جامعة المجمعة
Majmaah University
كلية العلوم
الطبية التطبيقية

جامعة المجمعة
Majmaah University

DEPARTMENT MANUAL

Radiological Sciences and Medical Imaging

1445 H

Program Identification and General Information

<table>
<tr><td colspan="3">Total Credit Hours for Completing the Program: (141 Hours)</td></tr>
<tr><td colspan="3">Professional Occupations/Jobs: Specialist</td></tr>
<tr><td colspan="3">The graduates have ample job prospects in Hospitals in Radiological Sciences and Medical Imaging department as (Specialist)</td></tr>
<tr><td colspan="3">Major Tracks/Pathways (if any):</td></tr>
<tr><td>Major track/pathway</td><td>Credit hours
(For each track)</td><td>Professional Occupations/Jobs
(For each track)</td></tr>
<tr><td>1. Computed Tomography (CT)</td><td>12</td><td>(CT) Specialist</td></tr>
<tr><td>2. Magnetic Resonance Imaging (MRI)</td><td>12</td><td>(MRI) Specialist</td></tr>
<tr><td>3. Ultrasound (US)</td><td>12</td><td>(US) Specialist</td></tr>
<tr><td>4. Nuclear medicine (NM)</td><td>12</td><td>(NM) Specialist</td></tr>
<tr><td colspan="3">Intermediate Exit Points/Awarded Degree (if any): NA</td></tr>
</table>

Mission, Goals, and Learning Outcomes

1. Program Mission:

To build advanced academic skills in radiological sciences, including scientific Research, technical, and behavioral competences, in order to graduate individuals who are highly skilled and qualified. Additionally, to contribute to the community through the provision of advanced services within an innovative academic setting.

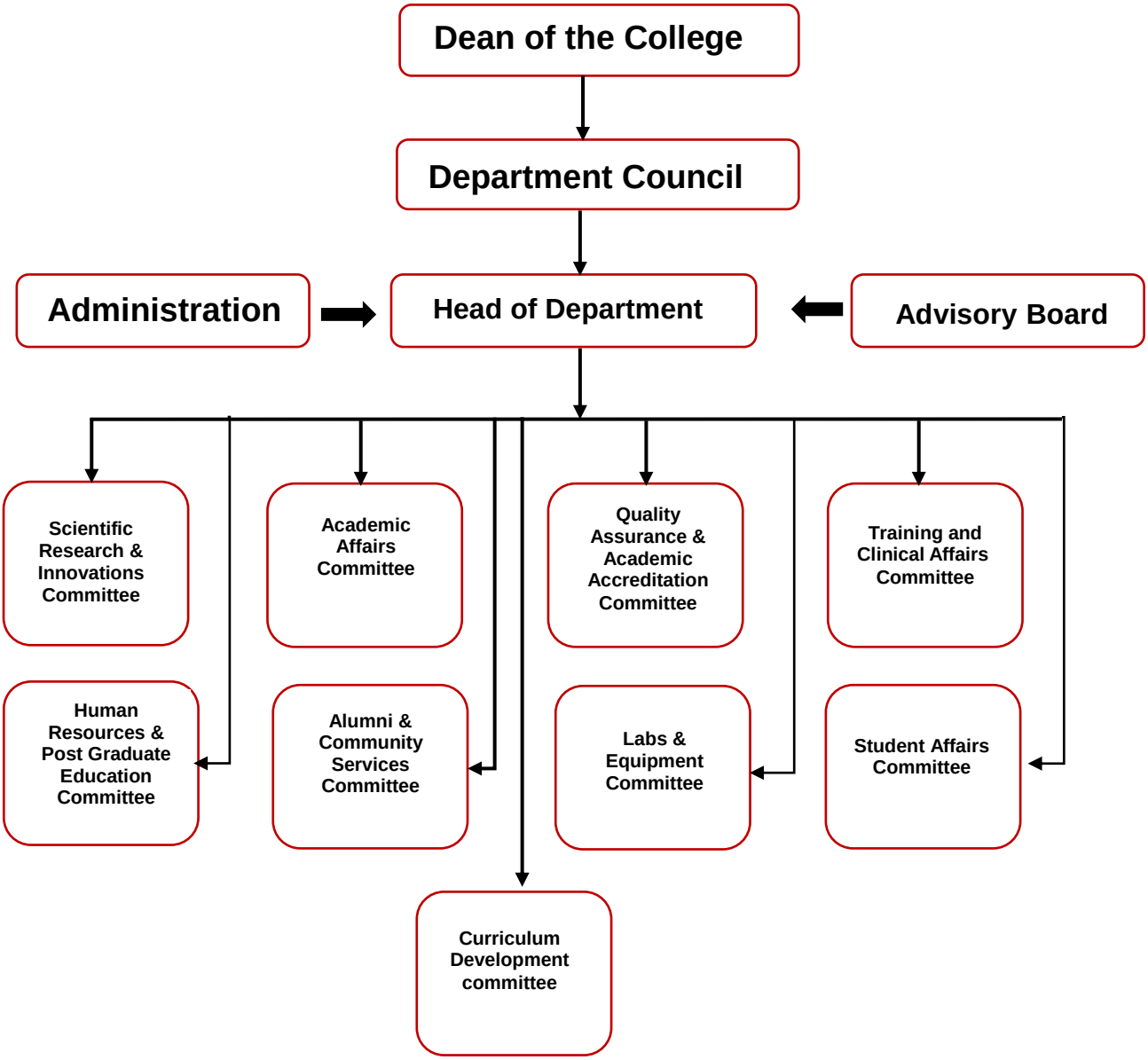
2. Program Goals:

- To provide talented specialists in radiological sciences through an academically advanced environment.
- To prepare qualified and updated graduates who follow up the most advanced technology in the field of Radiological Sciences.
- To become successful technical advisors and managers in order to develop scientific research related to the radiological field.
- To participate in life-long learning and become successful educators for healthcare community through higher education and continual professional development.

