

ATTACHMENT 2 (c)

Annual Program Report

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**ANNUAL PROGRAM REPORT
(APR)**

Program Eligibility: The program is to submit the two most recent APRs as part of the requirements for program eligibility using the NCAAA Template.

Post Accreditation: The program is required to annually complete an APR. The APR is to document a complete academic year.

APR's are prepared by the program coordinator in consultation with faculty teaching in the program. The reports are submitted to the head of department or college, and used as the basis for any modifications or changes in the program. The APR information is used to provide a record of improvements in the program and is used in the Self Study Report for Programs (SSRP) and by external reviews for accreditation.

Annual Program Report

1. Institution Majmaah University	Date of Report: 15 September 2015
2. College/ Department Applied Medical Sciences / Medical Laboratory Sciences	
3. Dean Dr. Fahd Khalid Aldefri	
4. List all branches/locations offering this program 1. Male campus /Al Majmaah 2. Male campus/ Zulfi 3. Female campus/ Al Majmaah	

A. Program Identification and General Information

Program title and code Medical Laboratory Sciences – MDL
Name and position of person completing the APR Dr Mohammed Alaidarous/ Head of the department
Academic year to which this report applies. 1435-1436/ 2014-2015

B Statistical Information

1. Number of students who started the program in the year concerned:	250
2. (a) Number of students who completed the program in the year concerned:	16
Completed the final year of the program:	
Completed major tracks within the program (if applicable)	
Title Medical laboratory sciences No	16
Title.....No	
Title.....No	
Title.....No	
2. (b) Completed an intermediate award specified as an early exit point (if any)	NA
3. Apparent completion rate.	
(a) Percentage of students who completed the program, (Number shown in 2 (a) as a percentage of the number that started the program in that student intake.)	6.4
(b) Percentage of students who completed an intermediate award (if (e.g. Associate degree within a bachelor degree program)	NA
(Number shown in 2 (b) as a percentage of the number that started the program leading to	

that award in that student intake).

Comment on any special or unusual factors that might have affected the apparent completion rates (e.g. Transfers between intermediate and full program, transfers to or from other programs).

4. Enrollment Management and Cohort Analysis (Table 1)

Cohort Analysis refers to tracking a specific group of students who begin a given year in a program and following them until they graduate (How many students actually start a program and stay in the program until completion).

A **cohort** here refers to the total number of students enrolled in the program at the beginning of each academic year, immediately after the preparatory year. No new students may be added or transfer into a given cohort. Any students that withdraw from a cohort may not return or be added again to the cohort.

Cohort Analysis (Illustration): **Table 1** provides complete tracking information for the most recent cohort to complete the program, beginning with their first year and tracking them until graduation (students that withdraw are subtracted and no new students are added). Update the years as needed.

Enrollment Management and Cohort Analysis (Table 1)

						Current Year
Student Category	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Total cohort enrollment	*PYP					
Retained till year end						
Withdrawn during the year and re-enrolled the following year						
Withdrawn for good						
Graduated successfully						

- Provide an analysis for the cohort that started PYP on 2008 – 09
- Provide an analysis for the cohort that started PYP on 2009 – 10
- Provide an analysis for the cohort that started PYP on 2010 – 11

d. Provide an analysis for the cohort that started PYP on 2011 – 12

*** PYP - Preparatory Year Program**

7. Destination of graduates as shown in survey of graduating students (Include this information in years in which a survey of employment outcomes for graduating students is conducted).

Date of Survey

Number Surveyed

Number Responded

Response Rate %

Destination	Not Available for Employment		Available for Employment		
	Further Study	Other Reasons	Employed in Subject Field	Other Employment	Unemployed
Number					
Percent of Respondents					

Analysis: List the strengths and recommendations

C. Program Context

Significant changes within the institution affecting the program (if any) during the past year.

- Majmaah University is currently working on its “Accreditation Project” which demands improvement in Quality assurance.
- MDL program is applying for international accreditation (AHPGS) which will improve the educational process in the department.
- MU Deanship of E-learning has started Desire to learn (D2L) program for the students and faculties to enhance active learning and communication between faculties and students.
- The college is centralizing the examination process by establishing assessment unit.
- The university has established a new guidance for academic advising and encouraged all colleges to implement this guide.

Implications for the program:

- Quality assurance and quality accreditation has improved the faculties' teaching and assessment, and practical training. This is due to the establishment of program objectives and outcome, improving courses' outcomes and objectives. Establishing exams to meet exact outcomes and objectives and rubrics to decrease bias in assessment especially in practical sessions.
- Using the new E-learning interface (D2L) has made connecting students with faculty member easy. The interface provide accessing to lecture and practical materials and any supporting documentations. The interface will develop in the future new assessment tools such as the online examinations and online assignment submission.
- The department has implemented unifying final exams dates between male and female branches as well as making new criteria in grade distribution to decrease bias in assessment between students.
- The department is keen to get academic advising to acceptable quality, the department is facing issues with students not coming to office meeting which needs to be managed. The department is following a step-by-step guide to make sure students are in the right track of their academic progress and ensure that they graduate on time.

