

Guideline for Establishing Research Centres at the University of Malaya

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1.0 Introduction

Research Centres are established at the University of Malaya to promote world class research particularly in interdisciplinary, multidisciplinary and trans-disciplinary areas. The Research Centres report to the Faculty Deputy Dean of Research/Research Cluster Dean/Deputy Vice Chancellor (R&I) depending on their tier. The Research Centres play an important role in broadening the knowledge base leading to new discoveries and policies. Research Centres must actively engage with society in a productive and beneficial manner. Research Centres should also, simultaneously, play an important role in educating and training the next generation of researchers and innovators. Lastly, the Research Centres should show continual improvement efforts and target to higher levels, e.g., to become a Higher Institution Centre of excellence (HICoE).

A Research Centre should satisfy the following general requirements:

1. The focal area of the Research Centre must be critically important to the success and branding of the University.
2. Bring together scholars from similar or different disciplines and/or areas of specialization to conduct research that can make an impact to the academia, industry and community at large
3. The Research Centre must show potential to become a leader in a chosen niche area
4. Development of innovative, new curricula will be considered as an extra achievement
5. The Research Centre should be able to sustain itself financially
6. It should attract national and international talented faculty and students as external collaborators
7. Research Centre are collaborative efforts and not the product of single individuals.

2.0 Definition of a Research Centre

- A Research Centre can be a **multi-disciplinary**¹ unit organized to conduct research activities in a specialized area of interest or need.
- A Research Centre may be based either in the Faculty or under the Research Cluster structure.
- A Research Centre is not an autonomous unit within the organizational structure of the University of Malaya replacing a Department or Faculty. The Head of centre will report to Faculty Deputy Dean (Research) at respective faculty, Research Cluster Dean or directly to the Deputy Vice Chancellor (R&I) depending on their category. Please refer to **Attachment A** for reporting structure.
- Different categories of Research Centres are as follows:

a) Tier 1: Higher Institution Centre of Excellence (HICoE)

The HICoE programme was setup by the Ministry of Education in the year of 2009. To date, there are 14 HICoEs across the nation. UM has 3 HICoEs (as of June 2015) namely UM Power Energy Dedicated Advanced Centre (UMPEDAC), Institute of Ocean & Earth Sciences (IOES), and Photonic Research Centre (PRC). The criteria for setting up a HICoE can be found in <http://www.moe.gov.my/v/hicoe>.

b) Tier 2: University of Malaya Centre of excellence (UMCoE)

UM intends to nurture potential HICoEs within UM in order to remain competitive in the various fields of research, expertise and services nationally and internationally. A few Research Centres which are recognised within UM as potential HICoE will be given the status of UMCoE. (Refer to existing criteria for UMCoE).

Footnote:

¹**Multi-disciplinary** draws on knowledge from different disciplines but stays within their boundaries.

c) Tier 3: UM Senate-approved Research Centre (Faculty-based and Cluster-based) (UMCoR)

UMCoR can be classified into Faculty-based and Cluster-based. The Faculty-based UMCoRs conduct single and/or multidisciplinary research; while the Cluster-based UMCoRs conducts transdisciplinary research. The flow of application for establishing a new UMCoR is shown in **Attachment B**.

d) Tier 4: Research Group

A Research Group consists of researchers with a common desire to collaboratively develop some aspects of their research. Research Groups need to be registered. **Please refer to attachment E for the expression of interest form.**

- Research Centres are expected to put efforts on research, education, service, and networking opportunities for faculties and students.

3.0 Requirement for Tier 3 Research Centre (UMCoR)

The following subsections stipulate the expectations and standards for performance set for both new and existing Tier 3 Research Centres (UMCoR). The requirements are as follows:

3.1 Mission, Vision, and Objectives

A UMCoR must have clear mission and vision statements consistent with that of the University of Malaya. The objectives of the centre should be well aligned with the goals of the University of Malaya Research Strategic Plan. The need for the UMCoR must be demonstrated within the context of a core interest of a group of faculty members, preferably across several disciplines, or within the context of a unique opportunity for obtaining external funding from national and/or international entities.