3. Program Learning Outcomes*

Knowledge and Understanding	
K1	To describe patient positioning and anatomical structures radiographically techniques via research aspect solutions in societal and global context.
K2	To explain problems-and solutions associate with critical-thinking skills in the performance of medical imaging procedures
K3	To choose suitable ionizing radiation.
K4	To explain problems via critical thinking in medical imaging procedures and conclude the solutions
Skills	
S1	To produce diagnostic images and able to create conclusions.
S2	To select exposure factors considering radiation protection laws for the patients, competent and workers. Recognizing emergency patient conditions and, if necessary, initiating lifesaving first aid.
S3	To interpret an appropriate information and communications technology in gathering, and communicating medical images performance and reconstruction
S4	To use standard tests and measurements, to evaluate data and to apply patient care radiological procedures effectively
Values, Autonomy, and Responsibility	
V1	To demonstrate expected professional behavior within the profession’s scope of practice and function effectively as a leader or member of the team
V2	To demonstrate and enhance competence in written, oral, and graphical communication across diverse technical and non-technical settings.
V3	To promote a positive learning environment for the education and clinical skills development in the field of radiology

Organizational Chart



Curriculum

Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	9	29	20.6
	Elective	6	12	8.5
College Requirements	Required	1	2	1.4
	Elective	2	4	2.8
Program Requirements	Required	46	82	58.2
	Elective	6	12	8.5
Capstone Course/Project				
Field Training/ Internship				
Residency year				
Others				
Total		61	141	100

* Add a separated table for each track (if any).

2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	PENG 111	English (1) for Preparatory Year	Required		8	First common year
	PMTH 112	Introduction to Mathematics (1)	Required		2	
	PCOM 113	Computer Skills	Required		2	
	PSSC 114	Learning and Communication Skills	Required		2	
Level 2	PENG 121	English (2) for Preparatory Year	Required		6	First common year
	PENG 122	English for Medical Specialties	Required		2	
	PCHM 124	Introduction to Chemistry	Required		2	
	PPHS 125	Physics for Health Purposes	Required		2	
	PBIO 126	Biology Science	Required		3	
Level 3	RMI232	Principles of Anatomy	Required		2	Department
	RMI233	Introduction to Medical Imaging.	Required		2	
	RMI234	Radiation Protection & Biology	Required		2	

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	RMI235	Radiation Physics and Equipment	Required		3	
	RMI237	Principles of Physiology	Required		2	
	MU1	MU Elective Course	Elective		2	University
	CAMS 231	Emergency Care	Required		2	College
	CAMS 2	CAMS Elective Course	Elective		2	
Level 4	RMI241	General Pathology	Required	RMI 237 RMI 232	2	Department
	RMI242	Patient Care and Ethics in Radiology	Required		2	
	RMI243	Radiographic Anatomy	Required	RMI232	2	
	RMI244	Radiographic Techniques 1	Required	RMI233	2	
	RMI245	Computer Applications in Radiology	Required		2	
	RMI246	Digital Imaging Systems	Required	RMI235	2	
	RMI247	Numerical Mathematics	Required		2	
	MU2	MU Elective Course	Elective		2	University
	CAMS 3	CAMS Elective Course	Elective		2	College
Level 5	RMI351	Nuclear Medicine Physics and Instrumentations	Required	RMI246	3	Department
	RMI352	Cross-Sectional Anatomy	Required	RMI243	2	
	RMI353	Computed Tomography Physics and Instrumentation	Required	RMI246	3	
	RMI354	Radiographic Techniques 2	Required	RMI244	2	
	RMI355	Clinical Practicum 1	Required	RMI244	3	
	MU 3	MU Elective Course	Elective		2	University
	MU 4	MU Elective Course	Elective		2	
Level 6	RMI361	Ultrasound Physics and Instrumentation	Required	RMI246	2	
	RMI362	Radiographic photography	Required	RMI354	2	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	RMI363	Magnetic Resonance Physics and Instrumentation	Required	RMI246	2	
	RMI364	Image Analysis	Required		2	
	RMI365	Radiographic Pathology	Required	RMI241	2	
	RMI366	Clinical Practicum 2	Required	RMI355 RMI 354	2	
	MU 5	MU Elective Course	Elective		2	University
	MU 6	MU Elective Course	Elective		2	
Level 7	RMI471	Trauma & Emergency Radiography	Required	RMI365	2	Department
	RMI472	Computed Tomography Techniques	Required	RMI353	2	
	RMI473	Image Processing Techniques	Required	RMI364	3	
	RMI474	Radiation Therapy Physics and Instrumentation	Required		2	
	RMI475	Nuclear Medicine Techniques	Required	RMI351	2	
	RMI476	Clinical Practicum 3	Required	RMI366	2	
	RMI (G1)	RMI Elective Course 1(TRACK)	Elective		2	
Level 8	RMI481	Ultrasound Techniques	Required	RMI361	3	Department
	RMI482	Radiation Therapy Techniques	Required	RMI474	3	
	RMI483	Research Methodology	Required		2	
	RMI484	MRI Techniques	Required	RMI363	3	
	RMI485	Clinical Practicum 4	Required	RMI476	2	
	RMI486	Introduction to Radiation Oncology	Required		2	
	RMI (G2)	RMI Elective Course 2(TRACK)	Elective		2	
Level 9	RMI591	Quality Assurance in Radiology	Required		2	Department
	RMI592	Graduation Project	Required		2	

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	RMI(G3)	RMI Elective Course 3	Elective		2	
	RMI(G4)	RMI Elective Course 4	Elective		2	
	RMI(G5)	RMI Elective Course 5	Elective		2	
	RMI(G6)	RMI Elective Course 5	Elective		2	

4th Year Semester 1	Course code	Course title	Required or elective	Credit Hours	College or Department
G1	RMI411	Computed Tomography Procedures 1	Elective	2	Department
	RMI421	Magnetic Resonance Imaging Procedures 1	Elective	2	Department
	RMI431	Health Safety for Sonographers	Elective	2	Department
	RMI441	Dosimetry and Treatment Planning	Elective	2	Department
	RMI451	Nuclear Medicine Clinical Practice 1	Elective	2	Department
4th Year Semester 2 G2	RMI412	Computed Tomography Procedures 2	Elective	2	Department
	RMI422	Magnetic Resonance Imaging Procedures 2	Elective	2	Department
	RMI432	Diagnostic Medical Sonography Clinical Practice	Elective	2	Department
	RMI442	Radiation Safety and Dosimetry	Elective	2	Department
	RMI452	Nuclear Medicine Clinical Practice 2	Elective	2	Department
5th Year Semester 1	RMI513	Sectional Imaging Clinical CT Practice-1	Elective	2	Department
	RMI523	Sectional Imaging Clinical MRI Practice-1	Elective	2	Department
	RMI533	Small Parts and Interventional Sonography	Elective	2	Department

