Course Guide

for

Measurement of learning outcomes and Questions banks

Content

Terminology used

Knowledge	A	a
Cognitive Skills	B	b
Interpersonal Skills and Responsibility	C	c
Communication, Information Technology and Numerical Skills	D	d
Psychomotor Skills (if applicable)	E	e
Consistency matrix of the University	MUP0x	
Ket Performance measurement indicators	KPIs	

Introduction:

Since the Deanship of quality and skills development was the basic requirements to apply for the most readiness programs in previous years to measure learning outcomes of the program through consistency specific models by the developmental project of the University**.**

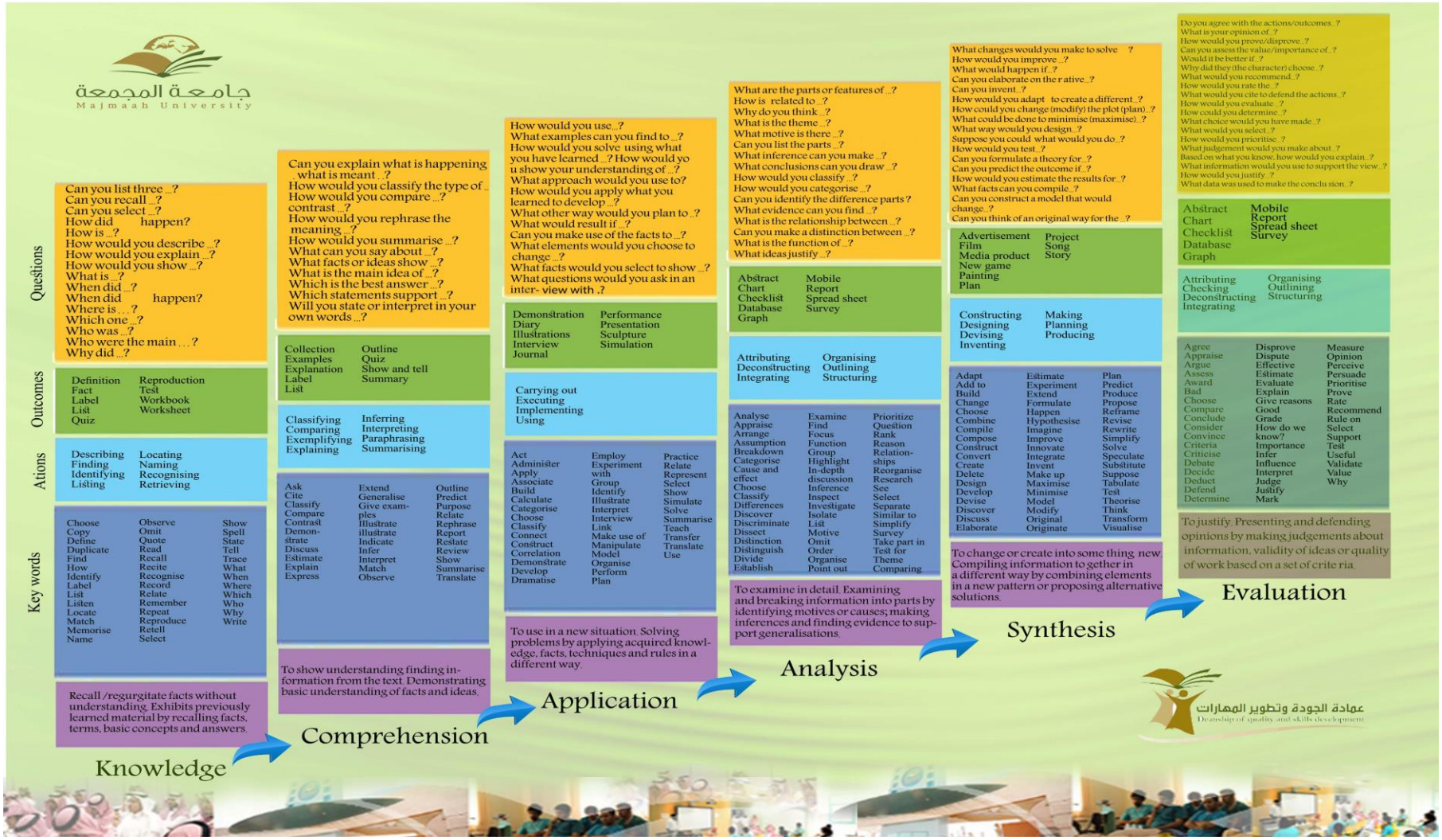
And in pursuit of the deanship in helping programs in the measurement of learning outcomes correctly to qualify for the adoption of academic and mechanisms in order to be properly measured and standardized at the university level as well as in the processing of the university to visit institutional accreditation by the National Authority for Assessment and Accreditation**.**