2. Significant changes external to the institution affecting the program (if any) during the past year. A team of advisory council for the department of Medical Laboratory Sciences reviewed the Program in relation to NCAAA accreditation standards. The team showed satisfaction regarding program development, delivery and assessment. However the team recommended

- To change the name of the department from medical laboratory sciences to clinical laboratory sciences
- To add new course concerning the health professions ethics within the higher levels
- To change the elective course of the medical terminology to be mandatory to improve students English level.
- To consider the re-distribution of Credit hours of theoretical and practical lectures for some courses which have inconsistency in the distribution.
- To merge the electron microscope and histotechnology courses in one course.
- To add blood bank course to the curriculum because of its importance
- To change the elective course of medical genetics and diagnostic molecular biology to be mandatory courses
- To merge the Biostatistics and Epidemiology courses in one course
- To take Attention for the practical part in all courses and make sure students acquire the necessary skills in the field of medical laboratories.
- To find the mechanism for defaulting students to graduate in the middle of curriculum and get a scientific degree according to the National Qualifications Framework.
- To implement the clinical training within the credit hours of clinical courses in the high levels.
- To put a detailed training plan for the internship.
- To Implement awareness sessions for students to clarify the areas needed by the labor market to add more training for required areas after fourth level

Implications for the program

- The recommendations suggested by advisory council will help in change the curriculum by adding or deleting courses. This will help in improving student study skills and practical skills needed for their future career. The job opportunities will also increase for the graduates

D. Course Information Summary

1. Course Results. Describe and analyze how the individual NCAAA “Course Reports” are utilized to assess the program and to ensure ongoing quality assurance (eg. Analysis of course completion rates, grade distributions, and trend studies.)

(a.) Describe how the individual course reports are used to evaluate the program.

Each course report explains the analysis of course completion rates, grade distribution, and trend studies. It also provide improvement tool and recommendation by faculties to increase the quality of the course.

The table below shows a brief summary of the important recommendations for each course, which have substantial impact into the program.

Course number and name	Course reports' recommendations affecting the program
CAMS 232 / Medical terminology	<ul style="list-style-type: none"> - Due to students not taking this course as an elective course and choosing other courses, it is recommended that this course should be a compulsory course. - View from the head of the department that a more intensive course structure should be designed to give more detailed information.
CAMS 234 / The quality of health care	<ul style="list-style-type: none"> - This course is recommended to be structured to deliver specialized information about medical laboratory sciences and what does it mean to be a medical laboratory technologist.
MDL 232 / Principles of physiology	<ul style="list-style-type: none"> - As faculty always facing a hurdle in making a 2 hours practical session every week, we recommend to make this course an only theoretical course or joining the course with MDL 231 principles of anatomy).
MDL 241 / Hematology	<ul style="list-style-type: none"> - This is the only hematology course in the curriculum and it is very difficult to cover all hematological clinical aspects in one course, therefore, it is recommended that another hematology course is added to the curriculum. - It is also recommended that students should have idea about the anatomy and physiology of some blood related organs, so anatomy and physiology courses should be prerequisites.
MDL 243 / Medical microbiology	<ul style="list-style-type: none"> - It is recommended that this course to be joined with MDL 234 (general microbiology) to get the best of both courses.

	<ul style="list-style-type: none"> - We think this course has tremendous number of topics repeated from MDL 234. 	
MDL 244 / Introduction to immunology	<ul style="list-style-type: none"> - As faculty always facing a hurdle in making a 2 hours practical session every week, we recommend to make this course an only theoretical course. - Also it is recommended to increase the lecturing hours to 2 hours to get through enough course topics beneficial to students. - It is recommended from the head of the department to modify the assessment tool by adding self-learning tolls such as assignments and group presentations. 	
MDL 352 / General pathology	<ul style="list-style-type: none"> - As faculty always facing a hurdle in making a 2 hours practical session every week, we recommend to make this course an only theoretical course or utilizing the practical session to be tutorials to discuss diseases. 	
MDL 353 / Histotechnology	<ul style="list-style-type: none"> - It is recommended from the head of the department that this course could be merged with the Histology course MDL 242, because this course could be part of the practical session. 	
MDL 354 / Clinical mycology	<ul style="list-style-type: none"> - It is very hard to find proper laboratory tests to do cover all hours assigned for this course, as well as usually diagnostic mycology laboratories are specialized labs. So, it is recommended that this course is merged with a microbiology course. 	
MDL 355 / Clinical parasitology	<ul style="list-style-type: none"> - Sometimes faculty finds that students get low grades in this course because of not achieving a prerequisite related to microbiology. So, it is recommended that General microbiology course should be a prerequisite. 	
MDL 361 / Medical biochemistry	<ul style="list-style-type: none"> - It is recommended that this course to be joined with MDL 351 (principles of biochemistry) to get the best of both courses. 	
MDL 362 / Electron microscopy	<ul style="list-style-type: none"> - It is recommended to reduce the practical session to 2 hours instead of 4 hours. 	