G3	RMI543	Radiation Therapy Clinical Practice 1	Elective	2	Department
	RMI553	Radiopharmacy and Radiochemistry	Elective	2	Department
G4	RMI514	Sectional Imaging Clinical CT Practice 2	Elective	2	Department
	RMI524	Sectional Imaging Clinical MRI Practice 2	Elective	2	Department
	RMI534	Abdominal Sonography	Elective	2	Department
	RMI544	Radiation Therapy Clinical Practice 2	Elective	2	Department
	RMI554	Radionuclide Therapy	Elective	2	Department
G5	RMI515	Pathology in Computed Tomography Imaging	Elective	2	Department
	RMI525	Pathology in Magnetic Resonance Imaging	Elective	2	Department
	RMI535	Vascular & Cardiac Sonography	Elective	2	Department
	RMI545	Clinical Radiation Oncology Practice	Elective	2	Department
	RMI555	Advanced Radionuclides Procedures.	Elective	2	Department
G6	RMI516	Advance Computed Tomography Imaging	Elective	2	Department
	RMI526	Advance Computed Tomography Imaging	Elective	2	Department
	RMI536	Advance Ultrasound Imaging	Elective	2	Department
	RMI546	Advance Clinical Radiation Therapy	Elective	2	Department
	RMI556	Advance Nuclear Medicine Imaging	Elective	2	Department

TRACKS

4th Year Semester 1	Course code	Course title	Required or elective	Credit Hours	College or Department
G1	RMI411	Computed Tomography Procedures 1	Elective	2	Department
	RMI421	Magnetic Resonance Imaging Procedures 1	Elective	2	Department
	RMI431	Health Safety for Sonographers	Elective	2	Department
	RMI441	Dosimetry and Treatment Planning	Elective	2	Department
	RMI451	Nuclear Medicine Clinical Practice 1	Elective	2	Department
4th Year Semester 2 G2	RMI412	Computed Tomography Procedures 2	Elective	2	Department
	RMI422	Magnetic Resonance Imaging Procedures 2	Elective	2	Department
	RMI432	Diagnostic Medical Sonography Clinical Practice	Elective	2	Department
	RMI442	Radiation Safety and Dosimetry	Elective	2	Department
	RMI452	Nuclear Medicine Clinical Practice 2	Elective	2	Department
5th Year Semester 1	RMI513	Sectional Imaging Clinical CT Practice-1	Elective	2	Department
	RMI523	Sectional Imaging Clinical MRI Practice-1	Elective	2	Department

G3	RMI533	Small Parts and Interventional Sonography	Elective	2	Department
	RMI543	Radiation Therapy Clinical Practice 1	Elective	2	Department
	RMI553	Radiopharmacy and Radiochemistry	Elective	2	Department
G4	RMI514	Sectional Imaging Clinical CT Practice 2	Elective	2	Department
	RMI524	Sectional Imaging Clinical MRI Practice 2	Elective	2	Department
	RMI534	Abdominal Sonography	Elective	2	Department
	RMI544	Radiation Therapy Clinical Practice 2	Elective	2	Department
	RMI554	Radionuclide Therapy	Elective	2	Department
G5	RMI515	Pathology in Computed Tomography Imaging	Elective	2	Department
	RMI525	Pathology in Magnetic Resonance Imaging	Elective	2	Department
	RMI535	Vascular & Cardiac Sonography	Elective	2	Department
	RMI545	Clinical Radiation Oncology Practice	Elective	2	Department
	RMI555	Advanced Radionuclides Procedures.	Elective	2	Department
G6	RMI516	Advance Computed Tomography Imaging	Elective	2	Department

	RMI526	Advance Computed Tomography Imaging	Elective	2	Department
	RMI536	Advance Ultrasound Imaging	Elective	2	Department
	RMI546	Advance Clinical Radiation Therapy	Elective	2	Department
	RMI556	Advance Nuclear Medicine Imaging	Elective	2	Department

Program learning Outcomes Mapping Matrix:

Align the program learning outcomes with program courses, according to the following desired levels of performance *(I = Introduced&P = Practiced&M = Mastered).*

Course code & No.	Program Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3
RMI232	I	I			I						
RMI233	I			I	I						
RMI234	I		I			I					
RMI235	I					I			I		
RMI237		I				I			I		
RMI241	I	I			I						
RMI242	I	I				I					
RMI243		I	I				I				
RMI244	I		I					I	I		
RMI245		I						I	I		
RMI246	I			I		I					
RMI247	I	I				I					
RMI351				I		I		I			
RMI352			I			I		I			
RMI353				I		I		I			
RMI354	I		I					I			
RMI355							I		I	I	
RMI361				P		P		P			
RMI362		P	P				P				
RMI363				P		P		P			
RMI364		P	P				P				
RMI365			P			P		P			
RMI366							P		P	P	
RMI471			P			P	P				
RMI472		P		P			P				
RMI473		P						P	P		
RMI474				P		P		P			
RMI 475		P		P			P				
RMI476								P	P		P
RMI481			M				M		M		
RMI482			M				M		M		
RMI483				M				M		M	
RMI484			M				M		M		
RMI485								M		M	M
RMI486			M				M			M	
RMI (G1)				M				M			M
RMI591				M	M			M			
RMI592								M		M	M

Course code & No.	Program Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3
RMI(G2)				M				M			M
RMI(G3.G4G 5.G6)				M				M			M

Courses	Program Learning Outcome (CT Track): NQF Learning Domain and Learning Outcomes										
	Knowledge and Understanding				Skills				Values		
	K.1	K.2	K.3	K.4	S.1	S.2	S.3	S.4	V.1	V.2	V.3
RMI411				M				M			M
RMI412				M				M			M
RMI513				M				M			M
RMI514				M				M			M
RMI515				M				M			M
RMI516				M				M			M

Courses	Program Learning Outcome (MRI Track): NQF Learning Domain and Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K.1	K.2	K.3	K.4	S.1	S.2	S.3	S.4	V.1	V.2	V.3
RMI421				M				M			M
RMI422				M				M			M
RMI523				M				M			M
RMI524				M				M			M
RMI525				M				M			M
RMI526				M				M			M

Courses	Program Learning Outcome (US Track): NQF Learning Domain and Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K.1	K.2	K.3	K.4	S.1	S.2	S.3	S.4	V.1	V.2	V.3
RMI431				M				M			M
RMI432				M				M			M
RMI533				M				M			M
RMI534				M				M			M
RMI535				M				M			M
RMI536				M				M			M

Courses	Program Learning Outcome (Radiotherapy Track): NQF Learning Domain and Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K.1	K.2	K.3	K.4	S.1	S.2	S.3	S.4	V.1	V.2	V.3
RMI441				M				M			M
RMI442				M				M			M
RMI543				M				M			M
RMI544				M				M			M
RMI545				M				M			M
RMI546				M				M			M

Courses	Program Learning Outcome (NM Track): NQF Learning Domain and Learning Outcomes										
	Knowledge and understanding				Skills				Values, Autonomy, and Responsibility		
	K.1	K.2	K.3	K.4	S.1	S.2	S.3	S.4	V.1	V.2	V.3
RMI451				M				M			M
RMI452				M				M			M
RMI553				M				M			M
RMI554				M				M			M
RMI555				M				M			M
RMI556				M				M			M

Teaching and learning strategies

Based on the mission and objectives of the program the program learning outcomes weredeveloped.Allthecoursewasthenalignedtotheseprogramlearningoutcomes, for each outcome appropriate performance indicators were decided which the basis for all teaching and assessment activities became.

