

LAPORAN AUDIT DALAM *MALAYSIA RESEARCH ASSESSMENT* (MyRA[®]) 2017

UNIVERSITI TENAGA NASIONAL

NAMA KETUA AUDIT DALAM MyRA[®]: YBHG. PROF. DR. MD. ZAINI BIN JAMALUDIN

NAMA JURUAUDIT DALAM MyRA[®] DAN TUGASAN:

BIL.	NAMA	SEKSYEN
1.	YBHG. PROF. DR. MD. ZAINI BIN JAMALUDIN	
2.	YBHG. PROF. IR. DR. YAP KEEM SIAH	
3.	YBHG. PROF. DR. HANIM BINTI SALLEH	
4.	YBRS. PROF. MADYA DR. ALICIA TANG YEE CHONG	
5.	YBRS. PROF. MADYA DR. OTHMAN CHIN	
6.	YBRS. PROF. MADYA DR. HALINA MISRAN	

TARIKH AUDIT DALAM MyRA[®]: 06/03/2018 - 26/03/2018

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RAW DATA (INTERNAL AUDIT)

SECTION A: GENERAL INFORMATION 2017

No	Criteria	IPT	IA	Comments for IA
1	Total number of academic staff (permanent/contract staff)			
	a.Number of academic staff (including staff on study leave) (FTE)	447	447	
				100% checked.
	i.Professor (FTE)	35	35	The number is consistent with the Master list sources
	▪ Full Time	35	35	
	▪ Part Time	0	0	
	ii.Associate Professor (FTE)	63	63	100% checked.
	▪ Full Time	63	63	The number is consistent with the Master list sources
	▪ Part Time	0	0	
	iii.Senior Lecturer (FTE)	192	192	100% checked.
	▪ Full Time	192	192	The number is consistent with the Master list sources
	▪ Part Time	0	0	
	iv.Lecturer (FTE)	157	157	100% checked.
	▪ Full Time	157	157	The number is consistent with the Master list sources
	▪ Part Time	0	0	
	b.Number of active academic staff (FTE)	420	420	
				100% checked.
	i.Professor (FTE)	35	35	The number is consistent with the Master list sources
	▪ Full Time	35	35	
▪ Part Time	0	0		
ii.Associate Professor (FTE)	62	62	100% checked.	
▪ Full Time	62	62	The number is consistent with the Master list sources	
▪ Part Time	0	0		
iii.Senior Lecturer (FTE)	181	181	The number is consistent with the	

	▪ Full Time	181	181	Master list sources
	▪ Part Time	0	0	
	iv. Lecturer (FTE)	142	142	The number is consistent with the Master list sources
	▪ Full Time	142	142	
	▪ Part Time	0	0	
	c. Total number of active S&T academic staff (FTE)	281	281	The number is consistent with the Master list sources
	◦ Full Time	281	281	
	◦ Part Time	0	0	
	d. Total number of active Non S&T academic staff (FTE)	139	139	
	e. Percent of active S&T academic staff	66.90	66.90	
	f. Total number of active foreign academic staff (FTE)	29	29	The number is consistent with the Master list sources
	◦ Full Time	29	29	
	◦ Part Time	0	0	
2	Total number of fulltime students	10,635	10,532	
	a. Number of local and foreign undergraduate students	9,735	9,718	
	i. Bachelor (Local)	9,353	9,336	1. Checked the data (master list) and found some duplications (hence removed).. 2. A total of 100 samples (student files) were selected (based on long duration of studies) and checked.
	ii. Bachelor (Foreign)	382	382	1. Checked the data (master list) and found OK. 2. A total of 20 samples (student files) were selected (based on long duration of studies) and checked.
	b. Number of local and foreign postgraduate students	900	814	
	PhDs	280	280	
	Postgraduates by Research	530	445	

Postgraduates (Foreign)	195	188	
Masters (Local)	555	476	
Masters (Foreign)	65	58	
i.Masters - Research (Local) FTE	229	151	1. Checked the data (master list) and found actual less numbers of this part.
▪ Full Time	198	136	
▪ Part Time	62	31	2. A total of 10 samples (student files) were selected (based on long duration of studies) and checked.
ii.Masters - Research (Foreign) FTE	21	14	1. Checked the data (master list) and found actual number 14.
▪ Full Time	21	14	
▪ Part Time	0	0	2. A total of 3 samples (student files) were selected (based on long duration of studies) and checked.
iii.Masters - Coursework (Local) FTE	326	325	1. Checked the data (master list) and found duplication.
▪ Full Time	222	221	
▪ Part Time	208	208	2. A total of 40 samples (student files) were selected (based on long duration of studies) and checked.
iv.Masters - Coursework (Foreign) FTE	44	44	1. Checked the data (master list) and found OK.
▪ Full Time	44	44	
▪ Part Time	1	1	2. A total of 8 samples (student files) were selected (based on long duration of studies) and checked.
v.PhDs (Local) FTE	150	150	1. Checked the data (master list) of Part A but found this data is not reliable (only active students), hence double check similar data for Part D3, then found this data OK.
▪ Full Time	135	135	
▪ Part Time	46	46	2. A total of 20 samples (student files) were selected (based on long duration of studies) and checked.
vi.PhDs (Foreign) FTE	130	130	1. Checked the data (master list) of Part A but found this data is not reliable (only active students), hence double check similar data for Part D3, then found this data OK.
▪ Full Time	128	128	
▪ Part Time	6	6	2. A total of 20 samples (student files) were selected (based on long duration of studies) and checked.