	<ul style="list-style-type: none"> - It is recommended by the head of the department that this course could be part of an automation course or histology or pathology course. As, few graduates will be working with such highly specialized instrument like the EM. 	
MDL 363 / Clinical bacteriology	<ul style="list-style-type: none"> - This course could be modified to be named as diagnostic microbiology 1 covering diagnostic bacteriology and another course named diagnostic microbiology 2 covering diagnostic virology and mycology 	
MDL 364 / Pathophysiology	<ul style="list-style-type: none"> - We think this course has tremendous number of topics repeated from MDL 352 (general pathology), therefore, it is recommended to join both courses. 	
MDL 366 / Health care system and vocational safety	<ul style="list-style-type: none"> - We recommend to decrease the lecturing hours to 2 hours instead of 3 hours. 	
MDL 367 / Laboratory management	<ul style="list-style-type: none"> - We recommend to decrease the lecturing hours to 2 hours instead of 3 hours. 	
MDL 471 / Clinical virology	<ul style="list-style-type: none"> - It is very difficult to design practical experiments because of highly infectious viruses. So, we recommend to join this course with mycology to be clinical microbiology 2. 	
MDL 472 / Epidemiology	<ul style="list-style-type: none"> - It is recommended from the head of the department to introduce assessment methods such as assignment and teaching tool like open discussion and tutorials. - It is also recommended to add microbiology and immunology courses as prerequisites. 	
MDL 474 / Clinical biochemistry	<ul style="list-style-type: none"> - This course is not enough to cover all topics related to clinical biochemistry it is recommended to have another course named clinical biochemistry 2. 	
MDL 475 / Research and seminar	<ul style="list-style-type: none"> - As this course considered to be mocking a graduation project it should be transferred to final semester. - To get full benefit from a research course students could start from a beginning of the year and spend two 	

	<p>semester thinking and working with their research and this could be modified as graduation project.</p> <ul style="list-style-type: none"> - Few important prerequisites should be added especially the clinical related courses. 	
MDL 476 / diagnostic molecular biology	<ul style="list-style-type: none"> - Practical sessions could be utilized as tutorial session if experiments could not be performed due to the unavailability of equipment. - Prerequisite is very important to be added such as clinical microbiology and clinical immunology and clinical biochemistry courses 	
MDL 477 / Medical genetics	<ul style="list-style-type: none"> - Practical sessions could be utilized as tutorial session if experiments could not be performed due to the unavailability of equipment. - Prerequisite is very important to be added such as clinical microbiology and clinical immunology and clinical biochemistry courses 	
MDL 481 / Applied clinical microbiology	<ul style="list-style-type: none"> - This course and as it is important for students to get training in hospitals prior graduation, this course should be all taught and supervised in hospital. - Hours should be considered as clinical hours or all practical hours. - Or if one hour is best to be introduced with final written comprehensive exam. - The prerequisite to undertaking this course of even to start level 8 is to finish from all courses in the previous levels. 	
MDL 482 / Applied clinical biochemistry	<ul style="list-style-type: none"> - This course and as it is important for students to get training in hospitals prior graduation, this course should be all taught and supervised in hospital. - Hours should be considered as clinical hours or all practical hours. - Or if one hour is best to be introduced with final written comprehensive exam. The prerequisite to undertaking this course of even to start level 8 is to finish from all courses in the previous levels. 	

MDL 483 / Analytical laboratory automation	<ul style="list-style-type: none"> - This course is recommended to be in lower levels such as level 3 or level 4 discussing principle automation in diagnostic labs.
MDL 484 / applied immunology and hematology	<ul style="list-style-type: none"> - This course and as it is important for students to get training in hospitals prior graduation, this course should be all taught and supervised in hospital. - Hours should be considered as clinical hours or all practical hours. - Or if one hour is best to be introduced with final written comprehensive exam. The prerequisite to undertaking this course of even to start level 8 is to finish from all courses in the previous levels.
MDL 485 / Cellular and molecular pathology	<ul style="list-style-type: none"> - The laboratory credit hours in this course should be decreased to 2 hours and lecture hours should be 2 hours. - It is recommended by the head of the department to merge the topics of this course with general pathology and diagnostic molecular biology courses.

(b.) Analyze the completion rates, grade distributions, and trends to determine strengths and recommendations for improvement.

