact.

1.7.5 Research Impact

The study must be clear and able to produce impact (not necessarily immediate) on at least one of the following:

Industry engagement / acceptance	Proof of concept
Prototype / Pilot plant	Demonstration
Commercialization	Dissemination
Publicity	Influencing policymakers
Advocacy	Outreach, community engagement
Direct / Indirect impact on economy	Impact on society

1.8 Distribution of Allocation

1.8.1 Vote 11000 Salary and Wages

Refers to salary and wages for contract and temporary staff involved in the research. Only two (2) contract or temporary staff can be hired in each sub-programme.

The ceiling for salaries and wages are subject to the Guidelines on Recruitment and Appointment of Senior Researcher / Researcher /

Assistant Researcher / Project Assistant / Research Assistant set by the University.
The ceiling for the vote is RM 30,000 per year.
Each sub-programme must hire at least one (1) Research Assistant.

1.8.2 Vote 21000 Travelling and Transportation

Covers travel for fieldwork ONLY.

Documents required for fieldwork application:

- a) Justification of fieldwork
- b) Schedule of work activities
- c) Letter of invitation from institution (if applicable)

Application for fieldwork must be submitted fifteen (15) working days prior to travel date.

Ceiling for this vote:

Sciences	:	20% of current year allocation
Social Sciences	:	40% of current year allocation

This vote does not cover expenses related to conference attendance.

1.8.3 Vote 24000 Rental

Rental is allowed for research space, equipment, transportation and other items that are directly involved in the research. Vehicle rental must be with a licensed transport company.

1.8.4 Vote 27000 Research Material and Supplies

Only research-related expenses are allowed.

Applications for purchases of equipment of less than RM 3000 must be made through this vote.

1.8.5 Vote 28000 Maintenance and Minor Repair Services

Only expenses for minor repairs and renovation of buildings, laboratories, equipment or any other research-related items are allowed.

Maintenance cost of existing equipment during the project is allowed. Once the project has been completed, this cost will not be covered by the grant.

1.8.6 Vote 29000 Professional Services

Other services include printing, hospitality, honorarium for research assistant / professional services / consultancy, data processing and other services that are related to the research project.

Honorarium Payment Guidelines (Research Assistant):

- a) Honorarium cannot be paid more than three (3) consecutive months or three (3) times to the same person in one (1) financial year.

- b) Honorarium payment that exceeds RM 500 cannot be paid in cash.
- c) Letter of appointment as temporary research assistant from Head of Research / Head of Department is required for honorarium payment.
- d) Ceiling research assistant honorarium is RM 3000 / month.

Honorarium Payment (respondents / subjects):

- a) Clinical : RM 50 (max) / session.
- b) Non-clinical : RM 5 – RM 20 / session.

1.9 Achievement / Research Output

1.9.1 Academic Output

Defined as follows:

- i. ISI publications
- ii. Book(s) / Chapters in book(s)
- iii. Scopus/ Peer reviewed journal articles (only for non-science & journal category A&B)
- iv. Policy papers
- v. IPR / Copyright
- vi. Human Capital Development

1.9.2 Non-Academic Output

Defined as follows:

- i. Videos
- ii. Commercialization of research output
- iii. Media Articles
- iv. Website
- v. Software / Applications
- vi. Societal Engagement
- vii. Others: Please specify

1.9.3 Compulsory Promotional and Visibility Requirement

All programmes are required to produce videos related to the research programme (one- minute video and three- minutes video). The videos will be used for promotion and visibility purposes.

1.9.4 Additional Requirement

To avoid over dependency on internal funding, all successful applicants are expected to prepare a proposal that will continue with the work done in the IIRG. The proposal must be prepare and be ready for submission by the 21st month of the IIRG. This proposal is intended as a top drawer proposal to be submitted for external grants.

Note:

Researchers who fail to produce the required research outputs may not be considered for any new UM internal grant applications for a period of up to 3 years.

1.10 Research Impact

You can use these columns to help write your 'IMPACT SUMMARY'		This may be helpful for <u>structuring</u> your 'Impact Summary' and 'Pathways to Impact' sections	You can use these columns to help write your 'PATHWAYS TO IMPACT'				
Who will your research benefit? (non-academic beneficiaries)	What will be the benefits to them from your research?	How would you categorise this benefit/beneficiary? (E.g. public, industry, Policy?)	How are you going to share your research with them? (I.e. what is the specific activity?)	When are these activities going to take place? (Be as specific as possible)	Who from your research project is going to arrange and deliver this activity?	What resources/training will you need for this activity? (Include in costs & justification of resources)	How will you know these activities have been successful?