	vii. Doctoral Level Coursework (Local) FTE	0	0	Checked, there is no coursework program for doctoral level
	▪ Full Time	0	0	
	▪ Part Time	0	0	
	viii. Doctoral Level Coursework (Foreign) FTE	0	0	Checked, there is no coursework program for doctoral level
	▪ Full Time	0	0	
	▪ Part Time	0	0	

Foot notes:

Bold numerals are computer calculated values. They are usually numbers from other fields. Please check that all fields are filled-in. Type "0" numerals if you do not have any data.

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RAW DATA (INTERNAL AUDIT)

SECTION B: QUANTITY AND QUALITY OF RESEARCHERS 2017

No	Criteria	IPT	IA	Comments for IA
1	Critical Mass			
	Total Number of Academic Staff involved as Principal Investigator of Research Grants	292	290	
	a. University Grants	172	173	One new PI with staff number 90010441 was added
	b. National Grants	91	89	Two staff were removed (Staff number 90020879 and 90010316) PI with this staff number 90010316 move to consultancy (F6) 100% evidence checked
	c. Industrial Grants	25	26	add one new PI 10021304
	d. International Grants	4	2	Two projects were removed because there were not related to research more toward training. U-EN-CR-18-01, U-EN-CT-18-06 The PI were added to University Grant in section 1a and another in Industrial Grant section 1c.
2	PhDs or Professional Qualifications	212	212	
	a. Total Number of Staff with PhDs/DSc, DEng, etc.	203	203	100% data has been verified. A random no. of Certificates (around 50) have been sighted and satisfied.
	b. Total Number of Staff with Professional Qualifications (such as physicians, engineers, architects, accountants etc)	9	9	All professional certificates were checked & verified with the registration numbers. For the staff Chua Yaw Long, his registration no. is missing from the masterlist. However, it is in the HR document. Please update.
3	Research Experience (3 Cohorts)			
	Total Number of Staff in each Age Group	420	420	
	a. >50 Years Old	83	83	100% checked.and found to be correct.
	b. 40–50 Years Old	146	146	100% checked.and found to be correct.
	c. <40 Years Old	191	191	100% checked.and found to be correct.

4	Awards/ Stewardships Conferred by National and International Academic and Professional Bodies for Research Excellence			
	a. Total Number of Awards Conferred by International Academic and Professional Bodies for Research Excellence	1	0	Data removed, the award not related to research
	b. Total Number of Recognitions/ Stewardships Conferred by International Academic and Professional Bodies for Research Excellence	5	5	100% checked
	c. Total Number of Awards Conferred by National Academic and Professional Bodies for Research Excellence	0	0	
	d. Total Number of Recognitions/ Stewardships Conferred by National Academic and Professional Bodies for Research Excellence	1	1	100% checked
	e. Research Exhibition Awards (gold medal / special awards)	11	11	100% checked

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SECTION C: QUANTITY AND QUALITY OF RESEARCH 2017

No	Criteria	IPT	IA	Comments for IA
1	Publications			
	a.Total number of Publications in SCOPUS/WOS/ERA Indexed Journals			
	i.Journals	314	293	Journals were audited 100 %. It was found that 6 papers are Scopus Listed Conference Proceedings and moved to Section (ii). 15 papers were rejected due to not following the criteria of active staff/wrong affiliation.
	ii.Conference Proceedings	182	182	Conference Proceedings were audited 100 % based on 182 data of Masterlist All 176 data were accepted and 6 data were rejected. Additional 6 Conference Paper from Section (i). Total = 182
	iii.Joint Publications			
	1.Industrial Collaborations	29	33	The difference was based on several papers were found to have industrial collaboration which was mislooked. Thus, additional Industrial collaboration.
	2.International Collaborations	164	159	The difference was based on several papers rejected and some do not to have international collaboration.
	3.National Collaborations (UA-UA, UA-US, US-US, Agencies/ Research Institutes)	258	242	The difference was based on several papers rejected and some do not to have national collaboration.
	b.Publication Impact			
	i.Total Citations of Publications	6,111	6,165	Citation as at 13/3/2018.
	ii.Number of Articles Published in Q1 and Q2 Journals			
	iii.Percentage of Articles Published in Q1 and Q2 Journals	0.00	0.00	
	c.Total Number of Publications in Other Journals	184	184	All presented data has evidence.
	d.Research Books and Chapters			
	i.No. of Research Books	2	2	All data were accepted as it follow the criteria for research books.
ii.No. of Chapters in Research Books	11	11	All data were accepted.	
e.Policy Papers	0	0	No data on policy papers were presented.	