(1.) Completion rate analysis:

The assessment committee works out for assessment of achievement of all course objectives and in turn, program objectives,

a. Course objective are considered as “achieved” if students average grades in questions for that objective are 70% or above

b. Program objectives are considered as “achieved” if objectives of different courses leading to this program objective are achieved

(2.) Grade distribution analysis:

Level	Attended	Withdraw	Deprived	Absent	A+	A	B+	B	C+	C	D+	D	F
Level 3	836	69	25	0	63	68	83	90	93	83	92	131	129
Level 5	224	4	7	0	28	18	24	30	33	27	25	20	21

Level 7	99	1	0	0	31	24	11	9	7	8	4	2	3
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Level	Attended	Withdraw	Deprived	Absent	A+	A	B+	B	C+	C	D+	D	F
Level 4	274	5	0	0	8	17	23	21	16	42	35	63	49
Level 6	226	4	0	0	33	30	26	30	21	27	23	24	12
Level 8	52	0	0	0	24	14	5	5	2	2	0	0	0

(3.) Trend analysis (a study of the differences, changes, or developments over time; normally several semesters or years):

2. Analysis of Significant Results or Variations.

List any courses where completion rates, grade distribution, or trends are significantly skewed, high or low results, or departed from policies on grades or assessments. For each course indicate what was done to investigate, the reason for the significant result, and what action has been taken.

a. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	
b. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	

Action taken (if required)	
c. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	

(Attach additional summaries if necessary)

4. Delivery of Planned Courses

(a) List any courses that were planned but not taught during this academic year and indicate the reason and what will need to be done if any compensating action is required.		
Course title and code	Explanation	Compensating action if required

(b) Compensating Action Required for Units of Work Not Taught in Courses that were Offered. (Complete only where units not taught were of sufficient importance to require some compensating action)		
Course	Unit of work	Reason

Compensating action if required

Course	Unit of work	Reason
Compensating action if required		
Course	Unit of work	Reason
Compensating action if required		
Course	Unit of work	Reason
Compensating action if required		

E Program Management and Administration

List difficulties (if any) encountered in management of the program	Impact of difficulties on the achievement of the program objectives	Proposed action to avoid future difficulties in Response
Lack of technicians	The Psychomotor outcome is not completely achieved	Employment technicians
Shortage in practical materials	The Psychomotor outcome is not completely achieved	Providing the required facilities for the practical work before the beginning of each semester
Lack of unifying the exam among three sections	Variation in assessment tools	unifying the exam among three sections
Shortage in hospital visits	Acquired training skills is not enough	Put strategy for training in hospitals
Some courses need to be merged because they are similar in some parts	Repeating for some topics	Change the curriculum
Communication difficulties between female and male branches	Inconsistency in delivering lectures and practical courses	Organize timetable and make more meeting regarding the order of lecture and practical topics during semesters

F. Summary Program Evaluation

1. Graduating Students Evaluation (To be reported on in years when surveys are undertaken)	
Date of Survey	<input type="text"/>
Attach survey report	
a. List most important recommendations for improvement, strengths and suggestions	Analysis (e.g. Assessment, action already taken, other considerations, strengths and recommendation for improvement.)
b. Changes proposed in the program (if any) in response to this analysis and feedback.	

2. Other Evaluation (e.g. Evaluations by employers or other stakeholders, external review)			
Describe evaluation process			
Attach review/survey report			
a. List most important recommendations for improvement, strengths and suggestions for improvement.		(e.g. Analysis of recommendations for improvement: Are recommendations valid and what action will be taken, action already taken, or other considerations?)	
b. Changes proposed in the program (if any) in response to this feedback.			
2. Ratings on Sub-Standards of Standard 4 by program faculty and teaching staff; 4.1 to 4.10.			
(a) List sub-standards. Are the “Best Practices” followed; Yes or No? Provide a revised rating for each sub-standard. Indicate action proposed to improve performance (if any).			
Sub-Standards	Best Practices Followed (Y/N)	5 Star Rating	List priorities for improvement.

4.1 Intended student learning outcomes must be consistent with the National Qualifications Framework, and with generally accepted standards for the field of study concerned including requirements for any professions for which students are being prepared.	Yes	****	Regular feedback will be taken from now onwards
4.2 Program Development Processes Programs must be planned as coherent packages of learning experiences in which all courses contribute in planned ways to the intended learning outcomes for the program.	Yes	***	
4.3 Program Evaluation and Review Processes The quality of all courses and of the program as a whole must be monitored regularly through appropriate evaluation mechanisms and amended as required, with more extensive quality reviews conducted periodically	Yes	***	
4.4 Student Assessment Student assessment processes must be appropriate for the intended learning outcomes and effectively and fairly administered with independent verification of standards achieved.	Yes	****	

4.5 Educational Assistance for Students Effective systems must be in place for assisting student learning through academic advice, study facilities, monitoring student progress, encouraging high performing students, and providing assistance when needed by individuals.	Yes	***	
4.6 Quality of Teaching Teaching must be of high quality with appropriate strategies used for different categories of learning outcomes.	Yes	***	
4.7 Support for Improvements in Quality of Teaching Appropriate strategies must be used by the program administrators and teaching staff to support continuing improvement in quality of teaching	Yes	***	
4.8 Qualifications and Experience of Teaching Staff Teaching staff should have qualifications and experience necessary for teaching the courses they teach, and keep up to date with academic and/or professional developments in their field	Yes	***	
4.9 Field Experience Activities In programs that include field experience activities, the field experience activities must be planned and administered as fully integrated components of the program, with learning outcomes specified, supervising staff considered as members of teaching teams, and appropriate evaluation and course improvement strategies carried out	Yes	***	

4.10 Partnership Arrangements With Other Institutions Partnership Arrangements With Other Institutions		***	
Analysis of Sub-standards. List the strengths and recommendations for improvement of the program's self-evaluation of following best practices.			