3.2 Theme

UMCoRs must have a niche/theme which reflects its focal area. The UMCoRs must have a core group of researchers who have created a focused niche/theme of significant merit. The UMCoRs will undertake research that otherwise would not exist, creating opportunities for its members to achieve excellence in research. Within its specialized niche/theme, the centre must facilitate and encourage collaborations across academic disciplines.

3.3 Visibility

- Each UMCoR must be highly visible, nationally, and internationally. Visibility is expected to attract high-quality graduate students, postdoc, research fellow and aid in the producing new talents. The UMCoR should indicate and plan to achieve visibility, through public events, community engagements, outreach programs, press releases, scholarly publications and presentations.
- UMCoR is required to setup its own website. UMCoR is also responsible for maintaining the website and ensuring that all information displayed on the website are up-to-date.

3.4 Centre Governance Structure and Membership

- A UMCoR must have a clear governance structure and an organisation chart showing a strong managerial core. The governance structure can be changed according to the needs of the UMCoR with the approval of the Deputy Vice-Chancellor (Research & Innovation).
- The members of the UMCoR should be listed, with their specific roles indicated.

- The Head of Centre will be appointed by the Deputy Vice-Chancellor (Research & Innovation), while the specific roles for the members in the UMCoR will be assigned by the Head of Centre. Please refer to Attachment A for the reporting structure.
- All UMCoR should have a minimum of five (5) permanent faculty members. Faculty members, postdocs, and research fellows may be members of an UMCoR. For members under contract e.g. postdocs and research fellows, their membership is considered based on duration of appointment at the centre and are divided into three (3) categories as follows:
 - Short term: members that attached to the centre for less than 1 year e.g. visiting scholars.
 - Medium term: more than 1 year but less than 3 years e.g. research fellows.
 - Long term: 3 years or more.

3.5 Infrastructure

UMCoRs must have resources upon which to build, such as supporting staff, space and physical plant facilities, graduate students available as research assistants, and adequate laboratory facilities to start off the centre.

3.6 Funding and Sustainability

UMCoRs are expected to support themselves financially from internal and external research grants and contracts, obtaining more research funding than could be achieved by individual researchers. UMCoRs must have a clear plan for achieving sustainability with and plan for future funding that clearly places time limits on institutional support, if any from UM.

3.7 Excellence in Performance

Each UMCoR must demonstrate excellence in performance according to the Key Performance Index (KPI) developed with input from their advisory group, Deputy Dean of Research, Research Cluster Dean and Deputy Vice-Chancellor (Research & Innovation). The KPI must be aligned with the Research Strategic Plan of University of Malaya. UMCoR must register in the approved system² and fill-in information of annual research activities and outputs accordingly for annual performance evaluation purpose. The performance of UMCoR will be graded as follows:

- Excellent: ≥ 75 marks
- Average: ≥ 50 marks and < 75 marks
- Poor: < 50 marks

Audit of performance for UMCoR will be conducted based on the evaluation criteria set (**Attachment C**) once every three years.

For UMCoR that obtain grade Poor for 3 years consecutively maybe terminated or closed based on audit and panel reports.

3.8 Good Scientific Practice

The University of Malaya expects the highest standards of good scientific practice in conducting research within all research fields. All research conducted must comply with all laws, rules, regulations, codes, orders and requirements of the University and government ranging from ethical principles to detailed legal requirements such as, but not limited to, legal requirements, animal experiments, clinical trials, intellectual property rights, data protection, administrative procedures, occupational health and safety, laboratory health and safety, etc.

Footnote:

²An evaluation system where a Centre of Research can report their annual research activities and submit research output for annual performance evaluation purpose.

4.0 Application for Setting up a New Tier 3 Research Centre (UMCoR)

Faculty-based

Before submitting a proposal for a new UMCoR, the proposed Centre Head or core faculty members should confer with relevant Faculty Deputy Dean (Research) and Dean of Faculty to obtain support for the proposed centre. The centre is also required to register in the approved system² and obtain an Excellent score (> 75 marks) for 3 consecutive years. A proposal for the new UMCoR should be forwarded to the Office of IPPP, through the Faculty.