	f. Other Publications (case studies, technical reports, articles in magazines, newsletters, original writings and publications from conferences, digital or print media)	430	367	59 video data were rejected.
2	Research Grants for Academic Staff			
	a. Total Amount of Public Funds from Government Agencies/ Parent Bodies/ Home Universities/ Main Campus			
	i. Total Amount Pledged for New Projects	48,023,073.6 1	51,388,745.8 7	Have checked on the appointment letters and amount. One project was removed since no appointment letter as sub-project. However total grant was the same. Project U-TD-CR-17-02 goes to consultancy. Project 201502001UTP, 201503001UTP, U-GN-CR-15-06 were removed since the projects have ended. Have added 5 TNB R&D seed fund U-TD-RD-17-02, U-TS-RD-17-03, U-TS-RD-17-05, U-TD-RD-17-09, U-TD-RD-17-10. Slight changes on the amount. 100% evidence checked.
	ii. Total Amount Received for Active Projects	25,690,683.6 4	26,854,742.9 9	Have checked on the appointment letters, amount and finance record. 100% records check. Project U-TD-CR-17-02 goes to consultancy. Project 201502001UTP, 201503001UTP, U-GN-CR-15-06 were removed since the projects have ended. 100% evidence checked.
	b. Total Amount of Private/ Industrial Funds (including Contract Research)			
	i. Total Amount Pledged for New Projects	4,820,113.13	4,524,585.13	Have checked on the appointment letters and amount. One record was removed, Project U-EN-CR-18-04, should be in commercialization. Slight changes due to finance record. 100% evidence checked.
	ii. Total Amount Received for Active Projects	8,238,685.50	8,238,894.00	Have checked on the appointment letters and amount. Slight changes due to finance record. 100% evidence checked.
	c. Total Amount of International Funds			
i. Total Amount Pledged for New Projects	59,953.71	0.00	Two of the projects are training and workshop. U-EN-CR-18-01 U-EN-CT-18-06 .	
ii. Total Amount Received for Active Projects	106,388.29	46,434.58	Remove RM59953.71 for the two	



				projects and bring to consultancy. 100% evidence checked.
3	Research Expenditure for All Projects (Data from Bursary)			
	a.Total Amount of Research Grants Received in the Year	34,035,757.4 3	35,140,071.5 7	Slight discrepancies due to removal and addition of some projects. Verified with finance transaction including GST. 100% evidence checked.
	b.Total Amount of Research Grants Spent	17,892,812.6 7	18,510,486.1 5	Slight discrepancies due to removal and addition of some projects. Verified with finance transaction including GST. 100% evidence checked.

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SECTION D: QUANTITY AND QUALITY OF POSTGRADUATES 2017

No	Criteria	IPT	IA	Comments for IA
1	Number of PhDs Graduated			
	a. Total Number of PhDs Graduated in the Year	37	37	
	i. Total Number of Local PhDs (Research Mode) Graduated in the Year	13	13	1. 100% checked the data (master list) and found OK 2. Checked minutes of senate for list of graduation, and found OK.
	ii. Total Number of International PhDs (Research Mode) Graduated in the Year	21	24	1. 100% checked the data (master list) and found OK. 2. Checked minutes of senate for list of graduation, and found there are additional 3 students (ID: PT20352, PT20382, PT20430)
	b. Ratio of PhDs Graduated to Active Academic Staff	0.09	0.09	
	c. Number of PhDs Graduated within 7 Semesters or 42 Months			
	d. Percentage of PhDs Graduated within 7 Semesters or 42 Months	0.00	0.00	
2	Number of Masters Graduated			
	a. Total Number of Masters (Research Mode) Graduated in the Year	25	25	
3	Number of PhDs Enrolled			
	a. Total Number of PhDs Enrolled	280	280	
	b. Ratio of PhDs Enrolled to Active Academic Staff	0.67	0.67	
	c. Total Number of PhDs Enrolled in S&T	235	235	50% sampled. Checked the data (master list) and found OK.
4	Postgraduates Enrolment			
	a. Ratio of Postgraduates Enrolled to Active Academic Staff	2.14	1.94	
	b. Ratio of Postgraduates Enrolled (based on research and mixed modes only) to Undergraduates Enrolled	0.09	0.08	
5	Number of International Postgraduates			

	a.Total Number of International Postgraduates Enrolled	195	188	
	b. Percentage of International Postgraduates to Total Number of Postgraduates Enrolled	21.67	23.10	
6	Entry Qualification Level of Postgraduates			
	a.Number of Postgraduates Enrolled with CGPA ? 3.0 or Equivalent for their First Degree	622	626	
	b. Percentage of Postgraduates Enrolled with CGPA ? 3.0 or Equivalent for their First Degree	69.11	76.90	
7	Total Number of Fellowships/ Grants Awarded by Prestigious Bodies to Postgraduates via Research Mode			
	a.Number of Postgraduates Enrolled via Research Mode with Fellowships/ Grants	236	236	
	b. Percentage of Postgraduates Enrolled via Research Mode with Fellowships/ Grants	44.53	53.03	
8	Post-doctoral Appointments			
	Number of Post-doctoral Research Fellows	8	8	
	a.Local	6	6	1. 100% checked, data (master list), found OK. 2. Check documents of all post-doctoral researcher, found OK.
	b.Foreign	2	2	1. 100% checked, data (master list), found OK. 2. Check documents of all post-doctoral researcher, found OK.