G. Program Course Evaluation

1. List courses taught during the year. Indicate for each course whether student evaluations were undertaken and/or other evaluations made of quality of teaching. For each course indicate if action is planned to improve teaching.

Course Title/Course Code	Student Evaluations		Other Evaluation (specify)	Action Planned	
	Yes	No		Yes	No
Principles of Anatomy /MDL 231	√				
Principles of Physiology / MDL 232	√				
Organic Chemistry / MDL 233	√				
General Microbiology / MDL 234	√				
Hematology / MDL 241	√				
Histology / MDL 242	√				
Medical Microbiology / MDL 243	√				
Introduction to Immunology / MDL 244	√				
Analytical Chemistry / MDL 245	√		Evaluation of the exam		√
Principles of Biochemistry / MDL 351	√		Evaluation of the exam		√
General Pathology / MDL 352			Evaluation of the exam		√
Histotechnology / MDL 353	√		Evaluation of the exam		√
Clinical Mycology / MDL 354	√		Evaluation of the exam		√
Clinical Parasitology / MDL 355	√		Evaluation of the exam		√
Medical Biochemistry / MDL361	√		Evaluation of the exam		√
Electron Microscopy / MDL 362	√		Evaluation of the exam		√
Clinical Bacteriology /MDL 363	√		Evaluation of the exam		√
Pathophysiology / MDL 364	√				
Health care system and vocational safety / MDL 365	√		Evaluation of the exam		√

Laboratories management/ MDL 366	√				
Clinical Virology / MDL 471	√				
Epidemiology / MDL 472	√				
Clinical Immunology and serology / MDL 473	√				
Clinical Biochemistry / MDL 474	√				
Research and Seminar / MDL 475	√				
Medical Genetics / MDL 476	√				
Diagnostic Molecular Biology / MDL 477	√				
Applied Clinical Microbiology / MDL 481	√				
Applied Clinical Biochemistry / MDL 482	√				
Analytical Laboratory Automation / MDL 483	√				
Applied Immunology and Hematology / MDL 484	√				
Cellular and Molecular Pathology /MDL 485	√				

(Add items or attach list if necessary)

2. List All Campus Branch/Locations (approved by Ministry of Higher Education or Higher Council of Education).

Campus Branch/Location	Approval By	Date
Main Campus:		
1: Majmaah male campus	Higher Council of Education	18/01/1428 H
2: Majmaah female campus	Higher Council of Education	18/01/1428 H
3: Zulfi male campus	Higher Council of Education	25/07/1426 H

List all courses taught by this program and for this program that are in other programs (if any).

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
Prep Year	Semeste	PENG 111	Required	8	Deanship of Preparatory Year
		اللغة الانجليزية (1) للسنة التحضيرية			
		PMTH 112		2	
		مقدمة في الرياضيات			
		PCOM 113		2	
		مهارات الحاسب الالى			

	Semester 2	PSSC 114	مهارات التعلم و الاتصال	Required	2	
		PENG 121	اللغة الانجليزية (2) للسنة التحضيرية		6	
		PENG 122	اللغة الانجليزية (1) للتخصصات الصحية		2	
		PCHM124	مقدمة في الكيمياء		2	
		PPHS 125	فيزياء للأغراض الصحية		2	
		PBIO 126	علم الاحياء		3	
2nd Year	Semester 1	-	University required	Elective	2	College of Applied Medical Science
		MDL231	Principles of Anatomy	Required	2	Medical Laboratory Department
		MDL 232	Principles of Physiology		2	
		MDL 233	Organic Chemistry		3	
		MDL 234	General Microbiology		4	
		CAMS 231	Emergency care		2	
		-	College required	Elective	2	College of Applied Medical Science
	Semester 2	-	University required	Elective	2	College of Applied Medical Science
		MDL 241	Hematology	Required	3	Medical Laboratory Department
		MDL 242	Histology		3	
		MDL 243	Medical Microbiology		3	
		MDL 244	Introduction to Immunology		2	
		MDL 245	Analytical Chemistry		3	
		-	College required	Elective	2	College of Applied Medical Science
3rd Year	Semester 1	-	University required	Elective	2	College of Applied Medical Science
		MDL 351	Principles of Biochemistry	Required	3	Medical Laboratory Department
		MDL 352	General Pathology		3	
		MDL 353	Histotechnology		3	
		MDL 354	Clinical Mycology		3	
		MDL 355	Clinical Parasitology		3	
	Semester 2	-	University required	Elective	2	College of Applied Medical Science
		MDL 361	Medical Biochemistry	Required	3	Medical Laboratory Department
		MDL 362	Electron Microscopy		3	
		MDL 363	Clinical Bacteriology		3	
		MDL 364	Pathophysiology		3	
		MDL 365/366	Department required	Elective	3	
4th Year	Semester 1	-	University required	Elective	2	College of Applied Medical Science
		MDL 471	Clinical Virology	Required	3	Medical Laboratory