The Deputy Vice-Chancellor (R&I) and Associate Vice-Chancellor (R&I) will consider the proposal in collaboration with relevant Dean of Faculty, Deputy Dean (Research), Cluster Deans, Deputy Cluster Deans and other appointed advisors, and make a recommendation.

Cluster-based

Before submitting a proposal for a new UMCoR, the proposed Centre Head or core faculty members should confer with relevant Faculty Deputy Dean (Research) and Cluster Dean to obtain internal support for the proposed centre. The centre are also required to register in the approved system² and obtain an Excellent score (> 75 marks) for 3 consecutive years. A proposal for the new Research Centre should be forwarded to Office of IPPP, through Research Cluster.

The Deputy Vice-Chancellor (R&I) and Associate Vice-Chancellor (R&I) will consider the proposal in collaboration with relevant Dean of Faculty, Deputy Dean (Research), Cluster Deans, Deputy Cluster Deans and other appointed advisors, and make a recommendation.

*All evaluation criteria for UMCoR were developed based on the definition of HICoE.

Please refer to **Attachment C for UMCoR evaluation criteria.

4.1 Working Paper/ Checklist

The working paper (**Attachment D**) for setting-up a New UMCoR should provide the following information:

1. A short summary of the centre's research agenda, including brief descriptions of any funded and/or proposed initial research projects.
2. A mission statement and objectives of the proposed centre.
3. Proposed Head of Centre and its organizational structure.
4. A list of the principal faculty members involved and participating researchers. The breadth and depth of participating faculty, demonstrating multi- or trans-disciplinary research approach should be highlighted.
5. A description of the initial and potential internal/external funding sources. The funding sources for the centre as well as assurance that infrastructure needs (support staff, physical facilities, etc.) are in place, and a proposed annual budget.
6. Contributions of the centre towards the visibility of University of Malaya nationally and internationally, and towards attracting high-quality faculty, research fellows, postdoc, and students as well as research funding.

Note:

This guideline is specifically for establishing the University Of Malaya Centre of Research (UMCoR)

Footnote:

²An evaluation system where a Research Centre can report their annual research activities and submit research output for annual performance evaluation purpose.

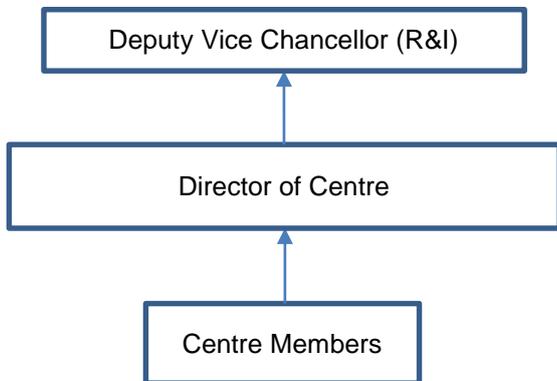
*A copy of Working Paper for setting up a New UMCOR can be obtained from UM research website

Completed working paper must be submitted to the following address through Faculty/Research Cluster:

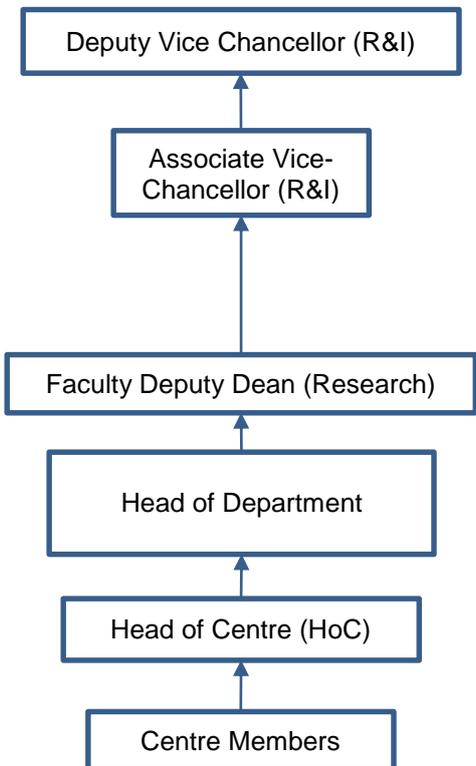
Office of IPPP
Level 7, Institute of Research Management & Monitoring
Research Management & Innovation Complex
University of Malaya