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SECTION E: INNOVATION 2017

No	Criteria	IPT	IA	Comments for IA
1	Patents			
	a. Total Number of New Certificates of Patents Granted	1	1	
	i. National	0	0	
	ii. International	1	1	Checked the certificate, and found OK.
	b. Total Number of New Certificates of Patents Filed	6	6	
	i. National	6	6	Checked the document and found OK
	ii. International	0	0	
	c. Total Number of New Inventions Granted Patents	1	1	Checked the document and found OK
	d. Total Number of New Inventions Filed for Patents	6	6	Checked the document and found OK
	2	Commercialized Products		
a. Total Number of Innovations Successfully Developed into Commercialized Products for the Market		3	3	Checked the document and found OK
3	Technology Know-How Licensing			
	a. Total Number Licensed	1	1	Checked the document and found OK
	b. Total Number Sold Outright	0	0	
4	Other IPRs (other than Patents, Commercialized Products, Technology Know-How and Books declared in Section C)			
	Total Number of Other IPRs (copyrights / trademarks / industrial designs, etc) Obtained	46	39	100% checked, found 7 with certificates where filed on 2016 although received on 2017.
5	Starts-Up/ Spin-off Companies			
	Total Number of Start-Up Companies (representing new businesses, jobs) Created Based on Research	0	0	



	Innovations			

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SECTION F: PROFESSIONAL SERVICES AND GIFTS 2017

No	Criteria	IPT	IA	Comments for IA
1	Gross Income from Training Courses (non-degree programmes) and Postgraduate Fees (Research programmes)			
	a. Training Courses from Non-Degree Programmes	236,194	296,148	Added trainings (U-EN-CR-18-01) and (U-EN-CT-18-06) from Section B(i) (RM59953.71)
	b. Postgraduate Fees from Research Programmes	3,108,970	3,108,970	Financial transactions are captured in UNITEN finance portal. Receipts available and checked.
2	Gross Income from Organising Conferences, Seminars and Knowledge-Sharing Programmes in the Field of Expertise			
	a. Total amount (RM)	214,552	214,552	No change
3	Gross Income from Product Commercialization/ Technology Know-How Licensing			
	a. Product Commercialization	833,644	521,022	Innovative Monitoring System (IMRS) has no evidence attached. Hence the amount of RM312622.02 has been removed .
	b. Technology Know-How Licensing	53,000	53,000	Evidence verified.
4	Gross Income Based on Financial Transaction of that Year from Consultancies (excluding Contract Research)/ Hospital Recoupable Fees/ Lab Services Fees			
	a. Consultancies (excluding contract research)	4,303,398	5,627,177	First entry "Semi-Automated Adjustable Filling Mechanism" needs appointment letter or financial statement. Others are accepted and evidences have been validated. * Added RM75,843 (U-TD-CR-17-02, from B(i)(b)) ** Added RM1,635,368 (UNITEN/PP/15/5/5255, from Section B) *** Added RM1,216,774 (UNITEN/PP/15/5/5251, from Section B) ****Removed RM1,604,206.49 (Transferred to Section B(i)(b))
	b. Hospital Recoupable Fees	0	0	
	c. Lab Services Fees	11,904	11,904	Receipts available and checked.

5	Endowment (including Professorial Chairs)			
	a. Total amount (RM)	3,025,739	1,000,000	YCU figure is not reconcile with prior year 2016 and the evidence that fund received from external parties.. 1) Include the amount for 2017 (Jan to Dec) only. 2) Contributions from UNITEN staff needs to be excluded.
6	Gifts/ Donations (money, equipment, research materials, etc.) worth >=RM 3,000 each			
	a. Total amount (RM)	2,640,061	2,400,650	(1) No. 5 & no. 6: No evidence (RM16611 excluded) (2) No.8, No. 9 & No. 22: entries removed. Journey to Astana does not indicate the research activity. (RM 51000 excluded) *** Unless there is a proof of R&D activities conducted. (3) No. 12 to No. 19: entries removed. Alaminformasi Sdn Bhd - no supporting letter from the sponsor. (RM 171800 excluded)
7	Total Amount of Operational Expenditure (OE) for R&D Development			
	a. Total Operational Expenditure (RM)	173,832,584	173,832,584	Evidence verified.
	a. Total Expenditure for R&D Development (RM)	3,748,457	3,748,457	Evidence verified.