		MDL 472	Epidemiology		2	Department
		MDL 473	Clinical Immunology and serology		3	
		MDL 474	Clinical Biochemistry		3	
		MDL 475	Research and Seminar		2	
		MDL 476/477	Department required		Elective	
	Semester 2	-	University required	Elective	2	College of Applied Medical Science
		MDL 481	Applied Clinical Microbiology	Required	3	Medical Laboratory Department
		MDL 482	Applied Clinical Biochemistry		4	
		MDL 483	Analytical Laboratory Automation		3	
		MDL 484	Applied Immunology and Hematology		3	
		MDL 485	Cellular and Molecular Pathology		3	
Include additional years if needed						

3. Program Learning Outcome Assessment. Design a program learning outcome assessment plan using the NCAAA accreditation four year cycle. By the end of the four year cycle all program learning outcomes are to be assessed using KPIs with benchmarks and analysis, national or international standardized testing if available, rubrics, exams and grade analysis, or some alternative scientific measure of student performance.

KPI #	NQF Learning Domains and Learning Outcomes	Method of Assessment	Date of Assessment
1.0	Knowledge		
1.1	Establish a personal scientific knowledge base that prepares them to read, to interpret, and to utilize scientific knowledge in clinical practice.	Exams, portfolios, long and short essays, log books, analytical reports, group reports, lab reports, debates, peer evaluations, demonstrations, discussion forums, interviews,	1st , 2nd midterm & final exam
1.2	Define the theoretical concepts of medical laboratory sciences used in conducting medical laboratory tests.		1st , 2nd midterm & final exam
1.3	Recognize the role of the clinical laboratory specialists in the assurance of quality health care.		1st , 2nd midterm & final exam
1.4			
2.0	Cognitive Skills		
2.1	Proficiency to problem-solves, troubleshoot, recognize and interpret abnormal laboratory results and use statistical approaches when evaluating data.	Exams, portfolios, long and short essays, log books, analytical reports, case studies, video analysis, group reports, lab reports, peer evaluations, videos, graphs, tables, demonstrations, graphic organizers, interviews,	1st , 2nd midterm & final exam
2.2	Exercise the principles of management and safety to include preventive and corrective maintenance of equipment as well as identify appropriate sources for repair.		1st , 2nd midterm & final exam
2.3	Execute quality control measures, and participate actively in quality assurance programs.		1st , 2nd midterm & final exam
2.4			
3.0	Interpersonal Skills & Responsibility		
3.1	Display high standards of ethical practice including interactions with patients, peers and other health care personnel	Exams, portfolios, analytical reports, individual and group presentations, case studies, video analysis, group reports, lab reports, debates, speeches, peer evaluations, self-evaluations, tables, demonstrations, graphic organizers, interviews,	1st , 2nd midterm & final exam
3.2	Demonstrate leadership, team player, and the desire for continuing education for one's professional development.		1st , 2nd midterm & final exam
3.3	Demonstrate ability to handle stressful situations calmly and efficiently.		1st , 2nd midterm & final exam
4.0	Communication, Information Technology, Numerical		
4.1	Demonstrate effective communication with patients, laboratory personnel and other health care professionals.	Long and short essays, log books, analytical reports, individual and group presentations, group reports, lab reports, peer evaluations, videos, graphs, tables, graphic organizers, interviews.	1st , 2nd midterm & final exam
4.2	Utilize computer technology applications to interact with computerized instruments and laboratory information systems		1st , 2nd midterm & final exam
5.0	Psychomotor		
5.1	Perform microscopic examination and analytical tests of cells, tissues, blood, body fluids, and other materials	Log books, analytical reports, case studies, video analysis, group reports, lab reports, peer evaluations, graphs, dramatic performances, tables, demonstrations, graphic organizers,	Quizes & final practical exam
5.2	Establish proper procedures, for collecting, safe handling, processing, and analyzing human specimens to maintain accuracy and precision.		

Assessment Table and paste to make additional tables as needed).