The assessment measures are designed to evaluate the effectiveness of teaching methods for delivering the intended program outcomes. A range of assessments strategies that matches all aspects of the instructional plans are being used for different modules. The assessment strategies are planned to match the instructional goals and objectives at the beginning of the semester and implemented throughout the semester. The selection of appropriate assessments also matches courses and

program objectives.

Teaching and learning strategies (Curricular activities):

1. Lectures
2. Support readings
3. Group discussions
4. Writing reports
5. Activities and homework.
6. Result interpretation
7. Brainstorming sessions
8. Lab. Demonstrations
9. Lab training in conducting experiments.
10. Individual and group tasks including presentation and assignments.
11. Individual and group discussion

Extracurricular activities:

1. Volunteer activities
2. Cultural activities
3. Community Services

Assessment Methods for program learning outcomes:

All the modules of the medical radiological sciences program have specific learning objectives that are aligned with the program outcomes. Each module has 3-5 specific module outcomes, which are evaluated by appropriate assessment methods. Both direct and indirect assessment techniques are utilized to ensure that the desired program outcomes are achieved. The process of assessment is carried out by using a combination of course work such as quizzes, exams, projects, presentations, homework, etc., Where the grades on these exercises are directly tied to the course outcomes.

At the end of each academic year these performance indicators are measured, and their overall consistence is evaluated. Based on the result of this process recommendation for improvement is prepared which are made part of next year's

improvement plan.

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**		
K1	To describe patient positioning and anatomical structures radiographically techniques via research aspect solutions in societal and global context.	Lecture, Support readings, Group discussions, Writing reports, activities and homework.	Direct Assessment: Written Exams, long and short essays, group reports. Indirect Assessment: Surveys
K2	to explain problems-and solutions associate with critical-thinking skills in the performance of medical imaging procedures		
K3	Tochoose suitable ionizing radiation.		
K4	To explain problems via critical thinking in medical imaging procedures and conclude the solutions		
2.0	**Skills**		
S1	To produce diagnostic images and able to create conclusions.	Lectures, Group work and Discussion, Case studies, Brainstorming sessions.	**Direct Assessment:** Written exams, long and short essays, Analytical reports, Case studies, Video analysis, group reports
S2	To select exposure factors considering radiation protection laws for the patients, competent and workers. Recognizing emergency patient conditions and, if necessary,		

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
	initiating lifesaving first aid.		assessments, lab reports assessments. **Indirect Assessment:** Surveys
S3	Tointerpret an appropriate information and communications technology in gathering, and communicating medical images performance and reconstruction		
S4	To use standard tests and measurements, to evaluate data and to apply patient care radiological procedures effectively	Demonstrations on use of lab equipment's. Lab training in conducting experiments.	**Direct Assessment:** Lab examination and lab reports. **Indirect Assessment:** Surveys
3.0	**Values, Autonomy, and Responsibility**		
V1	To demonstrate expected professional behavior within the profession's scope of practice and function effectively as a leader or member of the team	Lab demonstrations, individual and group tasks including presentation and assignments.	**Direct Assessment:** Assessment of good laboratory practices, Assessment of individual and group presentations, group reports. **Indirect Assessment:** Surveys
V2	To demonstrate and enhance competence in written, oral, and graphical communication across diverse technical and non-technical settings.		
V3	To promote a positive learning environment for the education and clinical skills development in the field of radiology		

Consistency between the program mission and Program learning Outcomes

Program learning out comes	Program mission			
	Advanced academic skills	Scientific, Technical, and Behavioral Competences	Contribute to the community	Innovative academic setting
K1		√	√	
K2	√		√	
K3		√		
K4	√			√
S1		√		√
S2		√	√	
S3		√	√	
S4	√			√
V1		√		√
V2		√		√
V3			√	√

Matrix of Consistency between the program learning outcome and Al Majmaah university graduate attributes

Consistency of PLOs with MU graduate attributes												
		Graduate attributes										
		ILO1.1	*ILO2.1*	*ILO2.2*	*ILO2.3*	*ILO2.4*	*ILO2.5*	*ILO2.6*	*ILO2.7*	*ILO2.8*	*ILO3.1*	*ILO3.2*	*ILO3.3*
Program learning outcome	*K1*	■											
	K2				■								
	K3		■										
	K4			■									
	S1		■										
	S2					■							
	S3						■						
	S4					■							
	V1							■			■		
	V2								■				
	V3									■			

Faculty Members

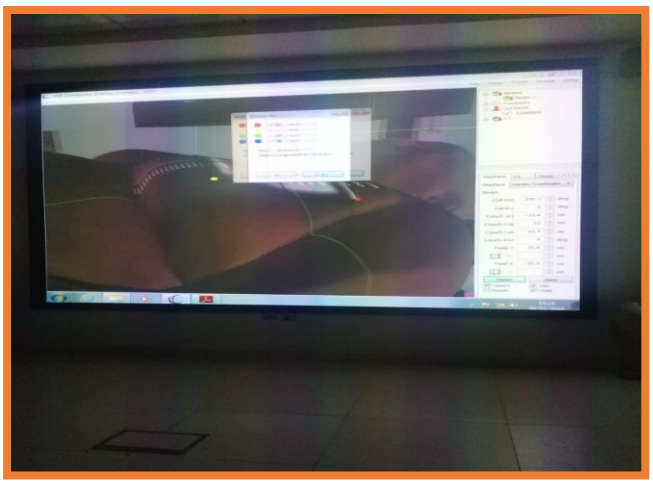
No	Name	Academic rank	General specialty
1	**Abdullah Althobity**	Assistant Professor	MRI and MR-Spectroscopy
2	**Yousif Mohamed Yousif**	Professor	Medical Radiological Sciences
3	**Nagi Ibrahim Ali**	Associated Professor	Nuclear medicine technology
4	**Abdullah Othman Alamoudi**	Assistant Professor	Medical Imaging Science
5	**Sami Nasreldeen Eljak**	Lecturer	Medical Radiological Sciences
6	**Majed Alzuferi**	T. Assistant	Medical Radiological Sciences
7	**Marwa Ammar Selmi**	Assistant Professor	Medical Physics
8	**Rahma Abdullah Awad**	Assistant Professor	Medical Radiological Sciences
9	**Alaa Ibrahim Ahmed**	Assistant Professor	Medical Radiological Sciences
10	**Ghaliah Alfuraih**	Lecturer	Medical Radiological Sciences