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SECTION G: NETWORKING AND LINKAGES 2017

No	Criteria	IPT	IA	Comments for IA
1	Participation in International Inter-Institution Research Related Activities Under MoA			
	a.Total Number of MoAs Signed and Stamped	10	10	100% checked. evidence verified.
	b.Total Number of Staff Involved in Joint Research Projects Under MoA	15	15	100% checked. evidence verified.
2	Number of Staff Sent Abroad for Research Activities			
	a.Total Number of Staff Sent Abroad for Research Activities	17	17	100% checked. evidence verified.
3	Membership in International Academic/ Professional Bodies/ Associations/ NGOs			
	a.Total Number of Staff as Members in International Academic/ Professional Bodies/ Associations	76	80	All evidences are in order. 80% sampling. Have added 4 records with additional evidences. 90010385, 90010216, 90010627, 90010473.
	b.Total Number of Staff Appointed as Chairman/ Committee Members in International Academic/ Professional Bodies/ Associations/ NGOs	2	1	1 record was removed since appointment as a member and by post not personal to holder. 100% evidence checked.
4	Participation in National Inter-Institution Research Related Activities Under MoA			
	a.Total Number of MoAs Signed and Stamped	5	5	100% checked. evidence verified.
	b.Total Number of Staff Involved in Joint Research Projects Under MoA	10	10	100% checked. evidence verified.
5	Membership in National Academic/ Professional Bodies/ Associations/ Ministry/ NGOs			
	a.Total Number of Staff as Members in National Academic/ Professional Bodies/ Associations/ Ministry/ NGOs	107	111	All evidences are in order. 80% sampling. Remove graduate membership with BEM 90020816. Add five records. 90010678, 90010073, 90010453, 90010328, 90010178
	b.Total Number of Staff Appointed as Chairman/ Committee Members in National Academic/ Professional Bodies/ Associations/ Ministry/ NGOs	9	10	Have checked all evidences. Add 90010073.

6	Knowledge/ Technology Diffusion Projects/ Assimilation (Social Innovation)			
	a.Total Number of New Community-Related Projects	17	19	100% checked. evidence verified. add two rolling community related projects
	b.Total Number of Rolling Community-Related Projects	2	0	100% checked. evidence verified. move 2 rolling community related projects to new community-related projects
	c.Total Number of Communities Receiving/ Benefiting from the Knowledge/ Technology Diffusion Projects	17	22	100% checked. evidence verified. add 5 more projects. new evidences were found and shown
7	Joint Research Projects Between Institution Assessed and Research Universities/Public Universities/Private Universities/Industries/Agencies in Each Project			
	a.Number of Collaborative Projects Between Institution Assessed and a Minimum of 3 Research Universities/Public Universities/Private Universities/Industries/Agencies in Each Project	0	0	
8	Joint Research Projects between RUs in Each Project			
	a.Number of Collaborative Projects with a Minimum of 4 Research Universities in Each Project			

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SECTION H: SUPPORT FACILITIES 2017

No	Criteria	IPT	IA	Comments for IA
1	Laboratories/ Research Facilities that are Accredited Based on their Core Competencies			
	Total Number of Laboratories Accredited to Good Manufacturing Practice (GMP), Good Regulatory Practice (GRP), Good Laboratory Practice (GLP), ISO17025, ISO15189, etc.	0	0	None
2	Library Facilities			
	a. Total Number of Titles of Books	90,286	90,286	Evidence of purchase has been sighted (e.g. PO, DO and the invoices).
	b. Total Number of Online Titles of Books	143,624	143,624	Links to online sites were verified. It works.
	c. Total Number of Journals Subscribed	33,450	33,450	Listed items have been verified.

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION B: QUANTITY AND QUALITY OF RESEARCHERS 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Critical Mass					
Percentage of Academic Staff involved as Principal Investigator of Research Grants		69.05	6.86	65.00	7.50
a. University Grants	% of staff	41.19	4.03	23.00	2.25
b. National Grants	% of staff	21.19	2.12	18.00	1.80
c. Industrial Grants	% of staff	6.19	0.62	12.00	1.20
d. International Grants	% of staff	0.48	0.09	12.00	2.25
2. PhDs or Professional Qualifications					
a. Total Number of Staff with PhDs/DSc, DEng, etc.	% of staff	48.33	3.22	60.00	4.00
b. Total Number of Staff with Professional Qualifications (such as physicians, engineers, architects, accountants etc)		2.14	0.11	20.00	1.00
3. Research Experience (3 Cohorts)					
Total Number of Staff in each Age Group			2.67		7.50
a. >50 Years Old	% of staff	19.76	0.71	30.00	2.25
b. 40–50 Years Old		34.76	1.95	40.00	3.00
c. <40 Years Old		45.48	0.00	30.00	2.25