You are doing a directory for each faculty member to help him work in a quarterly report to measure the target with the decision of the teach learning outcomes**.**

As well as the work of banks to questions the decision to measure approximately (15-20%) of the targeted learning outcomes which covers the knowledge and skills of cognitive decisions

As well as help in the development of methods of evaluation of a faculty member and cover all the targeted learning outcomes**.**

And that is to take advantage of the measurement results and handle those results through the official boards**.**



1 .**program Learning outcomes:**

The National Authority for Assessment and Accreditation has recommended the measurement of learning at the level of both the program and the educational institution for Alaatmadalakadamy program and institutional University with a note that the output of each right in raising the performance indicators as seen to achieve his goals.

The Deanship of quality and skills development through developmental project work of a number of consistency matrix starting from the consistency of message to the university with the collage message, and the message the program and pass the program's objectives and learning outcomes of the program and courses.

As well as the work schedule to measure the learning outcomes of the programs through the selection of program decisions so as to achieve certain specifications in order to analyze the percentage of completion quarterly or annually and action plans for the development and improvement of educational outcomes.

learning Domains Specified by the National Commission for Academic Accreditation & Assessment

Knowledge
Cognitive Skills
Interpersonal Skills and Responsibility
Communication, Information Technology and Numerical Skills
Psychomotor Skills (if applicable

The Rectorate for Academic Affairs and Quality Deanship Aims through the activation of those models the following:

- Achieve objectivity in the evaluation of academic achievement for students in all university programs

- To cover methods of evaluation of all the learning outcomes of the decisions and programs in the areas of knowledge and understanding

- The quality circle is closed through the work of improving each university

courses by faculty members plans

- The development of academic achievement assessment tools as the calendar one important processes for the development of the educational system

- Preparation of a relatively large group of test questions in all disciplines, is characterized by the quality, objectivity, honesty and reliability.

- Improving the quality of the questions in terms of shape, and quality assurance.
- The supply of faculty members of ammunition inhalers questions take on new ideas can seek the assistance during the teaching process and during the ongoing formative assessment of each part of Odzaoualorteur process.
- Provides the time and effort of faculty members in the construction of realizable objective test questions and to use this time to improve the teaching process.
- Help the student self-learning and attention to identifying learning outcomes for each student individually according to his abilities.
- The use of banks questions helps to compare the results of student performance from year to year.

And has been increasing the number of only four models to help develop a mechanism to measure learning outcomes and linking objective questions by assessment methods and build encoded set of questions for each course will help in the development processes.

The following is a simplified explanation of the previous matrix and the process of linking the new models.

Program learning outcomes PLO
College: Engineering
Programs: 1- Electrical Engineering

Domain	CODE	*Student learning Outcomes*
A	a1	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
	a2	A knowledge of contemporary issues.
B	b1	An ability to design and conduct experiments, as well as to analyze and interpret data
	b2	An ability to design a system, component, or process to meet desired needs within realistic constraints
	b3	An ability to identify, formulate, and solve engineering problems
	b4	The ability to analyze, design, and implement systems.
	b5	The ability to apply project management techniques to electrical systems.
C	c1	An ability to function on multidisciplinary teams
	c2	An understanding of professional and ethical responsibility
	c3	A recognition of the need for and an ability to engage in life-long learning.
D	d1	An ability to apply knowledge of mathematics, science, and engineering
	d2	An ability to communicate effectively
	d3	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
	d4	The ability to utilize statistics/probability, transform methods, discrete mathematics, or applied differential equations in support of electrical systems.