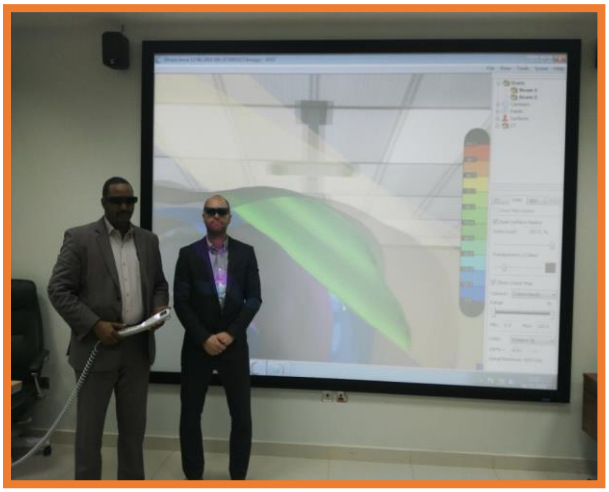
Learning Resources

No	Name of the Lab	No of the Lab
1	CT & MRI Simulator	005-0-3-8
2	Radiotherapy Simulator (VERT)	005-0-3-3
3	Ultrasound Lab	005-0-3-8
4	Radiation Physics & Measurement	005-0-3-4

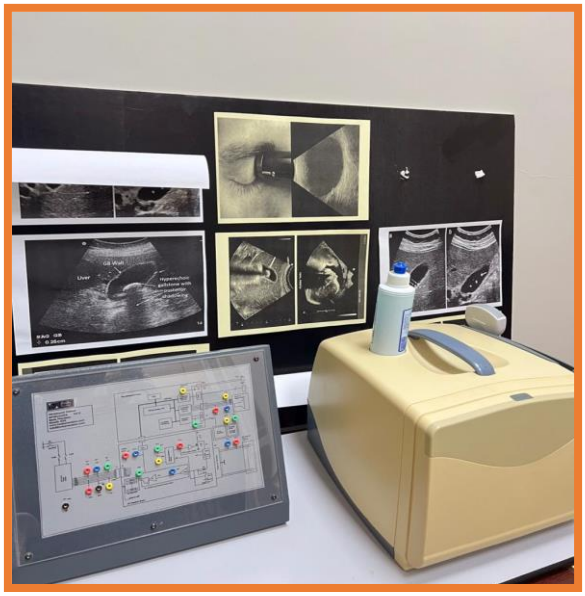
Name of the Lab	**CT & MRI Simulator**
No of the Lab	**005-0-3-8**
Course Taught in the Lab	- Introduction to medical imaging - CT Physics and instrumentation - MRI Physics and instrumentation - MRI Procedures - CT Procedures - CT Track's courses - MRI Track's courses
Skills Acquired in the laboratory	- Orientation to various CT & MRI Machines - Safe and effective use of all Program in the lab - Various CT Physics & Techniques

Name of the Lab	**Radiation Therapy Simulator (VERT)**
No of the Lab	**005-0-3-3**
Course Taught in the Lab	- Radiation Therapy Physics and Instrumentation - Nuclear Medicine Physics and Instrumentations - Radiation Therapy Techniques - Nuclear Medicine Techniques - Radiation Track's courses
Skills Acquired in the laboratory	- Orientation to various Radiation Therapy Machines - Safe and effective use of VERT Program in the lab - Various VERT Physics & Techniques

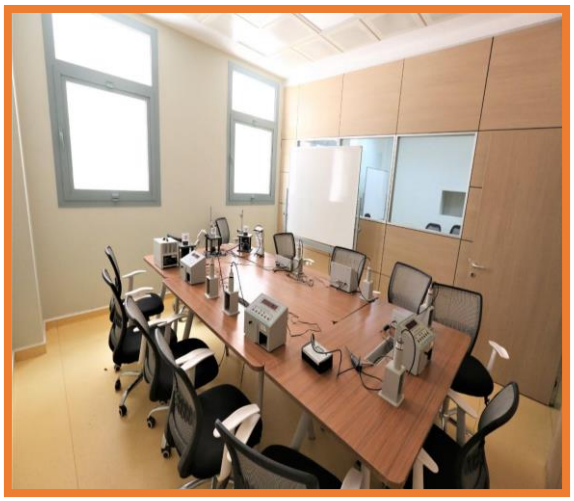




Name of the Lab	**Ultrasound Lab**
No of the Lab	**005-0-3-8**
Course Taught in the Lab	- Ultrasound Physics and Instrumentation - Ultrasound Techniques - Ultrasound Track's courses
Skills Acquired in the laboratory	- Orientation to various Ultrasound Machines - Safe and effective use of Machine in the lab - Various Ultrasound Techniques



Name of the Lab	**Radiation Physics and measurement**
No of the Lab	**005-0-3-4**
Course Taught in the Lab	- Ultrasound Physics and Instrumentation - Ultrasound Techniques
Skills Acquired in the laboratory	- Orientation to various Radiation Physics Equipment - Safe and effective use of Radiation Physics Equipment - Various Measurement Techniques



Learning Resources.

Majmaah University has subscription to many of the periodicals related to The Radiological Sciences and Medical Imaging (RMI) profession. In addition, of subscribing several Electronic Library full-text databases, the students and faculty members also have the access to Saudi digital library (SDL) http://sdl.edu.sa/SDLPortal/EN/Publishers.aspx.

Each course coordinator provides a list of related reference books for his courses at the first pages of the module guide. The whole list for all courses and submits it to the vice dean of academic affairs for approval and then sent to the University central library for purchase.