Reporting Structure

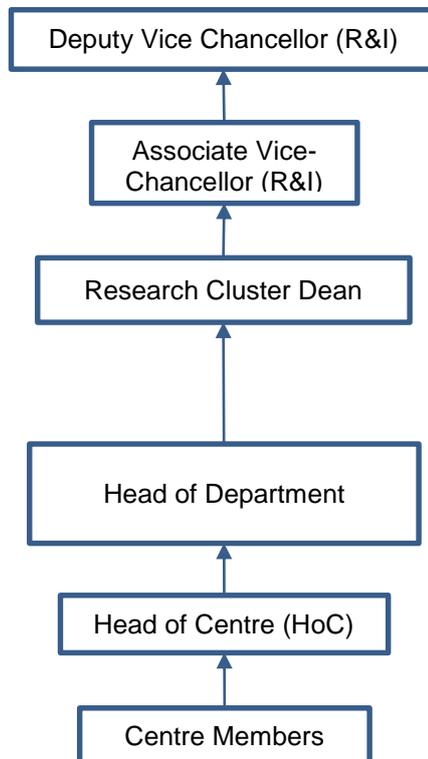
Tier 1: HiCoE and Tier 2: UMCoE



Tier 3: Faculty-Based UMCoR

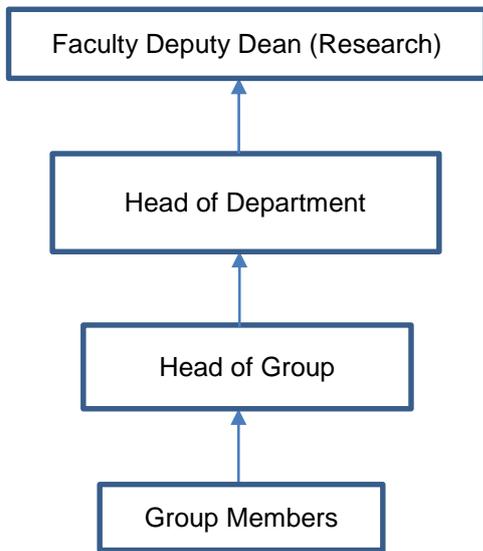


Tier 3: Cluster-Based UMCoR

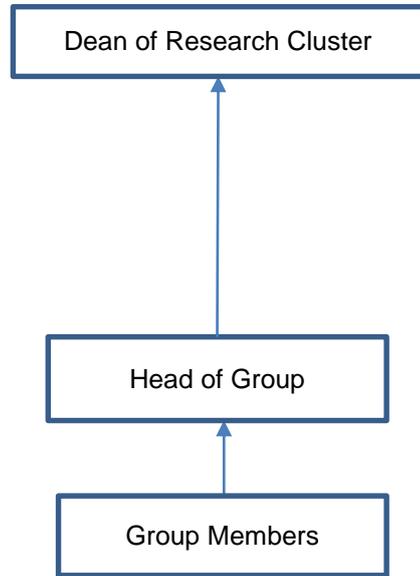


Reporting structure

Tier 4: Research Groups (Faculty-based)