Program KPI,s

It has been identified indicators to measure learning outcomes for each university programs and the following table represents a measure of performance of one of the educational programs indicators.

Code MUP07

ABET	PLOC	NCAAA domain	Program KPI,s		
a	**a: An ability to apply knowledge of mathematics, science, and engineering**	A	KPI(1)	KPI1	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering
			KPI(2)		Understands civil engineering theoretical concepts
				KPI2	solve engineering problems by using the concepts of integral and differential calculus and/or linear algebra
				KPI3	appropriate engineering interpretation of mathematical and scientific terms
			KPI(3)	KPI4	Translates academic theory into engineering applications
			KPI(4)	KPI5	Executes calculations correctly
				KPI6	Analyzing data using statistical concepts
c	**c: An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability**	B	KPI(9)	KPI16	Developing a design strategy
				KPI17	Use of approaches
				KPI18	Developing solutions
				KPI19	Understanding how areas interrelate and demonstrates ability to integrate prior knowledge into a new problem
			KPI(10)	KPI20	Using computer engineering tools
				KPI21	Supporting design procedure with documentation and references
			KPI(11)	KPI22	Developing a solution that includes realistic constraints
			KPI(12)	KPI23	Appling engineering and/or scientific principles correctly to design practical processes
				KPI24	Recognizing practical significance of design outcome/answer
				KPI25	Thinking holistically
e	**e: Ability to identify, formulate, and solve engineering problems**	B		KPI36	Solutions creativity alternatives
			KPI(17)	KPI37	practical problem solving using theoretical concepts
			KPI(18)	KPI38	predict and defend problem outcomes
			KPI(19)	KPI39	The uses of appropriate resources needed to solve problems
				KPI40	The integration of new information with previous knowledge
				KPI41	The understanding of how various pieces of the problem relate to each other and the whole
			KPI(20)	KPI42	Strategies for solving problems
				KPI43	Correction of the answer
				KPI44	Solutions: other ways
g	**g: An ability to communicate effectively**	D **(written).**		KPI52	Articulation of ideas
			KPI(25)	KPI53	The organization of the written materials
			KPI(26)	KPI54	The Use of graphs, tables, and diagrams
				KPI55	The presentation of the written work
			KPI(27)	KPI56	Grammar and spelling
				KPI57	Figures format
				KPI58	Writing style
				KPI59	Prescribed format (if any)

		oral-	KPI(28)	KPI60	Oral presentation delivery
				KPI62	Presentation mechanical aspects
				KPI63	English language
				KPI64	Visual aides
				KPI65	Appearance
				KPI66	Questions

Measure the course KPI,s and their relationship to the programKPIs

It was also a full identification of the learning outcomes of the decisions of the decisions and their relationship to the outcome of the educational programs and then see measurable performance indicators used for each course

Program KPI,s Used for courses and units outcome

ABET	PLOC	NCAAA Course Out come	Program KPI,s		
a	**a: An ability to apply knowledge of mathematics, science, and engineering**	A Understand the Fundamentals of geodetic measurements;	KPI(1)	KPI1	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering
			KPI(4)	KPI5	Executes calculations correctly
c	**c: An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability**	B Understanding all geodetic surveying techniques to produce map			
				KPI21	Supporting design procedure with documentation and references
			KPI(12)	KPI23	Appling engineering and/or scientific principles correctly to design practical processes
e	**e: Ability to identify, formulate, and solve engineering problems**	B **Ability to use different methods in surveying for geodetic control surveying**			
			KPI(17)	KPI37	practical problem solving using theoretical concepts
				KPI41	The understanding of how various pieces of the problem relate to each other and the whole
g	**g: An ability to communicate effectively**	D **(written) Ability to use 3-D measurement systems and arrange data elements in adjustment processing.**			
			KPI(25)	KPI53	The organization of the written materials
			KPI(26)	KPI54	The Use of graphs, tables, and diagrams

Rubrics for the learning outcomes measurement of the program and course.