Faculty and teaching staff follow the institutional process for planning and acquisition of any resources needed for library, laboratories, and classrooms, this procedure generally start by submitting their requests in appropriate forms to the department heads, Who forwarded to the Lab and equipment committee for study and recommendation then the final list of equipment has to be approved in the department council. Then the collective lists will be submitted to the vice dean of academic affairs. Upon approval, these lists will take its track through college administration and then to the concerned university administrations.

Facilities and Equipment

Based on the recommendation from the Course Coordinators and relevant unit/s the department send the list of requirements for Reference Books, Lab Equipment/Consumables and other teaching materials to the relevant Vice Deanships. These recommendations are considering as part of the College Annual Improvement and Action plan

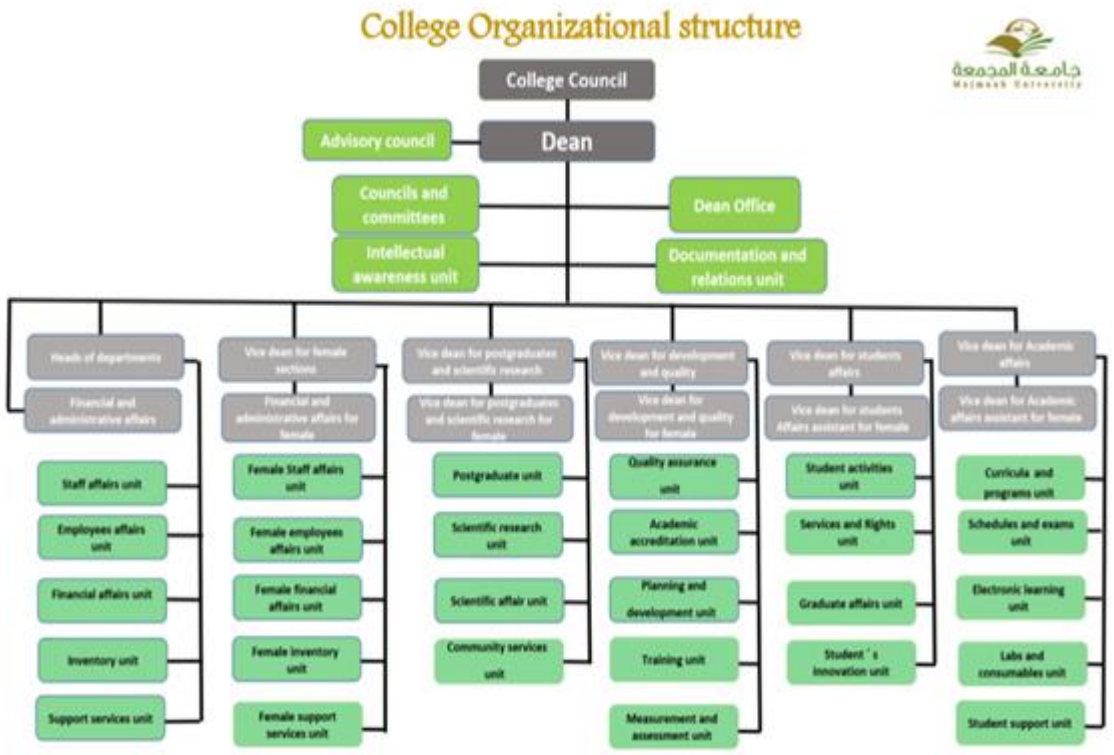
Arrangements to Maintain a Healthy and Safe Environment

The College confirms to the guidelines of department of health and other local and national regulatory authorities for health and safety measure.

Annual inspection by the relevant authorities are conducted for auditing the CAMS facilities. After audit the college is certified by OHSAS.

Program Management and Regulations

College Administrative Flow Chart



Program Regulations

Provide a list of related program regulations, including their link to online version: admission, study and exams, recruitment, appeals and complaint regulations, etc.)

A. Attendance and Completion Requirements

a. Attendance.

1. The regular student must attend the lectures. He shall be debarred from the final examination if the percentage of his attendance is less than the percentage fixed by the University Council, provided it is not less than (75%) of the lectures for each course during the semester. The student who is debarred, because of absence, is considered as a failure in the course, and will be awarded the denial grade(DN).
2. The student shall be debarred from the final examination if the percentage of his absence exceeds (25%) out of the total lectures of the course without an acceptable excuse.
3. Thestudentwhoisdebarredfromtheexaminationbecauseofabsenceisconsideredasafailure inthecourse.Hewillbeawardedthescoreofthecourseworkandgiventhedenialgrade(DN).
4. The lists of the debarred students shall be approved by the concerned College Board.

5. The lists of the debarred students shall be announced before the beginning of the final examinations.
6. TheCollegeBoardorwhoeveritdelegatesmay,exceptionally,forwardthedebarredstudents lists and allow the students for entering the examination, provided he will give an acceptable excusetotheboard.TheUniversityCouncilwilldeterminethepercentageofabsence,provided it shall not be less than (50%) of the lectures for the course.

b. Progression from year to year.

The student must commit to attending the classes from the first day for the beginning of the semester in accordance with the university academic calendar.

1. Registration:
    i. The student is availed the courses he wishes to study or drop according to the following:
    ii. The student may add the courses he wishes to study a week before the beginning of the academic year and ends by the end of the first week.
    iii. The student may drop the courses he does not wish to study until the end of the second week from the beginning of the academic year.
    iv. Registration must not exceed the maximum credit hours and not be less than the minimum as shall be mentioned in the fourth paragraph of this regulation.
    v. The process of the registration of the courses for the student is done in consultation with his academic supervisor. The student bears the responsibility of any deficiency or errors caused by ignorance of the instructions.
    vi. the student must complete the procedures of registration by himself, he is not entitled to assigned this responsibility to his representative at all.
    vii. The registration process can be performed automatically for students of a certain college or level if necessary.
    viii. If the student does not register for any course during the regular registration period, he shall be considered as leaving study.
2. Academic Load:
    i. Academic load refers to the total credit hours for the courses the student registers for in the semester. It is determined in accordance to the following regulations:
    ii. The minimum academic load is 12credit hours for a semester.
    iii. The maximum academic load is 20 credit hours per semester and 10

credit hours for the summer semester.

iv. The student who has an academic probation shall not be allowed to increase his academic load to more than 14 credit hours.

v. The student who has a Pass Grade shall not be allowed to increase his academic load to more than 16 credit hours.

vi. The student on the threshold of graduation is allowed to exceed the maximum, the increase being not more than three credit hours.

vii. Academic Probation

viii. The student shall be given an academic probation if his CGPA becomes less than 2.00 out of 5.00.

c. Program completion

1. The student graduates after completing the requirements of graduation successfully, according tothesyllabus,providedthathisCumulativeAverageisnotlessthantheratedeterminedbythe concerneduniversitycouncilforeachspecialization.Inallcasesitshouldnotbelessthanthe Pass grade.