KPI Assessment Table (Institutionally approved for the program)

<p>3. Orientation programs for new teaching staff</p> <p>Orientation programs provided? Yes <input type="checkbox"/> No <input type="checkbox"/> If offered how many participated? <input type="text"/></p>
<p>a. Brief Description</p> <p>Programm Objective:</p> <p>The objective of this induction program is to welcome new employees to our University and prepare them for their new role.</p> <p>The Faculty Induction Programme for the new Faculty members of Medical Laboratory department (MDL) was conducted on 17.8.2014G (21.01.1436H) Sunday by 11.00am. The programme started by welcoming the New Faculty members to the College of Applied Medical sciences. The program was started with detailed explanation about the MDL course curriculum. The description about department Vision, Mission, outcomes and the various Quality points were highlighted. The entire framework of NCAAA was presented for their orientation.</p> <p>Subsequently, a brief orientation about the steps and format for writing a Course specification and Course report was presented. The process of Internal and Final examination was reported. The documents to be prepared and procedures practiced during the examination period were made clear with a model of Course portfolio.</p> <p>The Induction programme was concluded with Questions session and by wishing those New Faculty members.</p>
<p>b. List recommendations for improvement by teaching staff.</p> <p>It was suggested to orient the new staffs about the initial official formalities to sign the contract. Also, it was suggested that a coordinating staff to guide the new faculty to guide them till they settle down in Majmaah city.</p>

c. If orientation programs were not provided, give reasons.

4. Professional Development Activities for Faculty, Teaching and Other Staff	How many Participated	
	Teaching Staff	Other Staff
a. Activities Provided		
b. Summary analysis on usefulness of activities based on participant's evaluations or other evaluation methods.		

H. Independent Opinion on Quality of the Program after Considering Draft Report (e.g. head of another similar department/ program offering comment on evidence received and conclusions reached) (Attach notes)

1. Matters Raised by Evaluator Giving Opinion	Comment by Program Coordinator

2. Implications for Planning for the Program	

I. Action Plan Progress Report

1. Progress on Implementation of Previous Year's Action Plans				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
a.				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
b.				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
c.				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
d.				

2. Proposals for Program Development

a. Proposals for Changes to Program Structure (units/credit-hours, compulsory or optional courses, other)

The department recommends changes to the curriculum to follow up with current development and employment needs in Saudi Arabia. Department recommendation will help in improving student study skill and practical skills needed for their future career. Department recommendations will open for the students new career which are not given by the current curriculum because of missing of number of courses.

The table below shows a recommended changes to the program structure (curriculum), comparison to the current curriculum and also answering part of the following question in section b regarding deletion and addition of units.

*PR means prerequisite

*Based on advisory committee recommendation to use clinical laboratory sciences (CLS) as the department name, the following table is showing course code with CLS in the recommended curriculum.

Current curriculum				Recommended curriculum			
Code	Name	Credit hours	change	Code	Name	Credit hours	Comments
LEVEL 1				LEVEL 1			
PENG111	English 1	8	No	PENG111	English 1	8	-
PMTH112	Introduction to mathematics	2	No	PMTH112	Introduction to mathematics	2	-
PCOM113	Computer skills	2	No	PCOM113	Computer skills	2	-
PSSC114	Learning and communication skills	2	No	PSSC114	Learning and communication skills	2	-
Total hours		14		Total hours		14	
LEVEL 2				LEVEL 2			
PENG121	English 2	6	No	PENG121	English 2	6	-
PENG122	English for health sciences	2	No	PENG122	English for health sciences	2	-
PENG124	Introduction to chemistry	2	No	PENG124	Introduction to chemistry	2	-
PPHS125	Physics for health sciences	2	No	PPHS125	Physics for health sciences	2	-
PBIO126	Biology	3	No	PBIO126	Biology	3	-
Total hours		15		Total hours		15	
LEVEL 3				LEVEL 3			
CAMS	College course	2+0	Yes	CAMS232	Medical terminology	2+0	Compulsory

							PR: prep year
MDL231	Principle of anatomy	1+1	Yes	CLS231	Principles of anatomy	2+1	PR: prep year
MDL232	Principles of physiology	1+1	Yes (Deleted)	CLS232	Principles of physiology	2+0	PR: prep year
MDL233	Organic chemistry	2+1	No	CLS233	Organic chemistry	2+1	PR: prep year
MDL234	General microbiology	3+1	No	CLS234	General microbiology	3+1	PR: prep year
CAMS231	Emergency care	1+1	Yes (Deleted)	CLS245	Introduction to clinical laboratory sciences	1+0	New course PR: prep year
-	University course	2	No	-	University course	2	-
Total hours		17		Total hours		17	
LEVEL 4				LEVEL 4			
CAMS	College course	2+0	Yes	CAMS233	Biostatistics	2+0	Compulsory
MDL241	Hematology	2+1	Yes	CLS241	Hematology 1	2+1	PR: CLS232
MDL242	Histology	2+1	Yes (deleted)	CLS242	General pathology	2+1	PR: CLS231 CLS232
MDL243	Medical microbiology	2+1	Yes (deleted)	CLS243	Instrumentation	2+0	New Course PR: CLS245
MDL244	Introduction to immunology	1+1	Yes	CLS244	Introduction to immunology	2+0	PR: CLS234
MDL245	Analytical chemistry	2+1	No	CLS245	Analytical chemistry	2+1	PR: CLS233
-	University course	2	No	-	University course	2	-
Total hours		18		Total hours		17	
LEVEL 5				LEVEL 5			
MDL351	Principles of biochemistry	2+1	No	CLS351	Principles of biochemistry	2+1	PR: CLS233 CLS245
MDL352	General Pathology	2+1	Yes (moved)	CLS352	Histotechnology and cytotechnology	2+1	PR: CLS232
MDL353	Histotechnology	2+1	Yes	CLS353	Hematology 2	2+1	New Course PR: CLS241
MDL354	Clinical mycology	2+1	Yes (deleted)	CLS354	Coagulation and hemostasis	2+1	New Course PR: CLS241
MDL355	Clinical parasitology	2+1	Yes (moved)	CLS355	Clinical microbiology 1	2+1	New Course PR: CLS234
-	University course	2	No	-	University course	2	-
Total hours		17		Total hours		17	