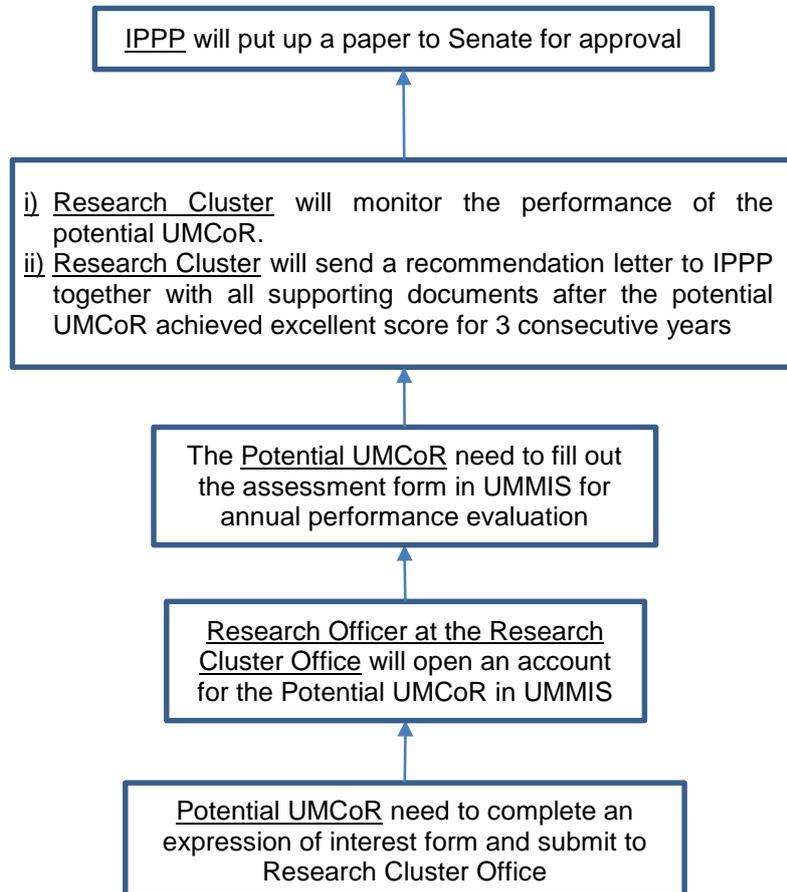


Tier 4: Research Groups (Cluster-based)



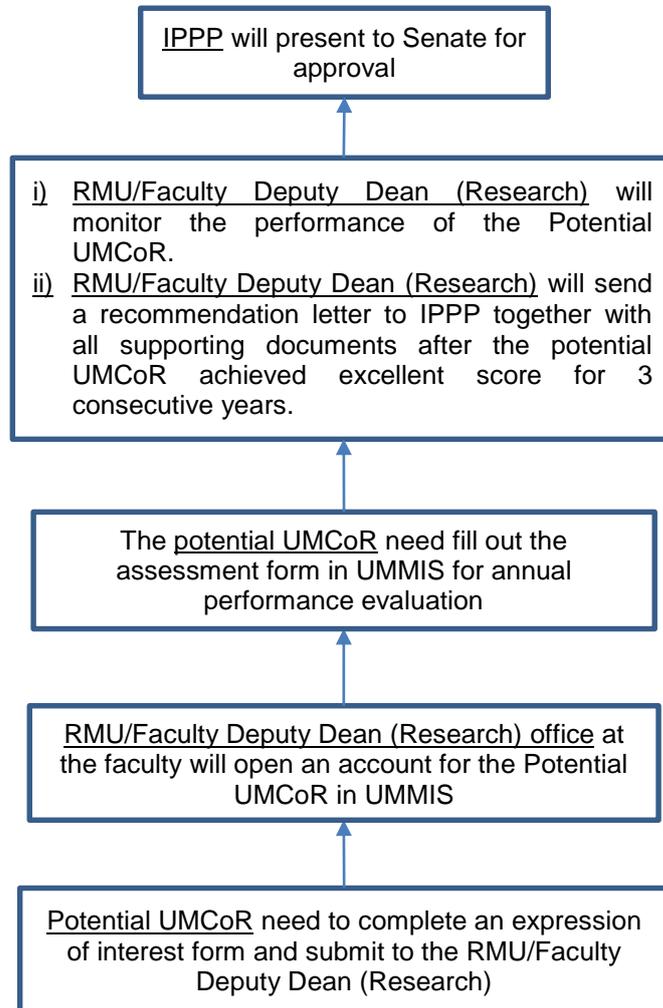
Application Flow for Establishing New UMCoR

Tier 3: Cluster-Based



Flow of Application for Establishing New UMCoR

Tier 3: Faculty-Based



Criteria of Evaluation for UMCoR

Bil	Sub-Criteria	Current Criteria for Science-based	Current Criteria for Social Science-based
A			
1	National priorities / academic needs	To be justified in terms of stated national goals and aspiration as well as fulfilling certain vision and mission of the University and the country Justified means meeting the country's priority area eg from MOSTI i.e. biotech, ICT etc	To be justified in terms of stated national goals and aspiration as well as fulfilling certain vision and mission of the University and the country Justified means meeting the country's priority area eg from MOSTI i.e. biotech, ICT etc
2	Multi-discipline	At least 2 different disciplines. COR has to declare the disciplines based on the Field of Research FOR (group) in MOSTI	At least 2 different disciplines. COR has to declare the disciplines based on the Field of Research FOR (group) in MOSTI
3	Management & Organisation	Formal organisation with lines of control and job descriptions in place	Formal organisation with lines of control and job descriptions in place
4	Quality Management System	Demonstrate appropriate quality systems in place such as: - MSISO9001:2008 - Conform to GLP, GMP etc (if applicable)	Demonstrate appropriate quality systems in place such as: - MSISO9001:2008 - Conform to GLP, GMP etc (if applicable)
5	Finance	Evidence of sustainability from internal and external research grant received / awarded.	Evidence of sustainability from internal and external research grant received / awarded.
6	Human Resource Management	Demonstrate good management & procedures for human management & training	Demonstrate good management & procedures for human management & training

Evaluation Criteria for UMCoR

Bil	Sub-Criteria	Current Criteria for Science-based	Current Criteria for Social Science-based
B			
1	Researchers research experience (3 cohorts)	At least 5 core employed staff of various disciplines; 3 cohort is based of years of experience: - 20 years (30%), 10-20 years (40%), <10 years (30%) Balanced distribution of staff with cumulative research experience of 80 years	At least 5 core employed staff of various disciplines; 3 cohort is based of years of experience: - 20 years (30%), 10-20 years (40%), <10 years (30%) Balanced distribution of staff with cumulative research experience of 80 years
2	Critical mass	60% of core members involved as Principal Investigator	60% of core members involved as Principal Investigator
3	% of academic staff with PhD or equivalent	at least 80% of members with PhD or equivalent	at least 80% of members with PhD or equivalent
4	No of recognition / awards / stewardships	minimum 5 recognition/awards / stewardships/per year	minimum 5 recognition/awards / stewardships/per year

Bil	Sub-Criteria	Current Criteria for Science-based	Current Criteria for Social Science-based
C			
1	Publications	Minimum 5 Papers in ISI indexed journals per year bearing the CoR affiliation <i>Add new sub-criteria: c1c. No of papers published in refereed journal /staff/year</i>	Minimum 5 Papers in ISI/ 10 Scopus indexed journals/refereed journal/book chapter in international publication per year bearing the CoR affiliation c1a. Papers in ISI indexed journals per staff / year c1b. Papers published in refereed journal/book chapter in international publication per staff / year At least 2 of which must be ISI ranked journals
2	Research grants for academic staff	Aggregate/Cumulative Research Grant received per year minimum RM 200,000.00	Cumulative Research Grant received per year minimum RM 100,000.00
2.1	Government		
2.2	Private		
2.3	International		
3	Research expenditure	Should not be less than 60% of grants attained / year	Should not be less than 60% of grants attained / year