2. According to the recommendation of the concerned Department Board, the College Board may require the student to repeat, based on his Cumulative Average, in case of his success in the courses and failure in Cumulative Average, according to the following rules:

   a. A condition for eliminating any grade for a course the student had studied is that he repeats and passes it.

   b. The total credit hours for the courses eliminated from the Cumulative Average should not be more than 15% of the total credit hours of the syllabus.

   c. In re-calculating the Cumulative Average, only the following grades may be eliminated: Fail (F), (Debarred (D), Withdrawal because of failure(WF).

The student shall not be considered a graduate until the issuance of approval of the University Council, awarding him the degree.

B. Student Appeals Process

A decision reached by a Student Conduct Administrator may be appealed by the respondent(s) or the complainant(s) to the Dean of Student Affairs within five (5) business days of the decision. Appeals must be made in writing and state the reason(s) for the appeal. The decision at each level is based on the written information provided by the Student Conduct Administrator/appeal officer, the respondent, and the complainant (if applicable) for the appeal. Appeals must be delivered in person to the Office of the Dean of Student Affairs. If the Dean of Student Affairs was the Student Conduct Administrator in a given case the appeal will be considered by the Vice Rector for Academic Affairs. Failure to submit an appeal, meeting the above requirements will result in the decision of the Student Conduct Administrator being final. The bases for appeals are limited to the following:

A procedural error or omission occurred that significantly impacted the outcome.

The presentation of new information, that was previously unknown, or other relevant facts unknown or unavailable during the hearing that could sufficiently alter the decision. A summary of this new information and its potential impact upon the outcome must be included in the appeal. Failure to participate in the hearing may not be used as a basis for filing an appeal under this action.

b. Sanctions imposed are substantially disproportionate to the severity of the violation.

Options for Appeal:

Level I: Decisions of the Student Conduct Administrator maybe appealed to the Dean of Student Affairs. The appeal officer may affirm reverse or modify the original decision regarding the violations and/or sanctions imposed. The original finding and sanction(s) will stand if the appeal is not timely or is not based on the grounds listed above. For conduct cases involving a complainant other than the University, when one party requests an appeal, the other party (parties) will be notified and given up to five business days to respond. After those five business days, or upon receiving appeal requests from all parties involved, a decision will be rendered within ten business days. Appeals for findings involving the Discrimination, Harassment, and Misconduct Policy start at Level II.

Level II: Decisions of the Dean of Student Affairs may be appealed to theVice Rector for Academic Affairs, within five business days following the above outlined procedures. The Vice Rector for Academic Affairs or designee will render a decision within ten business days. Decisions of the Vice Rector for Academic Affairs are final from the perspective of the University.

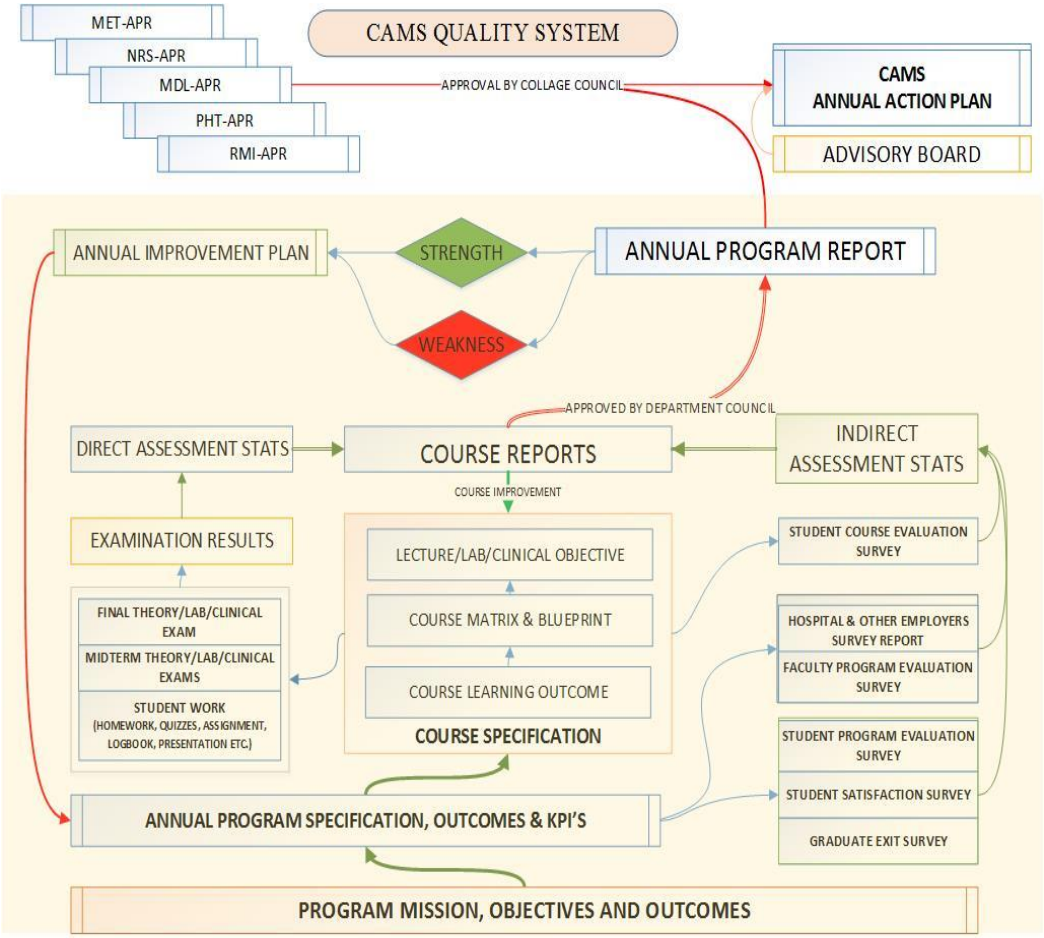
Level III: A respondent or complainant may request a discretionary review of the Level II appeal decision by the University Rector. The Rector has discretionary authority to grant or deny the request to review the decision. When the Rector decides to review the Level II appeal, the Rector's decision becomes the final decision of the University.