1.11 Announcement of Application Opening and Closing Dates

The opening and closing dates for applications will be announced through UMinfo

PART 2 – OTHERS

2.1 Reviewer

2.1.1 Selection of Reviewers

- i. The selection of the reviewers will be based on:
 - a. Experts in the research area, OR
 - b. Experts relevant to the research area, OR
 - c. Have experience in the research area

2.1.2 Programme Assessment

a) Quality of Research Proposal

The first element weighted is 40% (total of 20 marks) of the evaluation based on the following aspects:

- i. Clear research gap
- ii. SMART objectives

The details of the SMART objectives are as below:

S	Specific, Significant, Stretching - Outline in a clear statement precisely what is required.
M	Measurable, Meaningful, Motivational - Include a measure to enable you to monitor progress and to know when the objective has been achieved.
A	Agreed upon, Attainable, Achievable, Acceptable, Action-Oriented - Objectives can be designed to be challenging, but it is important that failure is not built into objectives. Employees and managers should agree to the objectives to ensure commitment to them.
R	Realistic, Relevant, Reasonable, Rewarding, Results-Oriented - Focus on outcomes rather than the means of achieving them
T	Time-based, Time-bound, Timely, Tangible, Trackable - Agree the date by which the outcome must be achieved

- iii. Detailed methodology
- iv. Connection between sub-programme

b) Scientific Merit

This element related to the final product of the programme (results) that will represent the value of the research.

Scientific merit weighted is 50% (total of 15 marks) of the evaluation based on the following aspects:

- i. Commands scientific excellence in relation to the output(s) promised
- ii. Significant aspects of the programme are based on innovative / novel approach
- iii. Expected result will lead to progress beyond the current state-of-the-art

c) Impact on Society / Industry / Policy Implication

Weighted at 10% (total 10 marks), the element is evaluated based on:

- i. Long term benefits and forecasting positive impact on society / industry / policy
- ii. Relevance to major national and / or global agenda

For science / engineering based programmes, impact on society / industry may be more relevant while policy implication will be relevant to non-science based programmes.

2.2 UM Safety & Research Handbook

All applicants are required to acknowledge that they have read, understood and will implement all requirements in UM Safety & Research Handbook. Failure to do so will result in disqualification of the application UM Safety & Research Handbook

This safety handbook covers the following topics:

1. Individual Responsibility
2. Safety and Health Regulations and Code of Practice in the University
3. Access, Housekeeping and General Safety Rules in Laboratories, Workshops and Stores
4. Safety in the Office, Reading Rooms and Classrooms
5. Safety in Workshops
6. Safety in Laboratories
7. Good Microbiological Practice
8. Waste Disposal
9. Radioactive Materials
10. Genetically Modified Organisms

Further information on safety procedures in specialized facilities, laboratories or workshops should be obtained from the respective unit heads/laboratory supervisors.

Note:

Proof of submission of Notice of Intent [NOI] to IBBC must be attach with your proposal for research involving use of infectious and potentially infectious agents/materials and biological toxins

2.3 Research Ethics

All research conducted by staff and students of the university involving human participants and the use of vertebrate animal subjects must be referred to the appropriate ethics committee.

These include all research, qualitative or quantitative, regardless of whether the research is funded by internal/external grants or even unfunded University of Malaya Research Ethics Committee (UMREC)

Note:

- a) If your proposal is successful, please be reminded that researchers are responsible for obtaining the biosafety and ethics approvals. Researchers are to take full responsibility if the project is conducted without the approvals.
- b) If researchers do not show any proof of biosafety and ethics approvals within six (6) months of grant approval, the research project may be suspended.

2.4 Reallocation of Research Grant

Documents required:

- i. Endorsement from the Head of Department/Dean of Faculty
- ii. Justification of amendment to research allocation and attachment (if any).
- iii. Financial statement from RGMS
- iv. The maximum additional re-allocation allowed from any vote is 20% only.

Example:

Original allocation for Vote 27000 (Supplies and Research Material) is RM10,000 Current balance for this vote is insufficient to cover the needs of the research.

Maximum additional reallocation allowed from any vote is 20% from RM10,000 = RM2000 only.

2.5 Extension of Research Grant

Application must be submitted one (1) month before the expiry date of the project. Any application submitted later than the duration stated may be REJECTED.

Documents required:

- i. Endorsement from the Head of Department/Dean of Faculty
- ii. Justification for extension
- iii. Latest progress report. Attach latest gantt chart and budget details from Research Grant Management System (RGMS)

The maximum period allowed for extensions is six (6) months only.

2.6 Transfer of Balance into other Research Grant

The current balance in the Universiti Malaya Impact-Oriented Interdisciplinary Research Grant Programme cannot be transferred to other research grants.

2.7 Page Charge

Researchers can apply at the IPPP Page Charge Fund for page charges. Please refer to the guidelines at UM Research Website.

2.8 Acknowledgement of Research Output

All publications / research output must acknowledge the research grant used. Maximum of two grants are allowed to be acknowledged in a publication. Only publications that are produced after the grant has been awarded, and are directly resulting from work done in the research programme will be accepted as output. Action will be taken against inappropriate grant acknowledgement

Example of acknowledgement:

This research is supported by Universiti Malaya Impact Oriented Interdisciplinary Research Grant (xxxxA/B/C-19XXX)