4. Awards/ Stewardships Conferred by National and International Academic and Professional Bodies for Research Excellence					
a. Total Number of Awards Conferred by International Academic and Professional Bodies for Research Excellence	No. per Institution	0.00	0.00	15.00	1.00
b. Total Number of Recognitions/ Stewardships Conferred by International Academic and Professional Bodies for Research Excellence		5.00	0.33	15.00	1.00
c. Total Number of Awards Conferred by National Academic and Professional Bodies for Research Excellence		0.00	0.00	20.00	1.25
d. Total Number of Recognitions/ Stewardships Conferred by National Academic and Professional Bodies for Research Excellence		1.00	0.05	25.00	1.25
e. Research Exhibition Awards (gold medal / special awards)		11.00	0.11	50.00	0.50
Total Marks for Section B			13.35		25

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION C: QUANTITY AND QUALITY OF RESEARCH 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Publications					
a. Total number of Publications in SCOPUS/WOS/ERA Indexed Journals					
i. Journals	No./staff	0.70	1.21	2.00	3.465
ii. Conference Proceedings	No./staff	0.43	0.50	0.50	0.578
iii. Joint Publications					
1. Industrial Collaborations	No. of joint articles/staff	0.08	0.27	0.30	1.040
2. International Collaborations	No. of joint articles/staff	0.38	1.31	0.30	1.040
3. National Collaborations (UA-UA, UA-US, US-US, Agencies/ Research Institutes)	No. of joint articles/staff	0.58	1.55	0.30	0.809
b. Publication Impact					
i. Total Citations of Publications	5 years cumulative citations of articles published only in the last 5 years	6,165	2.85	10,000	4.620
c. Total Number of Publications in Other Journals					
	No./staff	0.44	0.54	2.00	2.475
d. Research Books and Chapters					
i. No. of Research Books	No./staff	0.00	0.02	0.20	0.99

ii.No. of Chapters in Research Books	No./staff	0.03	0.02	0.80	0.66
e.Policy Papers	No./staff	0.000	0.00	0.01	0.495
f.Other Publications (case studies, technical reports, articles in magazines, newsletters, original writings and publications from conferences, digital or print media)	No./staff	0.87	0.66	0.10	0.33
2. Research Grants for Academic Staff					
a.Total Amount of Public Funds from Government Agencies/ Parent Bodies/ Home Universities/ Main Campus					
i.Total Amount Pledged for New Projects	-	-	-	-	-
ii.Total Amount Received for Active Projects	RM/staff	63,939.86	12.00	24,042.86	6.00
b.Total Amount of Private/ Industrial Funds (including Contract Research)					
i.Total Amount Pledged for New Projects	-	-	-	-	-
ii.Total Amount Received for Active Projects	RM/staff	19,616.41	4.80	8,676.19	2.40
c.Total Amount of International Funds					
i.Total Amount Pledged for New Projects	-	-	-	-	-
ii.Total Amount Received for Active Projects	RM/staff	110.56	0.04	10,661.90	3.60
3. Research Expenditure for All Projects (Data from Bursary)					
a.Total Amount of Research Grants Received in the Year	% of grant amount spent	52.68	1.32	60.00	1.50
b.Total Amount of Research Grants Spent					
Total Marks for Section C			27.10		30

UNIVERSITI TENAGA NASIONAL

ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION D: QUANTITY AND QUALITY OF POSTGRADUATES 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Number of PhDs Graduated					
a. Total Number of PhDs Graduated in the Year					
i. Total Number of Local PhDs (Research Mode) Graduated in the Year	-	-	-	-	-
ii. Total Number of International PhDs (Research Mode) Graduated in the Year	-	-	-	-	-
b. Ratio of PhDs Graduated to Active Academic Staff	No./staff	0.09	7.87	0.056	5.00
c. Number of PhDs Graduated within 7 Semesters or 42 Months	-	-	-	-	-
d. Percentage of PhDs Graduated within 7 Semesters or 42 Months	%				
2. Number of Masters Graduated					
a. Total Number of Masters (Research Mode) Graduated in the Year	-	-	-	-	-
3. Number of PhDs Enrolled					
a. Total Number of PhDs Enrolled	-	-	-	-	-
b. Ratio of PhDs Enrolled to Active Academic Staff	No./staff	0.67	0.44	1.50	1.00
c. Total Number of PhDs Enrolled in S&T	-	-	-	-	-
4. Postgraduates Enrolment					
a. Ratio of Postgraduates Enrolled to Active Academic Staff	No./staff	1.94	0.65	3.00	1.00

b. Ratio of Postgraduates Enrolled (based on research and mixed modes only) to Undergraduates Enrolled	No. PG/UG	0.05	0.00	0.25	0.00
5. Number of International Postgraduates					
a. Total Number of International Postgraduates Enrolled	-	-	-	-	-
b. Percentage of International Postgraduates to Total Number of Postgraduates Enrolled	%	23.10	3.00	10.00	1.50
6. Entry Qualification Level of Postgraduates					
a. Number of Postgraduates Enrolled with CGPA \geq 3.0 or Equivalent for their First Degree	-	-	-	-	-
b. Percentage of Postgraduates Enrolled with CGPA \geq 3.0 or Equivalent for their First Degree	%	76.90	4.61	50.00	3.00
7. Total Number of Fellowships/ Grants Awarded by Prestigious Bodies to Postgraduates via Research Mode					
a. Number of Postgraduates Enrolled via Research Mode with Fellowships/ Grants	-	-	-	-	-
b. Percentage of Postgraduates Enrolled via Research Mode with Fellowships/ Grants	%	53.03	4.00	10.00	2.00
8. Post-doctoral Appointments					
Number of Post-doctoral Research Fellows					
a. Local	No. per Institution / year	6	0.90	6.00	0.90
b. Foreign	No. per Institution / year	2	0.30	4.00	0.60
Total Marks for Section D			21.77		15