Evaluation Criteria for UMCoR

No.	Sub-Criteria	Current Criteria for Science-based	Current Criteria for Social Science-based
D			
1	% of postgraduate intake	50% of postgraduate with CGPA => 3.0 (or equivalent)	50% of postgraduate with CGPA => 3.0 (or equivalent)
2	Ratio of PhD to master postgraduate by research (and mixed mode)	There are 2 sub-measurements: D2.1: No of postgraduate students. (To have minimum 20 students (PhD + master)) D2.2: % of PhD students (min 40% PhD)	There are 2 sub-measurements: D2.1: No of postgraduate students. (To have minimum 10 students (PhD + master)) D2.2: % of PhD students (min 50% PhD)
3	Ratio of postgraduates to academic staff (enrolment)	Minimum 2 PG per staff Postgraduates = PhD and masters students Academic staff = permanent & contract prof & lecturers and visiting	Minimum 1 PG per staff Postgraduates = PhD and masters students Academic staff = permanent & contract prof & lecturers and visiting
4	% of international postgraduates		
5	% of postgraduate fellowship / grants from prestigious bodies		
E			
1	No of innovations	Includes any of the following : 1. Patents filed 2. Commercialised products 3. Licensing of technology know-how 4. IPR e.g copyrights (including original writings), invention disclosure, trademarks, industrial design, impact on policy	Includes any of the following : 1. Patents filed 2. Commercialised products 3. Licensing of technology know-how 4. IPR e.g copyrights (including original writings), invention disclosure, trademarks, industrial design, impact on policy 5. Creative Publication/Professional Documents/Policy Document 6. New Curriculum/Academic Program
F			
1	Income	S&T = RM 50,000 / year Income = training courses, consultancy, postgraduate fees (other than research grant)	Non S&T = RM20,000 / year Income = training courses, consultancy, postgraduate fees
G			
1	Inter-institution participation (international)	Minimum 3 per year 30% (1)	Minimum 10 (3) per year 50% (1)
2	Inter-institution participation (national)	70% (2)	50% (2)

Edited 05012016

**CENTRE OF RESEARCH
UNIVERSITI MALAYA**

NAME OF CENTRE

EXECUTIVE SUMMARY (Not more than 1 page)

A large, empty rectangular box with a thin black border, occupying most of the page below the section header. It is intended for the user to write the executive summary.

No.	Information	Details
1.	Name of the Centre	
2.	Justification for set-up	
3.	Objective of the Centre	
4.	Vision	
5.	Mission	
6.	Website	

7. Membership & Organizational Structure

<p>(a)</p>	<p>Membership</p> <ul style="list-style-type: none"> • <i>At least five (5) full time permanent academic staff for college-based CoR</i> • <i>At least eight (8) full time permanent academic staff for Cluster-based CoR</i> <p>* (Please provide full Curriculum Vitae with signature of each member as Appendix)</p>	
<p>(b)</p>	<p>Organizational Structure (proposed)</p> <ul style="list-style-type: none"> ○ <i>Governance structure of the CoR:</i> <ul style="list-style-type: none"> • <i>Director</i> • <i>Deputy director</i> • <i>Administration (secretarial support)</i> • <i>Research fellow/ RAs/ Post-doc</i> • <i>Duties and responsibilities of all members including the admin. team</i> 	

(c)	Space and physical plant facilities (e.g. Lab, office)	
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8. Key Activities of Centre (including training and workshops planned)

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9. Benefits of Set-up to University and the Society

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10. Collaborations & Linkages

National	International

11. Achievements (Past 3 years)**(a) Research (Last 3 years)**

No.	Title	Funding Sources	Funding Amount

(b) Human Capital Development (Please list name of candidates and title of thesis as Appendix)*

No.	Level	No. graduated	On-going supervision
1	PhD (*)		
2	Master (*)		
3	Bachelor (* if applicable)		
4	Research Assistant		
5	Post-Doctoral		
6	Others		

(c) Publications

No. of Publications: (Please list all relevant publications in Appendix)	
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(d) Intellectual Property

Year of registration	Product/Process	Researcher	Application Status (Approved/Pending & Year)	Details of Patent

(e) Recognition and Awards

Type of Recognition and Awards (e.g. Expo, Research Award, etc)	Level (National/International)

12. Financial

	Year 1 (RM)	Year 2 (RM)	Year 3 (RM)	Year 4 (RM)	Year 5 (RM)	TOTAL (RM)
A. Amount of grant received (period of 5 years prior to application)						
B. Amount of fund received from commercialization activities.						
C. Amount of fund received from services & training.						