Program Quality Assurance

Program Quality Assurance System:

.At the beginning of each semester,

- The module coordinators are decided and provided with the approved module specification to betaught.
- This module specification along with assessment rubrics and any other relevant information are provided to all the students taking thatmodule.
- One of the main responsibility of the module coordinator is to ensure the timely and uniform delivery/assessment of the module at all the sections it is being taught in that particularsemester.
- The module coordinator after consultation with all the teachers send recommendations in the course report regarding revision of the module learning outcome, revision of the assessment mode, modification of course content, requirements for special tools/equipment for implementing the module objectives or any other difficulty faced during thatsemester.
- This course report is then deliberated upon by the Academic Advisory Committee, Quality Assurance Committee and the Department council.
- If required, an internal/external expert committee is constituted for module evaluation.



Annual Quality Assurance approaches for the RMI Studies Program

In CAMS, there is a well-defined Management Control Process for Quality Assurance. The body responsible for monitoring of all issues related to quality is the Vice Deanship of Quality. The role of Vice Deanship is to advise and support secondary committees of quality within CAMS departments to ensure the congruence of all processes with the university mission, the short and long-term planning and reporting procedures based on evidence of quality of performance. All faculty members are involved in quality improvement processes, through focus group discussion, surveys and their evaluations for:

- Resources and program administration
- Appropriateness of mission and vision
- Overall student performance
- Their training and development needs
- Quality of examinations
- Job satisfaction
- Adequacy of research tools

These feedbacks are collected, analyzed by quality and accreditation committee and the results are included in course and program reports and as a separate feedback for the decision-maker body to help in building of strategic, improvement and operational plans.

b. Explain the process of the Advisory Committee (if applicable)

The advisory Committee consists of the members from the all-inclusive stakeholder associated with the RMI program. This committee meets at least once every year where they are provided with all the program data including the Annual Program Report (APR) and the proposed Improvement plan for the next year. Their feedback and recommendations are included for the betterment of the program.

The advisory committee meets frequently to review any suggested changes in the curriculum, to maintain the validity of the program educational objectives. In addition, they propose new specialties dealing with new trends in the field of RMI.

2. Program Quality Monitoring Procedures

Based on the mission and objectives of the program the program learning outcomes were developed. All the course was then aligned to these program learning outcomes, for each outcome appropriate performance indicators were decided which became the basis for all teaching and assessment activities

The assessment measures are designed to evaluate the effectiveness of teaching methods for delivering the intended program outcomes. A range of assessments strategies that matches all aspects of the instructional plans are being used for different modules. The assessment strategies are planned to match the instructional goals and objectives at the beginning of the semester and implemented throughout the semester. The selection of appropriate assessments also matches courses and program objectives.

3. Arrangements to Monitor Quality of Courses Taught by other Departments.

The course specifications and course report were reviewed and evaluated by the academic department staff . and then the course program coordinator were monitor the quality of Courses Taught by other Departments and write a report to the HOD.

4. Arrangements Used to Ensure the Consistency between Main Campus and Branches

5. Arrangements to Apply the Institutional Regulations Governing the Educational and

6. Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using its Results in the Development Processes

Based on the mission and objectives of the program the program learning outcomes were developed. All the courses was then aligned to these program learning outcomes, for each outcome appropriate performance indicators were decided which became the basis for all teaching and assessment activities. The assessment measures are designed to evaluate the effectiveness of teaching methods for delivering the intended program outcomes. A range of assessments strategies that matches all aspects of the instructional plans are being used for different modules. The assessment strategies are planned to match the instructional goals and objectives at the beginning of the semester and implemented throughout the semester. The selection of appropriate assessments also matches courses and program objectives.

Program Evaluation Matrix:

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Mission & Objectives	Faculty, program leaders	Surveys, DATA & KPI's	**End of the academic year**
Governance Administration	Faculty, program leaders	Surveys, Interview, visit, DATA & KPI's	**End of the academic yea**
Management of Quality Assurance and Improvement	Faculty, program leaders	Surveys, DATA, KPI's & Outcome evaluation	**End of the academic year**
Learning and Teaching	Faculty, program leaders	Surveys, DATA & KPI's	**End of the academic year**
Student administration and Support Services	Students	Surveys, DATA & KPI's	**End of the academic year**
Learning resources	Students	Surveys, DATA & KPI's	**End of the academic year**
Faculty and Staff Employment Processes	Faculty, program leaders	Surveys, DATA & KPI's	**End of the academic year**
Research	Faculty, program leaders	Surveys, Interview, DATA & KPI's	**End of the academic year**

Program KPIs

No.	KPIs Code	KPIs	Measurement Methods	Measurement Time
1	MUP-P1	Average rating of beneficiaries' satisfaction with the community services provided by the program on a five-level scale in an annual survey	Survey	Throughout the academic year
2	KPI-P-01	Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey	Survey	End of the academi year
3	KPI-P-02	Average students overall rating for the quality of courses on a five-point scale in an annual survey	Survey	End of the academic yea
4	KPI-P-03	Proportion of undergraduate students who completed the program in minimum time in each cohort	Data	End of the academic year
5	KPI-P04	Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year	Data	End of the academic year
6	KPI-P-05	Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)	Data	End of the academic year
7	KPI-P-06	Percentage of graduates from the program who within a year of graduation were: employed within 12 months, enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year.	Data	End of the academic year
8	KPI-P-07	Average of the overall rating of employers for the proficiency of the program graduates on a five- point scale in an annual survey.	Survey	End of the academic year
9	MUP-P2	The percentage of students who received a warning or more in the program to the total number of students in the program.	Biannual	End of each semester
10	MUP-P3	The percentage of students who were denied entry to the final examination of the course for exceeding the legally permitted percentage of the total number of students in the program.	Biannual	End of the academic year
11	MUP-P4	The number of student papers that have been published or presented in scientific conferences during the past year	Data	End of the academic year
12	KPI-P-08	Ratio of the total number of students to the total number of full-time and full- time equivalent teaching staff in the program	Data	End of the academic year
13	KPI-P-09	Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program.	Data	End of the academic year
14	KPI-P-10	The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year)	Data	End of the academic year
15	KPI-P-11	The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published)	Data	End of the academic year
16	MU-P5	The percentage of full-time faculty members who provided professional development activities inside or outside the university during the year to the total teaching staff in the program.	Data	End of the academic year

Council / Committee	RMI Council meeting
Reference No.	Meeting No. 14
Date	4/8/1442 H