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION E: INNOVATION 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Patents					
a. Total Number of New Certificates of Patents Granted					
i. National	-	-	-	-	-
ii. International					
b. Total Number of New Certificates of Patents Filed					
i. National	-	-	-	-	-
ii. International					
c. Total Number of New Inventions Granted Patents	No./staff	0.002	0.95	0.005	2.00
d. Total Number of New Inventions Filed for Patents	No./staff	0.014	0.71	0.02	1.00
2. Commercialized Products					
Total Number of Innovations Successfully Developed into Commercialized Products for the Market	No./staff	0.007	3.00	0.0025	3.000
3. Technology Know-How Licensing					
a. Total Number Licensed	No./staff	0.0024	1.4286	0.0025	1.5000
b. Total Number Sold Outright	No./staff	0.0000	0.0000	0.0025	1.5000



4. Other IPRs (other than Patents, Commercialized Products, Technology Know-How and Books declared in Section C)					
a. Total Number of Other IPRs (copyrights / trademarks / industrial designs, etc) Obtained	No./staff	0.09	1.86	0.05	1.00
5. Starts-Up/ Spin-off Companies					
a. Total Number of Start-Up Companies (representing new businesses, jobs) Created Based on Research Innovations	-	-	-	-	-
Total Marks for Section E			7.95		10

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION F: PROFESSIONAL SERVICES AND GIFTS 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Gross Income from Training Courses (non-degree programmes) and Postgraduate Fees (Research programmes)					
a. Training Courses from Non-Degree Programmes	Total Amount (RM in millions)	4.19	1.47	6.00	2.10
b. Postgraduate Fees from Research Programmes					
c. Gross Income from Organising Conferences, Seminars and Knowledge-Sharing Programmes in the Field of Expertise					
d. Technology Know-How Licensing					
e. Product Commercialization					
2. Gross Income Based on Financial Transaction of that Year from Consultancies (excluding Contract Research)/ Hospital Recoupable Fees/ Lab Services Fees					
a. Consultancies (excluding contract research)	Total Amount (RM in millions)	5.64	1.76	8.00	2.50
b. Hospital Recoupable Fees					
c. Lab Services Fees					
3. Endowment (including Professorial Chairs)					
a. Total amount (RM)	Total Amount (RM in millions)	1.00	0.35	4.00	1.40

4. Gifts/ Donations (money, equipment, research materials, etc.) worth >=RM 3,000 each					
a.Total amount (RM)	Total Amount (RM in millions)	2.40	0.50	2.00	0.50
5.Total Amount of Operational Expenditure (OE) for R&D Development					
a.Total Operational Expenditure (RM)	% of Operational Expenditure for R&D	2.16	0.50	2.00	0.50
b.Total Expenditure for R&D Development (RM)					
Total Marks for Section F			4.58		7.00

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)
SECTION G: NETWORKING AND LINKAGES 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Participation in International Inter-Institution Research Related Activities Under MoA					
a. Total Number of MoAs Signed and Stamped	No. per Institution	10.00	1.20	5.00	1.20
b. Percentage of Staff Involved in Joint Research Projects Under MoA	% of staff	3.57	0.30	3.00	0.30
2. Number of Staff Sent Abroad for Research Activities					
Percentage of Staff Sent Abroad for Research Activities	% of staff	4.05	0.24	5.00	0.30
3. Membership in International Academic/ Professional Bodies/ Associations/ NGOs					
a. Total Number of Staff as Members in International Academic/ Professional Bodies/ Associations	No. per Institution	0.19	0.30	0.15	0.30
b. Total Number of Staff Appointed as Chairman/ Committee Members in International Academic/ Professional Bodies/ Associations/ NGOs	% of staff	0.24	0.43	0.50	0.90
4. Participation in National Inter-Institution Research Related Activities Under MoA					
a. Total Number of MoAs Signed and Stamped	No. per Institution	5.00	0.45	20.00	1.80
b. Percentage of Staff Involved in Joint Research Projects Under MoA	% of staff	2.38	0.31	7.00	0.90
5. Membership in National Academic/ Professional Bodies/ Associations/ Ministry/ NGOs					
a. Total Number of Staff as Members in National Academic/ Professional Bodies/ Associations/	No./staff	0.26	0.40	0.30	0.45