It was also the work of **Rubrics** for measuring the levels of each indicator to measure the performance of the learning outcomes and the following table shows the model of those **Rubrics**

Code MUP09

domain	kpi	KPI Description	Satisfactory 75-100	Developing 40-75	Unsatisfactory 0-40
a: An ability to apply knowledge of mathematics, science, and engineering					
	KPI1	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering	Able to successfully combines mathematical and/or scientific principles to formulate models and systems relevant to civil engineering	Chooses a mathematical model or scientific principle that applies to an engineering problem, but has trouble in model development	Does not understand the connection between mathematical models and the system or process to be analyzed or designed
		Understands civil engineering theoretical concepts	able to define civil engineering terms, describe theoretical principles, understand derivation of formulae and compare similar items properly	able to define civil engineering terms but not able to describe, compare and not able to derive formulae perfectly	Neither understands civil engineering terms nor describes nor compare them nor able to derive formulae correctly
	KPI2	solve engineering problems by using the concepts of integral and differential calculus and/or linear algebra	applies concepts of integral and differential calculus and/or linear algebra to solve civil engineering problems	Shows nearly complete understanding of applications of calculus and/or linear algebra in problem-solving	Does not understand the application of calculus and linear algebra in solving civil engineering problems
	KPI3	appropriate engineering interpretation of mathematical and scientific terms	Shows appropriate engineering interpretation of mathematical and scientific terms	Most mathematical terms are interpreted correctly	Mathematical terms are interpreted incorrectly or not at all
	KPI4	Translates academic theory into engineering applications	Translates academic theory into engineering applications and accepts limitations of mathematical models of physical reality	Some gaps in understanding the application of theory to the problem and expects theory to predict reality	Does not appear to grasp the connection between theory and the problem
	KPI5	Executes calculations correctly	Executes calculations correctly by hand and using mathematical software	Minor errors in calculations by hand and through applying math software	Calculations not performed or performed incorrectly by hand and does not know how to use math software

	KPI6	Analyzing data using statistical concepts	Correctly analyzes data sets using statistical concepts	Minor errors in statistical analysis of data	No application of statistics to analysis of data
b: An ability to design and conduct experiments, as well as to analyze and interpret data					
	KPI7	laboratory safety procedures	Observes good laboratory safety procedures	Unsafe lab procedures observed infrequently	Practices unsafe, risky behaviors in lab
	KPI8	experimental plan of data gathering	Formulates an experimental plan of data gathering to attain a stated objective (develop correlation, test a model, ascertain performance of equipment, etc.)	Develops a simplistic experimental plan of data gathering, does not recognize entire scope of study (e.g. not all parameters affecting the results are investigated)	No systematic plan of data gathering; experimental data collection is disorganized, even random, and incomplete
	KPI9	Data documentation	Carefully documents data collected	Data collected are not all documented, units are missing, or some measurements are not recorded	Data are poorly documented
	KPI10	Development and implementation of logical experimental procedures	Develops and implements logical experimental procedures	Experimental procedures most often followed, but occasional oversight leads to loss of experimental efficiency and/or loss of data	Does not follow experimental procedure
	KPI11	Selection of appropriate equipment and instruments to perform the experiment	Can select appropriate equipment and instruments to perform the experiment	Needs some guidance in selecting appropriate equipment and instrumentation	Cannot select the appropriate equipment and instrumentation required to run the experiment(s)
	KPI12	Operation of instrumentation and process equipment	Is able to operate instrumentation and process equipment	Is tentative in operation of instruments and process equipment	Does not operate instrumentation and process equipment, does so incorrectly or requires frequent supervision
	KPI13	The analysis and interpretations of data using appropriate theory	Analyzes and interprets data carefully using appropriate theory; if required, translates theory into practice or applies to process model(s)	Applies appropriate theory to data when prompted to do so, but misinterprets physical significance of theory or variable involved; makes errors in unit conversions	Makes no attempt to relate data to theory
	KPI14	Awareness of measurement errors	Is aware of measurement error and is able to account for it statistically	Is aware of measurement error but does not account for it statistically or does so at a minimal level	Is unaware of measurement error
	KPI15	Seeking information for the experiment	Seeks information for experiment(s) from multiple sources	Seeks information for experiment(s) from a few sources - mainly from the textbook or the instructor	Seeks no extra information for experiments other than what is provided by instructor
c: An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability					
	KPI16	Developing a design strategy	Develops a design strategy, decomposition of work into subtasks, development of a timetable	Uses a design strategy with guidance	No design strategy; haphazard approach

	KPI17	Use of approaches	Suggests new approaches and improves on what has been done before	Can follow a previous example competently	Cannot design processes or individual pieces of equipment without significant amounts of help
	KPI18	Developing solutions	Develops several potential solutions and finds optimum	Can develop and compare multiple solutions to a problem, but does not usually arrive at the best result; conducts optimization but neglects one or two key aspects	Only focuses on one solution to a problem; no optimization attempted
	KPI19	Understanding how areas interrelate and demonstrates ability to integrate prior knowledge into a new problem	Understands how areas interrelate and demonstrates ability to integrate prior knowledge into a new problem	Can use prior knowledge to design individual pieces of equipment competently when guided to do so	Unable to relate prior knowledge to the design problem
	KPI20	Using computer engineering tools	Uses computer tools and engineering resources effectively	Minimal or incorrect use of computer tools and engineering resources	No use of computer tools and engineering resources
	KPI21	Supporting design procedure with documentation and references	Supports design procedure with documentation and references	Design is done, but procedures and equations are not documented or referenced	Design is done incompletely without the proper equations and without references
	KPI22	Developing a solution that includes realistic constraints	Develops a solution that includes economic, safety, environmental and other realistic constraints	Includes only minor or cursory consideration of economic, safety, and environmental constraints	No consideration of economics, safety, and environment
	KPI23	Appling engineering and/or scientific principles correctly to design practical processes	Applies engineering and/or scientific principles correctly to design practical processes	Applies some engineering and or scientific principles	No application of engineering and/or scientific principles
	KPI24	Recognizing practical significance of design outcome/answer	Recognizes practical significance of design outcome/answer	Gives an answer, but does not check its practicality	Design is incomplete, no answer is given
	KPI25	Thinking holistically	Thinks holistically: sees the whole as well as the parts	Does not think holistically: does not see the integration of the pieces clearly	Has no concept of the process as a sum of its parts
d: An ability to function on multidisciplinary teams					

College: Engineering Department: Electrical Engineering Program: Electrical Engineering

Code MUP09

Student Outcome Rubric

Student Learning Outcomes

The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

		Unsatisfactory	Developing	Satisfactory
KPIs	KPI (1)	Is unaware of current events	Is aware of current events in society	Is familiar with the current trends in the Electrical engineering discipline
	KPI (2)	Is unaware of historical effect of Electrical engineering solutions	Is aware of historical aspects of Electrical engineering solutions, but is not influenced by them	Respects the historical aspects of Electrical engineering solutions and their impacts
	KPI (3)	Is not familiar with any technical periodicals	Is aware of the existence of technical periodicals - would know where to look to find them	Reads and is familiar with the content of periodicals that are relevant to understanding the global and societal impact of Electrical engineering
	KPI (4)	Isn't sure why he/she is studying Electrical engineering	Is interested in Electrical engineering because of what the discipline offers him/her personally	Has a personal perspective on the importance (or lack thereof) of Electrical engineering in today's world

1.Teaching strategies and assessment tools for the program, and course.

Through course specification for all university programs has been teaching strategies and methods of assessment of programs and course are defined in the consistency matrix.

Examples for teaching strateges

1. Case Method.
2. Discussion.
3. Active Learning.
4. Cooperative Learning.
5. Integrating Technology.
6. Distance Learning.

Examples forCourse LO,s Assessment tools

1	Quizzes
2	Midterm Exam (1)
3	Midterm Exam (2)
4	Class Work
5	Lab Reports
6	Lab Exam.
7	Projects
8	Group report
9	Final Exam theory

And it represents one of the following of consistency matrix that defined the measurement of learning outcomes to one of thecollege programs

Measuring Learning Outcomes Methods

Code MUP11

Assessment methods used to measure Student Learning Outcomes

Student Learning Outcomes (code)	Assessment Methods
a1	Reports, discussions and presentations
a2	Exams and presentations
b1	Standardized exams, Oral exams, Micro projects
b2	Reports and presentations
b3	Standardized exams, Oral exams, Micro projects
b4	Standardized exams, Oral exams, Micro projects
b5	Behavior observation and reports
c1	Behavior observation and presentations
c2	Discussions
c3	Reports, discussions and presentations
d1	Standardized exams, Oral exams, Micro projects
d2	Reports, discussions and presentations
d3	Exams, quizzes and reports
d4	Standardized exams, Oral exams, Micro projects

6.Selected Courses for Measuring Student Learning Outcomes

Courses has been rated into three types according to the learning outcomes rapporteur introduction, the decision to support the director and the decision to emphasize the educational director and has been choosing some courses or strengthen or confirm to measure learning to program outputs and the table following shows those decisions through matrices consistency

Selected Courses for Measuring Learning Outcomes
For programe
Code MUP14

PLOC Outcomes	A		B					C			D			
	a1	a2	b1	b2	b3	b4	b5	c1	c2	c3	d1	d2	d3	d4
EE 341													X	
EE 307						X								
EE 322	X													
EE 323					X									
EE 360				X										
EE 361	X													
EE 399												X		
EE 498														X
EE 499						X								
EE 314						X								
EE 315										X				
EE 325							X							
EE 435														X
EE 426							X							
EE 427										X				
EE 389		X												
EE 372					X									
EE 373														X
EE 374							X							
EE 475													X	
EE 476												X		
EE 477				X										
EE 478												X		

(I) Introduce (R) Reinforce (E) Emphasize

7. Student Learning Outcomes Measuring Schedule

Schedule to measure learning outcomes for electrical engineering program

Code MUP15

	1st year			2nd year			3rd year			4th year			5th year		
	S1	**S2**	**S3**	**S1**	**S2**	**S3**	**S1**	**S2**	**S3**	**S1**	**S2**	**S3**	**S1**	**S2**	**S3**
EE 101	X														
EE 111	X														
EE 205		X													
EE 208		X													
EE 206		X													
EE 212		X													
EE 288				X											
EE 221				X											
EE 270				X											
EE 271				X											
EE 341					X										
EE 307					X										
EE 360					X										
EE 361							X								
EE 399								X							
EE 498										X					
EE 499											X				
EE 314										X					
EE 315										X					
EE 325										X					
EE 435											X				
EE 426											X				
EE 427											X				
EE 389										X					
EE 372										X					
EE 373										X					
EE 374										X					
EE 475											X				
EE 476											X				
EE 477											X				
EE 478											X				

(**S1**) First Semester (**S2**) Second Semester (**S3**) Third Semester

Note: The measurement of learning outcomes for all courses, but courses are placed identified in the annual report of the program

Consistency matrix

Which each faculty member work for each course

8. Matrix of learning outcomes for each of the courses in the program

All the faculty members has done the work matrix that shows the program outcomes linked to its course to outcomes of the educational program and the following sample demonstrates one of the matrix for the courses.

Code : **MUP16-1**

Map course LOs with the program LOs. (Place course LO #s in the left column and program LO #s across the top.)												
Course LOs #	**Program Learning Outcomes Use LOs Codes**											
	a1	**a2**	**a3**	**a4**	**b1**	**b2**	**b3**	**c1**	**c2**	**c3**	**d1**	**d2**
1	✖											
2											✖	
3				✖								
4		✖										
5							✖					
6								✖				
7										✖		
8											✖	
9										✖		

9. Matrix distribution of grades among the learning outcomes at the level of course and measurement tools.

All faculty members work a table represents the map as are educational outcomes targeted shows and tool measurement and the weight of each educational outcome and only responsible for determining the weights is a faculty member and can put weights depending on the objectives, the importance of the outcome or the number of lectures for each outcome.

Code : MUP16-2

Course grading system **Credit Hours: (2+1+0)**

Tools	Course Learning Outcomes (CLO's)				Total
	a	**c**	**e**	**g**	
	A1	**B1**	**B2**	**D1**	
KPI,s for course	**1-4**	**10 -12**	**17-19**	**25-26**	
Quizzes		5			5%
Midterm Exam1	10	5			15%
Reports		5		5	10%
Midterm Exam2.	5		10	5	20%
Class work		5		5	10%
Final Exam theory	10	20	10		40%
Total	25%	40%	20%	15%	100%

Learning Domains

A: Knowledge
B. Cognitive Skills
C. Interpersonal Skills and Responsibility
D. Communication, Information Technology and Numerical Skills
E. Psychomotor Skills (if applicable).

Courses Assessment tools at the level of course

Course (1) (EE372) LO,s Assessment tools at the level of course

Another form of the model without specifying the detailed weights

Code : MUP16-2

Tools	Course Learning Outcomes (CLO's)							Total
	A		B		C	D	E	
	a.1	*a. 2*	*b.1.*	*b.2.*	*c.1.*	*d.1.*	*e.1.*	
Quizzes				X				5%
Midterm Exam (1)	X		X			X		15%
Midterm Exam (2)	X	X	X					15%
Class Work					**X**			5%
Lab Reports		X						5 %
Lab Exam.					X		X	10 %
Group report					X			5 %
Final Exam theory	X	X	XX	X X		XX		40 %
Total	15%	15%	20%	15%	15%	15%	5%	100%

10.Distribution of grades among the matrix of learning outcomes at the level of a unit of study and measurement tools

On this matrix, faculty member identified the measurement tools of learning outcomes for each unit of study and it can be more than one unit of study of the course.

Code :

MUP16-3-1, MUP16-3-2, MUP16-3-3

Course LO,s Assessment tools at the level of units

Tools	Unit (--) Learning Outcomes of (CLO's)							Sub total	Total
	A		B		C	D	E		
	a. 1	*a.2*	*b..1*	*b.2.*	*c.1*	*d.1*	*e. 1*		
Quizzes				X				5	5%
Midterm Exam (1)	X		X					10	15%
Midterm Exam (2)									15%
Class Work									5%
Lab Reports		X						5	5 %
Lab Exam.									10 %
Group report									5 %
Final Exam theory				X				5	40 %
	5	5	5	10				25%	
Total	15%	15%	20%	15%	15%	15%	5%		100%

The following table shows the relationship between the units and weights and main learning outcomes to course

Outcome	weight	unit
a-1	25%	Unit (1)
b-2		
c-1		
2a-	15%	Unit (2)
b-1		
c-1		
a-1	20%	Unit (3)
b2		
c-1		
2a-	15%	Unit (4)
d-1		
e-1		
2a-	25%	Unit (5)
b-1		
C-1		

11.Matrix determine learning outcomes (detailed) at the level of courses unit

In this matrix faculty members put the detailed learning outcomes at the unit-level of the courses and lesson topics and can reach to more than ten detailed outcomes for each unit of course.

Matrix determine learning outcomes (detailed) at the level of courses unit

code

MUP16-4

Table Determining educational outcomes at the level of the lesson/unit

Collage:		Program:		Course:
Unit – Chapter	weight	Topic – lesson	Outcome no.	Out come
Chapter(1) or Unit (1)	25%	Topic-1	a-1	*Know..*
			a-2	*Understand …*
			b-1	*Apply*
			c-1	…
		Topic-2		
Chapter(2) or Unit (2)	15%	Topic-1		
		Topic-2		

12. Questions banks matrix associated to (detailed) learning outcomes at the level of courses unit

code
MUP16-5

collage		program	course
Unit – Chapter	Topic – lesson	Outcome code	**Questions to measure learning domains a-b** **♣ multiple choice.** **♣ right and wrong.** **♣ pairing** **♣ rearrangement**
Chapter(1) or Unit (1)	Topic-1	a-1	CE371-1-a1-RM-1
			▪
			CE371-1-a1-RM-2
	Topic-2	b-1	
	Topic-3	b-2	CE371-1-b2-UN-1
Chapter(2)	Topic-1	2a-	
		b-1	
		2b-	

- Questions Coding System

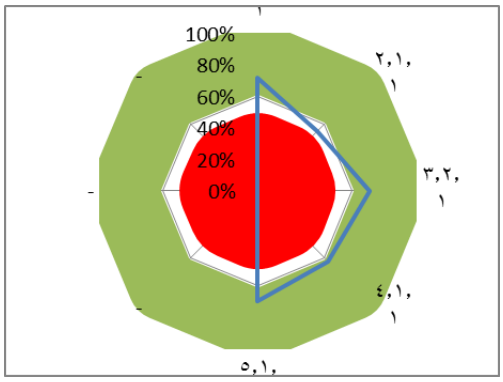
Note .. it can make a coding of questions to handle easy, as shown in the table

Course code	unit	domain	level	q-no.
CE372	1 2 3	A1 A2 B1 B2	RM تذكر UN فهم AP تطبيق AN تحليل	9 15 24 7

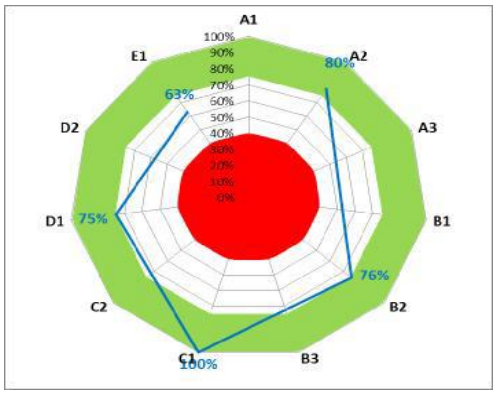
13. The results of the measurement of learning outcomes

The faculty member make a measurement of learning outcomes for each unit of study and the course manner it deems to manage the academic program and form follows illustrates one measurement methods and described in detail in the academic programs and based on previous models rubrex measuring the quality of evidence.

(A) The results of the measurement of learning outcomes at the level of a unit of study



(B) The results of the measurement of learning outcomes at the level of scheduled



NB. Graphics set graphics to help can be used or others to show the results of measurement of learning outcomes

14. Analysis of the results of measurement of learning outcomes the course

Can analyze the results of the measurement of learning outcomes through a variety of methods based on statistical data or graphics on the level of the unit and the the course as a whole and the following figures show the different styles to the process of analysis to identify the strengths and weaknesses Atazizha of action plans for improvement

Student Learning Outcome a1_	strength> 70	Point of improvement < 70

Student Learning Outcome Code____b1___	strength> 70	Point of improvement < 70

Student Learning Outcome Code___c2	strength> 70	Point of improvement < 70

15.Recommendations based on the analysis of the results of learning outcomes

Based on the results of analysis are the work of recommendations for the development of course

Recommendations:

1. .....
2. .....

And then adjust their goals based on the recommendations we obviously plans for the semester previous

Former Objective: .....

The new goal: .....

16 . improvement plan based on the analysis of the findings and recommendations

Activity

1. .....
2. .....

Sites for banks Questions

The following sites will help in the process of building Questions banks for many of the courses in the university which is open sites without fees

-
- Question Bank - Kings College of Engineering
- www.kingsindia.net
- department of science & humanities. i year . even semester . s.no : subject: 1. hs 1151-technical english-ii. 2. ma1151-mathematics-ii. 3. hs1152-engineering physics -ii
- Course Evaluations Question Bank | Center for Teaching ...
- teaching.berkeley.edu
- The adoption of end-of-term evaluation question items listed on this page helps to ensure that you will solicit informative feedback - feedback that can be used fo
- http://www.kingsindia.net/QUEST%20BANK_LINK2.htm
- http://teaching.berkeley.edu/course-evaluations-question-bank
- https://smccd.mrooms.net/mod/book/view.php?id=111328&chapterid=2612