LEVEL 6				LEVEL 6			
MDL361	Medical biochemistry	2+1	Yes (deleted)	CLS361	Clinical microbiology 2	2+1	New Course PR: CLS355
MDL362	Electron microscopy	1+2	Yes (deleted)	CLS362	Clinical chemistry 1	2+1	New course PR: CLS351
MDL363	Clinical bacteriology	2+1	Yes	CLS363	Clinical immunology and serology	2+1	PR: CLS244
MDL364	Pathophysiology	2+1	Yes (deleted)	CLS364	Diagnostic genetics and molecular biology	2+1	PR: CLS242 CLS351 CLS353 CLS363
MDL365/366	Department elective	2+1	Yes	CLS365	Clinical parasitology	2+1	PR: CLS355 CLS234
-	University course	2	No	-	University course	2	
Total hours		17		Total hours		17	
LEVEL 7				LEVEL 7			
MDL471	Clinical virology	2+1	Yes (deleted)	CLS471	Clinical biochemistry 2	2+1	PR: CLS362
MDL472	Epidemiology	2+0	No	CLS472	Epidemiology	2+0	PR: CLS361 CAMS233
MDL473	Clinical immunology and serology	2+1	Yes (moved)	CLS473	Blood bank	2+1	PR: CLS354
MDL474	Clinical biochemistry	2+1	Yes	CLS474	Urine analysis and body fluids	2+1	PR: CLS362
MDL475	Research and Seminar	1+1	Yes	CLS475	Research and seminar	1+2	PR: CLS361 CLS362 CLS363 CLS364
MDL476/477	Department elective	2+1	Yes	CLS475	Lab administration and quality control	2+0	PR: CLS362
-	University course	2	No	-	University course	2	-
Total hours		18		Total hours		18	
LEVEL 8				LEVEL 8			
MDL481	Applied clinical microbiology	2+1	Yes	CLS481	Applied clinical microbiology	0+3	PR: completion of all levels
MDL482	Applied clinical biochemistry	2+2	Yes	CLS482	Applied clinical biochemistry	0+3	PR: completion of all levels
MDL483	Analytical	1+2	Yes	MDL483	Applied clinical	0+3	PR:

	laboratory automation		(deleted)		hematology and blood bank		completion of all levels
MDL484	Applied immunology and hematology	2+1	Yes (deleted)	CLS484	Applied clinical immunology	0+2	PR: completion of all levels
MDL485	Cellular and molecular pathology	1+2	Yes (deleted)	CLS485	Applied histopathology and cytology	0+2	PR: completion of all levels
-	University course	2	No	CLS486	Applied molecular diagnostics	0+2	PR: completion of all levels
-	-	-	-	CLS487	Project	0+2	
-	-	-	-	-	University course	2	-
Total hours		18		Total hours		19	

b. Proposals for Changes to Courses, (deletions and additions of units or topics, changes in teaching or assessment procedures etc.)

c. Development Activities for Faculty and Teaching Staff

3. New Action Plan for Academic Year 2016/2017		
Actions Required	Completion Date	Person Responsible
a. Workshops to discuss changes in the curriculum	8/1437	
b. Update the internship manual and monitoring internship and stakeholder evaluation to the program	8/1437	
c. Workshops to improve the academic advising in the department and expose students to quality work	8/1437	
d. Improve the exam assessment by enforcing more quality work and achieving unifying all exams other than the final ones	8/1437	
e. Introducing various practical assessment tools such as OSPE by making rubrics	8/1437	
f. Introducing more self-learning and group based assessment tool in majority of courses	8/1437	
g. Complete all laboratory manuals	8/1437	

Program Chair/ Coordinator Name: _____

Signature: _____ Date Report Completed: _____

Received by: _____ Dean/Department Head

Signature: _____ Date: _____