Ministry/ NGOs					
b.Total Number of Staff Appointed as Chairman/ Committee Members in National Academic/ Professional Bodies/ Associations/ Ministry/ NGOs	% of staff	2.38	1.35	2.00	1.35
6. Knowledge/ Technology Diffusion Projects/ Assimilation (Social Innovation)					
a.Total Number of New Community-Related Projects	No.	19.00	0.35	15.00	0.35
b.Total Number of Rolling Community-Related Projects	No.	0.00	0.00	15.00	0.25
c.Total Number of Communities Receiving/ Benefiting from the Knowledge/ Technology Diffusion Projects	No.	22.00	0.15	60.00	0.40
7. Joint Research Projects Between Institution Assessed and Research Universities/Public Universities/Private Universities/Industries/Agencies in Each Project					
Number of Collaborative Projects Between Institution Assessed and a Minimum of 3 Research Universities/Public Universities/Private Universities/Industries/Agencies in Each Project	No. per Institution	0.00	0.00	5.00	1.50
Total Marks for Section G			5.47		10

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ASSESSMENT - MyRA-I (INTERNAL AUDIT)

SECTION H: SUPPORT FACILITIES 2017

Criteria	Unit Data	Input Data	Marks Obtained	Benchmark	Benchmark Scores
1. Laboratories/ Research Facilities that are Accredited Based on their Core Competencies					
a. Total Number of Laboratories Accredited to Good Manufacturing Practice (GMP), Good Regulatory Practice (GRP), Good Laboratory Practice (GLP), ISO17025, ISO15189, etc.	No. per Institution	0.00	0.00	3.00	2
2. Library Facilities					
a. Total Number of Titles of Books	millions titles per Institution	0.27	0.22	1.20	1
b. Total Number of Online Titles of Books					
c. Total Number of Journals Subscribed					
Total Marks for Section H			0.22		3

UNIVERSITI TENAGA NASIONAL

SUMMARY REPORT FOR MyRA-I 2017 (INTERNAL AUDIT)

No	Assessment Section	Status	IA Marks	IPT Marks	Benchmark Scores
1	Section B: Quantity and Quality of Researchers	UNSATISFACTORY	13.35	13.50	25
2	Section C: Quantity and Quality of Research	OK	27.10	27.28	30
3	Section D: Quantity and Quality of Postgraduates	EXCELLENT	21.77	20.73	15
4	Section E: Innovation	OK	7.95	8.10	10
5	Section F: Professional Services and Gifts	UNSATISFACTORY	4.58	4.96	7
6	Section G: Networking and Linkages	UNSATISFACTORY	5.47	5.88	10
7	Section H: Support Facilities	UNSATISFACTORY	0.22	0.22	3
	TOTAL	OK	80.44	80.67	100



ULASAN UMUM JURUAUDIT DALAM MyRA®:

Most evidences were properly filed and well presented.

Auditees were very corporative during the 2 days of the audit.

However, there are some improvements that need to be done such as :-

- a) Uploaded data in Masterlist and eMyRA system are not tally
- b) Retrieval time of information requested needs to be improved
- c) The understanding of the glosary by the auditee need to be improved



KEMENTERIAN PENDIDIKAN TINGGI

**PERAKUAN SELESAI PROSES PELAKSANAAN AUDIT DALAM MyRA[®]
BAGI PENCAPAIAN TAHUN 2017**

UNIVERSITI TENAGA NASIONAL

KETUA JURUAUDIT

Saya dengan ini mengesahkan bahawa kami telah melaksanakan proses Audit Dalam MyRA[®] bagi pencapaian tahun 2017 untuk insitituti ini secara telus dan berintegriti dengan kehadiran pihak yang diaudit sepanjang tempoh pengauditan. Sebarang komen dan ulasan telah dimaklumkan kepada pihak berkenaan untuk penambahbaikan pada masa akan datang. Saya bertanggungjawab untuk memaklumkan dapatan audit kepada Pengurusan Tertinggi Institusi.

.....
NAMA: YBHG. PROF. DR. MD. ZAINI BIN JAMALUDIN
TARIKH:

PENGURUS DATA MyRA[®] IPT

Saya telah berada bersama pasukan Audit Dalam MyRA[®] semasa pengauditan dan mengambil maklum atas komen serta maklum balas yang diberikan. Saya sebagai pengurus data MyRA[®] IPT yang diaudit, mengakui bahawa pengauditan ini telah dilaksanakan secara telus dan berintegriti oleh Juruaudit Audit Dalam MyRA[®].

.....
NAMA:
TARIKH:

PERAKUAN NAIB CANSOLOR/ PRESIDEN/ REKTOR/ PROVOS ATAU SETARA

Saya memperakukan Laporan Dapatan Audit Dalam MyRA[®] dan memanjangkan laporan ini kepada pihak Jabatan Pendidikan Tinggi.

.....
NAMA:
TARIKH:

COP RASMI

GAMBAR SEMASA AUDIT DALAM MyRA[®] DILAKSANAKAN:



