College: Engineering Department: Civil and Environmental Engineering

Program: Civil Engineering

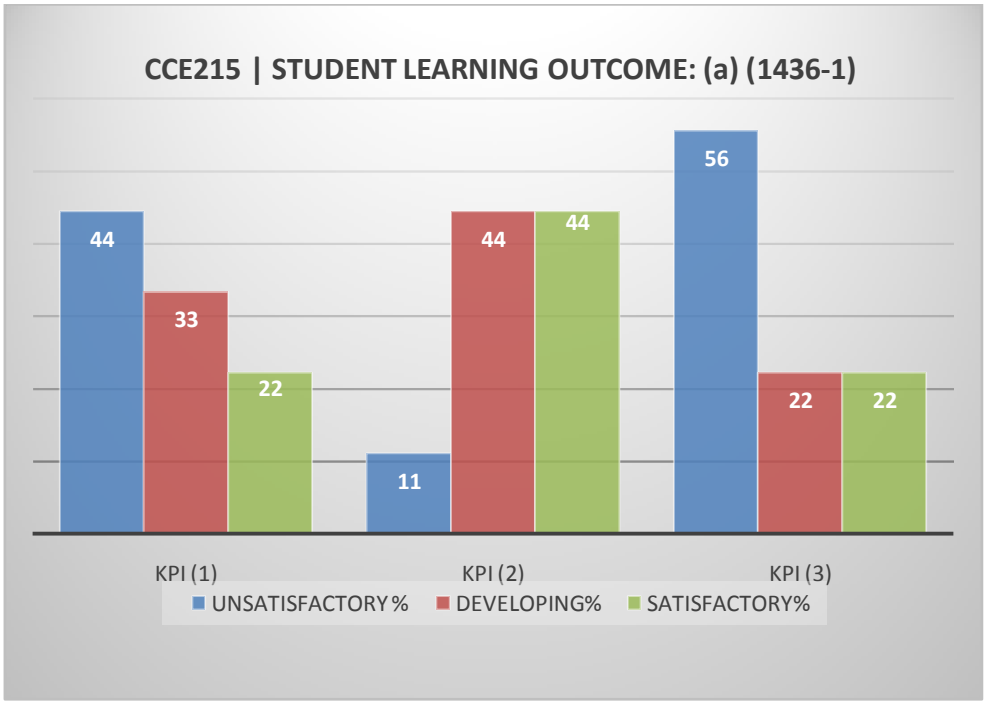
(A) Student Learning Outcome- Assessment Results

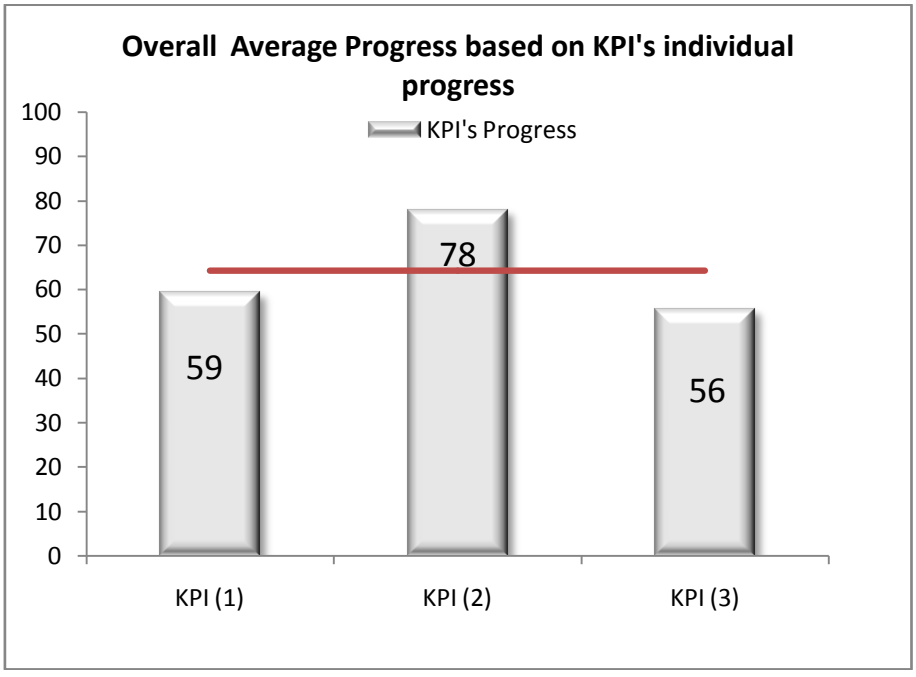
Code MUP17

Learning Student Outcome Code: **(a)**
Course Number and Semester: **CE 215 - Semester (1) 36/1**
Number of Students: 9
Rubrics = 6

Target: **an ability to apply Knowledge of mathematics, science and engineering.**

	Unsatisfactory		DEVELOPING		Satisfactory		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	4	44	3	33	2	22	1.78	59
KPI (2)	1	11	4	44	4	44	2.33	78
KPI (3)	5	56	2	22	2	22	1.67	56
Average		37		33		30		64


CCE215 | STUDENT LEARNING OUTCOME: (a) (1436-1)
44
33
22
11
44
44
56
22
22
KPI (1)
KPI (2)
KPI (3)
UNSATISFACTORY %
DEVELOPING%
SATISFACTORY%


Overall Average Progress based on KPI's individual progress
KPI's Progress
100
90
80
70
60
50
40
30
20
10
0
59
78
56
KPI (1)
KPI (2)
KPI (3)

***Outcome (a)*: an ability to apply Knowledge of mathematics, science and engineering**
Rubric
#6

***Outcome a*: an ability to apply Knowledge of mathematics, science and engineering.**	**Level 5: Satisfactory**	**Level 3: Developing**	**Level 1: Unsatisfactory**
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
solve computer 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
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
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
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
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

(a)	
An ability to apply principles of engineering, mathematics, and science in application of Engineering & Technology	
KPI (1)	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering
KPI (2)	appropriate engineering interpretation of mathematical and scientific terms
KPI (3)	Translates academic theory into engineering applications

This is will help as KPI's for this output

SLO #1	An ability to apply principles of engineering, mathematics, and science in application of Engineering & Technology
KPI (1)	Mid-term and final examinations
KPI (2)	Assignments, quizzes, and group discussions
KPI (3)	Ability to identify and solve relevant mathematical, problems, and to explore formulations and solutions using alternate approaches

College: Engineering Department: Civil and Environmental Engineering

Program: Civil Engineering

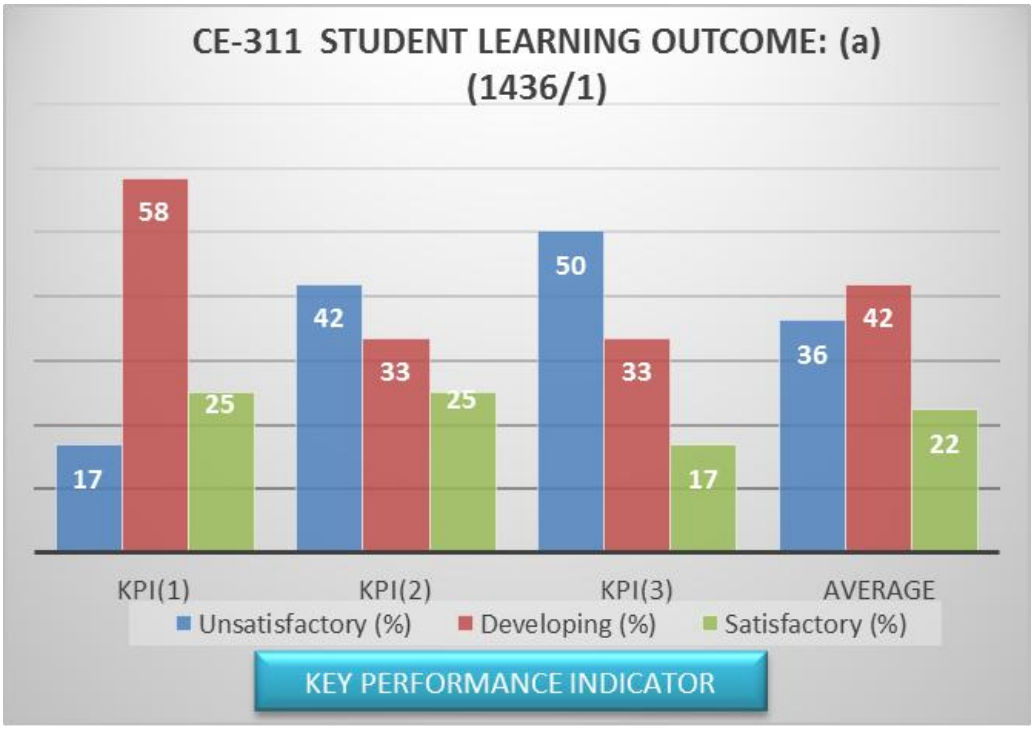
(A) Student Learning Outcome- Assessment Results

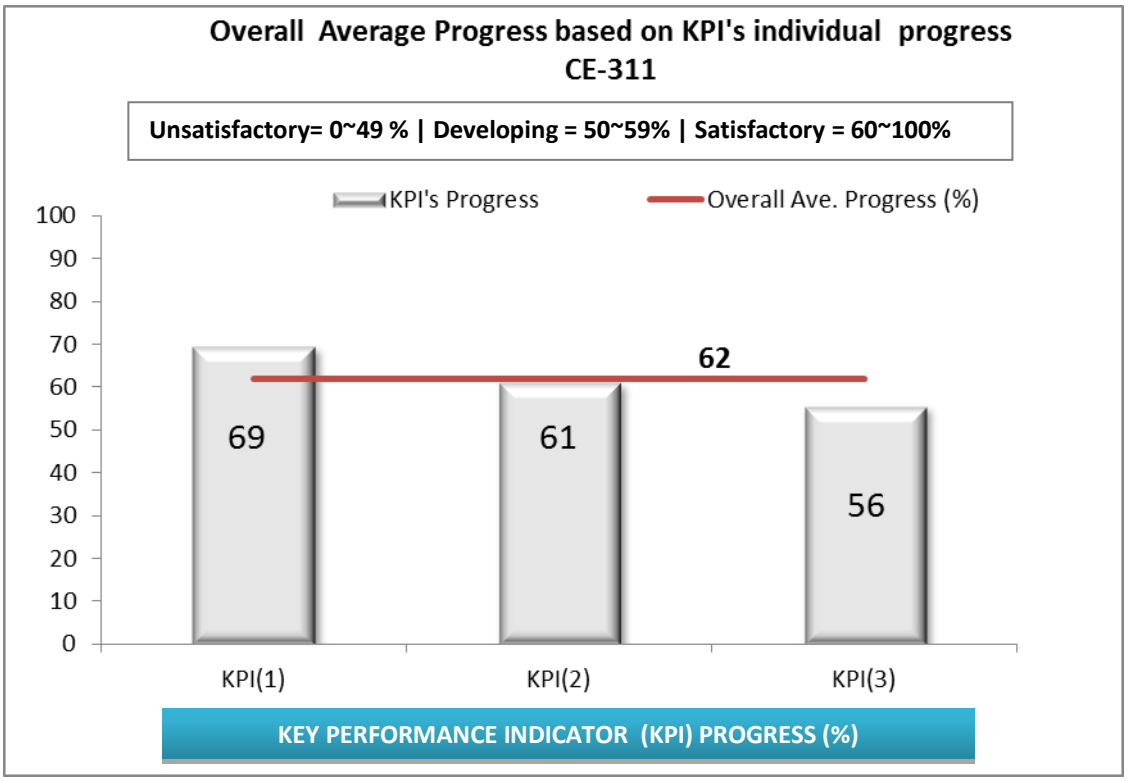
Code MUP17

Learning Student Outcome Code: **(a)**
Course Number and Semester: **CE 311 - Semester (1) 36/1**
Number of Students: _____12

Target: An ability to apply Knowledge of mathematics, science and engineering

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	2	17	7	58	3	25	2.08	69
KPI (2)	5	42	4	33	3	25	1.83	61
KPI (3)	6	50	4	33	2	17	1.67	56
Average		36		42		22		62




Overall Average Progress based on KPI's individual progress
CE-311
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
62
69
61
56
KPI(1)
KPI(2)
KPI(3)
KEY PERFORMANCE INDICATOR (KPI) PROGRESS (%)

Outcome (a): ***An ability to apply Knowledge of mathematics, science and engineering***

Rubric#1

	Satisfactory	Developing	Unsatisfactory
KPI (1)	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
KPI (2)	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
KPI (3)	Shows appropriate engineering interpretation of mathematical and scientific terms	Most mathematical terms are interpreted correctly	Mathematical terms are interpreted incorrectly or not at all

(a)	
An ability to apply Knowledge of mathematics, science and engineering	
KPI (1)	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering
KPI (2)	solve computer engineering problems by using the concepts of integral and differential calculus and/or linear algebra
KPI (3)	appropriate engineering interpretation of mathematical and scientific terms
KPI (4)	Translates academic theory into engineering applications

This is will help as KPI's for this output

SLO #1	An ability to apply principles of engineering, mathematics, and science in application of Engineering & Technology
KPI (1)	Mid term and final examinations
KPI (2)	Assignments, quizzes, and group discussions
KPI (3)	Ability to identify and solve relevant mathematical, problems, and to explore formulations and solutions using alternate approaches

College: Engineering Department: Civil and Environmental Engineering
Program: Civil Engineering

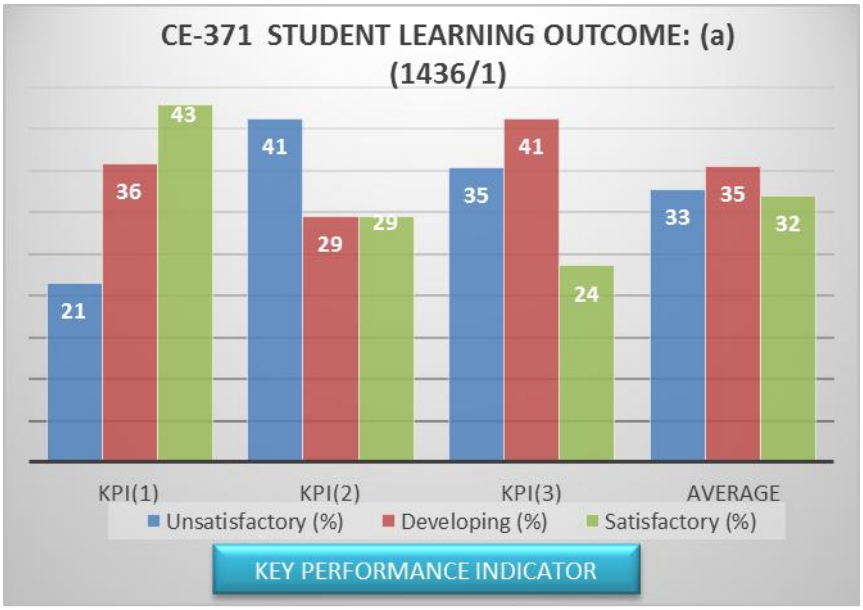
(A) Student Learning Outcome- Assessment Results

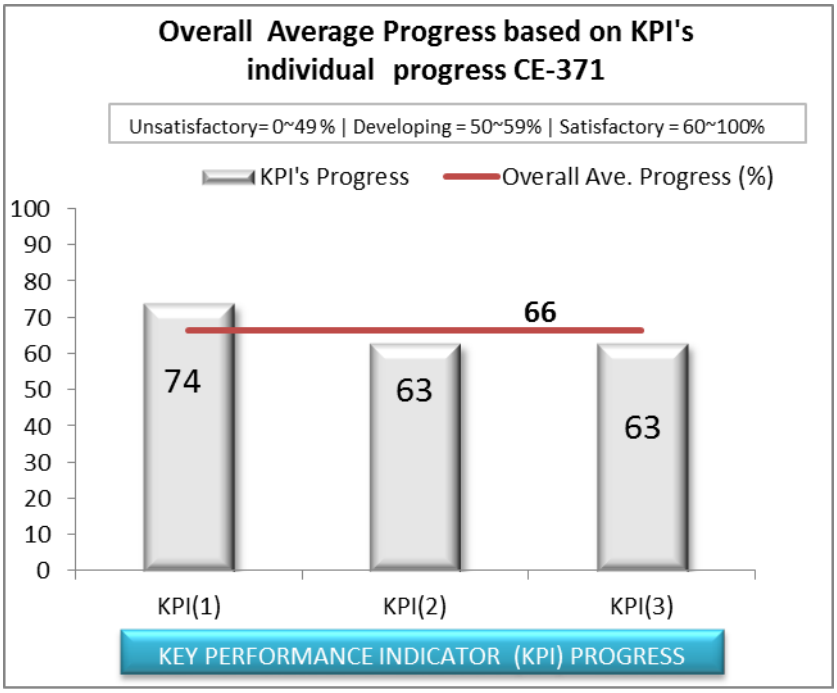
Code MUP17

Learning Student Outcome Code: **(a)**
Course Number and Semester: **CE 371 - Semester (1) 36/1**
Number of Students: ___14-17

Target: An ability to apply Knowledge of mathematics, science and engineering

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	3	21	5	36	6	43	2.21	74
KPI (2)	7	41	5	29	5	29	1.88	63
KPI (3)	6	35	7	41	4	24	1.88	63
Average		33		35		32		




Overall Average Progress based on KPI's individual progress CE-371
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
66
74
63
63
KPI(1)
KPI(2)
KPI(3)
KEY PERFORMANCE INDICATOR (KPI) PROGRESS

Outcome (a): ***An ability to apply Knowledge of mathematics, science and engineering***

Rubric #1

	Satisfactory	Developing	Unsatisfactory
KPI (1)	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
KPI (2)	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
KPI (3)	Shows appropriate engineering interpretation of mathematical and scientific terms	Most mathematical terms are interpreted correctly	Mathematical terms are interpreted incorrectly or not at all

(a)	
An ability to apply Knowledge of mathematics, science and engineering	
KPI (1)	Apply mathematical and scientific principles to formulate models and systems relevant to civil engineering
KPI (2)	solve computer engineering problems by using the concepts of integral and differential calculus and/or linear algebra
KPI (3)	appropriate engineering interpretation of mathematical and scientific terms
KPI (4)	Translates academic theory into engineering applications

This is will help as KPI's for this output

SLO #1	An ability to apply principles of engineering, mathematics, and science in application of Engineering & Technology
KPI (1)	Mid term and final examinations
KPI (2)	Assignments, quizzes, and group discussions
KPI (3)	Ability to identify and solve relevant mathematical, problems, and to explore formulations and solutions using alternate approaches

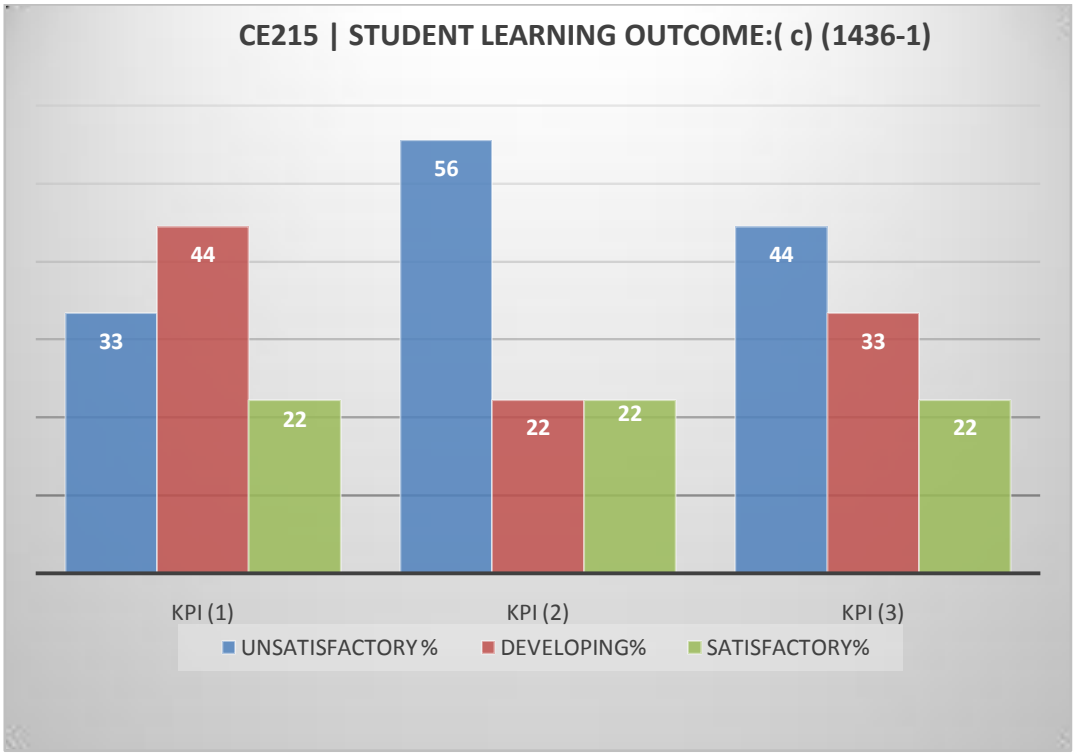
(A) Student Learning Outcome- Assessment Results

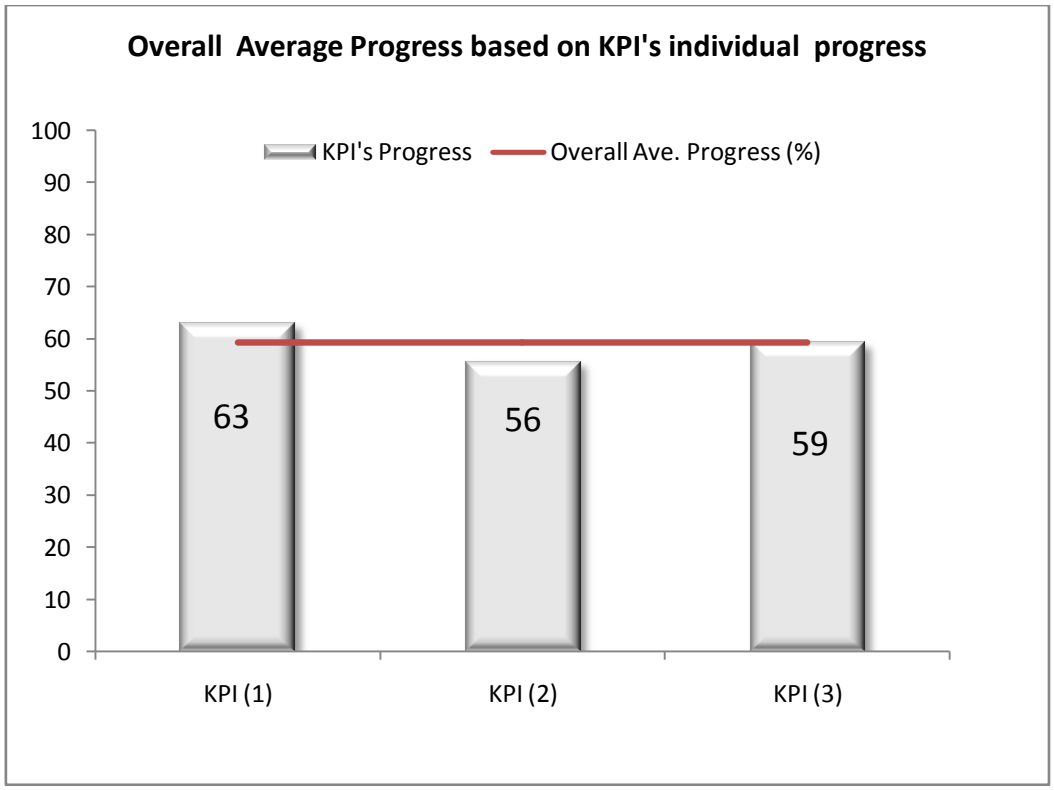
Code
MUP17

Learning Student Outcome Code: **(c)**
Course Number and Semester: **CE 215 - Semester (1) 36/1**
Number of Students: 9
Rubrics = 6

Target: ***An ability to design a system, component or process to meet desired needs within realistic constraints.***

	Unsatisfactory		DEVELOPING		Satisfactory		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	3	33	4	44	2	22	1.89	62.96
KPI (2)	5	56	2	22	2	22	1.67	55.56
KPI (3)	4	44	3	33	2	22	1.78	59.26


CE215 | STUDENT LEARNING OUTCOME:(c) (1436-1)
33
44
22
56
22
22
44
33
22
KPI (1)
KPI (2)
KPI (3)
UNSATISFACTORY%
DEVELOPING%
SATISFACTORY%


Overall Average Progress based on KPI's individual progress
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
63
56
59
KPI (1)
KPI (2)
KPI (3)

***Outcome (c)**: An ability to design a system, component or process to meet desired needs within realistic constraints.*

Outcome c: An ability to design a system, component or process to meet desired needs within realistic constraints.	Level 5: Satisfactory	Level 3: Developing	Level 1: Unsatisfactory
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
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
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
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
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
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
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
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
Recognizing practical significance of	Recognizes practical significance of design outcome/answer	Gives an answer, but does not check its practicality	Design is incomplete, no answer is given

design outcome/answer			
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

(c)	
An ability to design engineering system to meet specific needs.	
KPI (1)	**Use of approaches**
KPI (2)	**Developing solutions**
KPI (3)	**Understanding how areas interrelate and demonstrates ability to integrate prior knowledge into a new problem**

This is will help as KPI's for this output

SLO #3	An ability to design engineering system to meet specific needs.
KPI (8)	Thinks holistically: sees the whole as well as the parts Supports design procedure with documentation and references
KPI (9)	Testing ideas in the labs
KPI (10)	Considers all the relevant technical, nontechnical constraints and design tradeoffs.
KPI (11)	Develops a design strategy based on project and client needs and constraints.

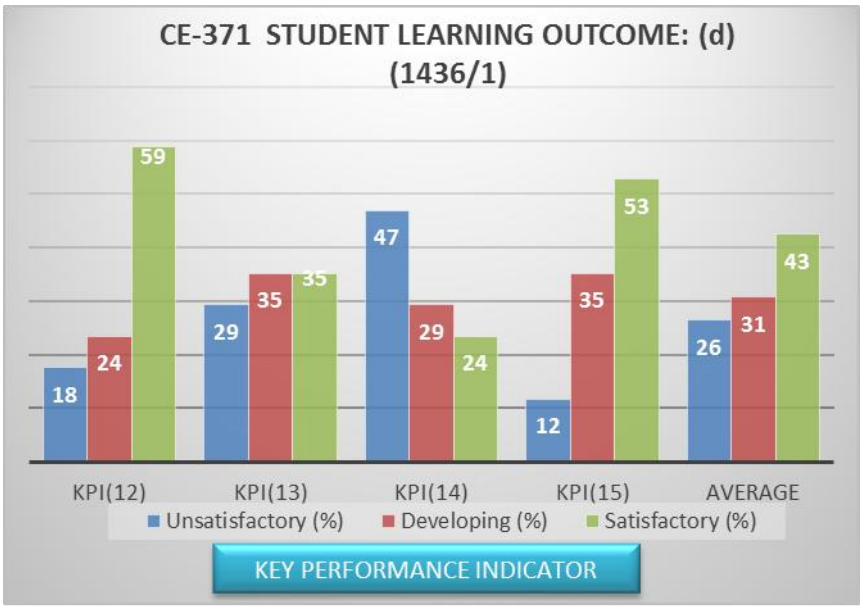
(A) Student Learning Outcome- Assessment Results

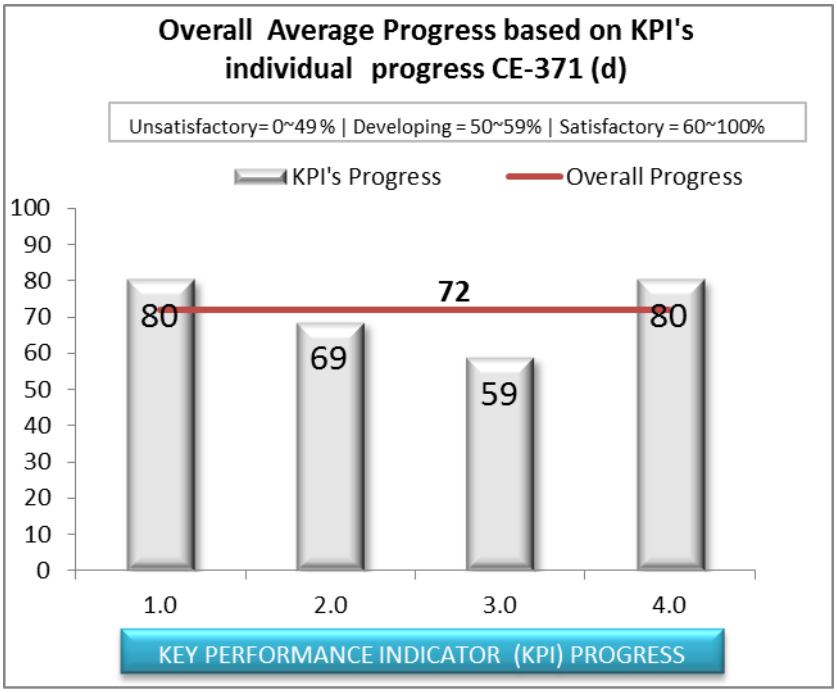
Code
MUP17

Learning Student Outcome Code: **(d)**
Course Number and Semester: **CE 371 - Semester (1) 36/1**
Number of Students: ___17

Target: The ability to function on multidisciplinary teams

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (12)	3	18	4	24	10	59	2.41	80
KPI (13)	5	29	6	35	6	35	2.06	69
KPI (14)	8	47	5	29	4	24	1.76	59
KPI (15)	2	12	6	35	9	53	2.41	80
Average		26		31		43		72




Overall Average Progress based on KPI's individual progress CE-371 (d)
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Progress
100
90
80
70
60
50
40
30
20
10
0
72
80
69
59
80
1.0
2.0
3.0
4.0
KEY PERFORMANCE INDICATOR (KPI) PROGRESS

Outcome (d): ***The ability to function on multidisciplinary teams***

Rubric#4

	Satisfactory	Developing	Satisfactory
KPI (26)	Routinely present at team meetings or work sessions. Contributes a fair share to the project workload.	Absent occasionally, but does not inconvenience group Sometimes depends on others to complete the work; contributes less than fair share	Is absent from team meetings or work sessions >50% of the time
KPI (27)	Is prepared for the group meeting with clearly formulated ideas	Prepares somewhat for group meetings, but ideas are not clearly formulated	Does not contribute to group work at all or submits own work as the group's
KPI (28)	Cooperates with others (outside of the discipline)	Occasionally works as a loner or interacts to a minor extent with extra-disciplinary team members	Routinely fails to prepare for meetings
KPI (29)	Shares credit for success with others and accountability for team results	Makes subtle references to other's poor performance or sometimes does not identify contributions of other team members	Does work on his/her own; does not value team work
KPI (30)	Shares information with others and provides assistance to others	Sometimes keeps information to himself/herself; not very willing to share	Claims work of group as own or frequently blames others
KPI (31)	Demonstrates the ability to assume a designated role in the group	Takes charge when not in the position to lead	Hides in the background; only participates if strongly encouraged
KPI (32)	Values alternative perspectives and encourages participation among all team members	Persuades others to adopt only his/her ideas or grudgingly accepts the ideas of others	Does not willingly assume team roles
KPI (33)	Remains non-judgmental when disagreeing with others/seeks conflict resolution; does not "point fingers" or blame others when things go wrong	Sometimes criticizes ideas of other team members or blames others for errors	Does not consider the ideas of others and is openly critical of the performance of others
KPI (34)	Is courteous group member	Is not always considerate or courteous towards team members	Is discourteous to other group members
KPI (35)	Has knowledge of technical skills, issues and approaches germane to disciplines outside of civil engineering	Has some knowledge of other disciplines, but gets lost in discussions with extra-disciplinary team members	Has no knowledge of disciplines outside of civil engineering

d) An ability to take roles in collaborative teams	
KPI (1)	Presentation and workload contribution
KPI (2)	Preparation for group meetings
KPI (3)	Cooperation
KPI (4)	Sharing credit of success

This is will help as KPI's for this output

SLO #4	An ability to take roles in collaborative teams
KPI (12)	Team Participation *(Cooperation)*
KPI (13)	Research and gather information *(Information Sharing)*
KPI (14)	Facilitates goal Accomplishment *(Knowledge of Other Disciplines)*
KPI (15)	Fulfill Team Roles Assigned

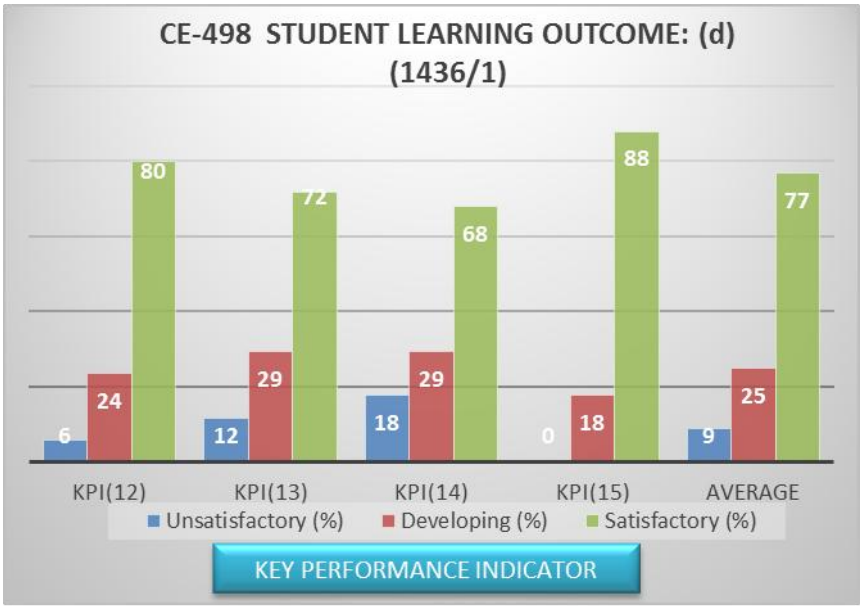
(A) Student Learning Outcome- Assessment Results

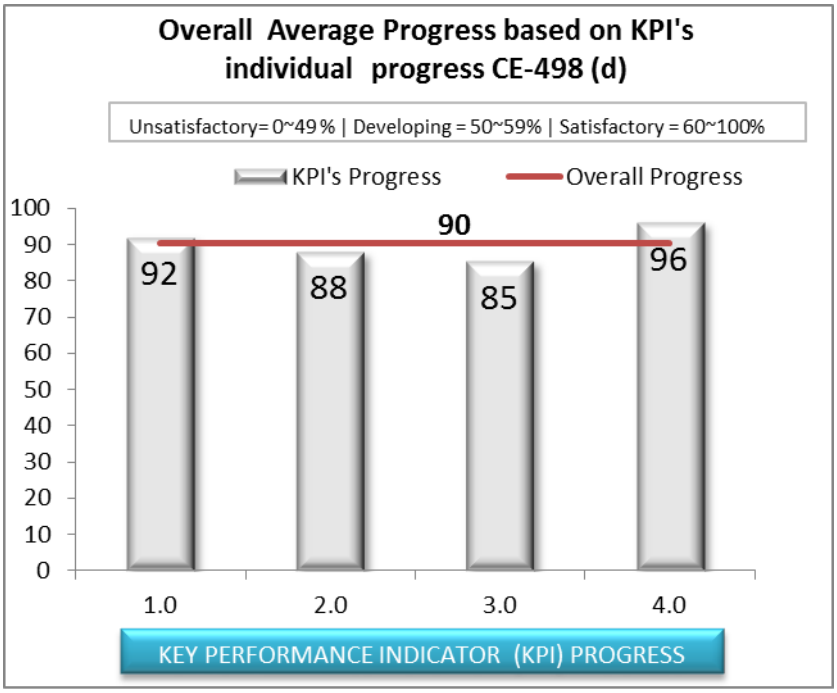
Code
MUP17

Learning Student Outcome Code: **(d)**
Course Number and Semester: **CE 498 - Semester (1) 36/1**
Number of Students: ____25

Target: ***The ability to function on multidisciplinary teams***

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (12)	1	4	4	16	20	80	2.76	92
KPI (13)	2	8	5	20	18	72	2.64	88
KPI (14)	3	12	5	20	17	68	2.56	85
KPI (15)	0	0	3	12	22	88	2.88	96
Average		9		25		77		90




Overall Average Progress based on KPI's individual progress CE-498 (d)
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Progress
100
90
80
70
60
50
40
30
20
10
0
90
92
88
85
96
1.0
2.0
3.0
4.0
KEY PERFORMANCE INDICATOR (KPI) PROGRESS

Outcome (d): ***The ability to function on multidisciplinary teams***

Rubric#4

	Satisfactory	Developing	Unsatisfactory
KPI (26)	Routinely present at team meetings or work sessions. Contributes a fair share to the project workload.	Absent occasionally, but does not inconvenience group Sometimes depends on others to complete the work; contributes less than fair share	Is absent from team meetings or work sessions >50% of the time
KPI (27)	Is prepared for the group meeting with clearly formulated ideas	Prepares somewhat for group meetings, but ideas are not clearly formulated	Does not contribute to group work at all or submits own work as the group's
KPI (28)	Cooperates with others (outside of the discipline)	Occasionally works as a loner or interacts to a minor extent with extra-disciplinary team members	Routinely fails to prepare for meetings
KPI (29)	Shares credit for success with others and accountability for team results	Makes subtle references to other's poor performance or sometimes does not identify contributions of other team members	Does work on his/her own; does not value team work
KPI (30)	Shares information with others and provides assistance to others	Sometimes keeps information to himself/herself; not very willing to share	Claims work of group as own or frequently blames others
KPI (31)	Demonstrates the ability to assume a designated role in the group	Takes charge when not in the position to lead	Hides in the background; only participates if strongly encouraged
KPI (32)	Values alternative perspectives and encourages participation among all team members	Persuades others to adopt only his/her ideas or grudgingly accepts the ideas of others	Does not willingly assume team roles
KPI (33)	Remains non-judgmental when disagreeing with others/seeks conflict resolution; does not "point fingers" or blame others when things go wrong	Sometimes criticizes ideas of other team members or blames others for errors	Does not consider the ideas of others and is openly critical of the performance of others
KPI (34)	Is courteous group member	Is not always considerate or courteous towards team members	Is discourteous to other group members
KPI (35)	Has knowledge of technical skills, issues and approaches germane to disciplines outside of civil engineering	Has some knowledge of other disciplines, but gets lost in discussions with extra-disciplinary team members	Has no knowledge of disciplines outside of civil engineering

d) An ability to take roles in collaborative teams	
KPI (1)	Presentation and workload contribution
KPI (2)	Preparation for group meetings
KPI (3)	Cooperation
KPI (4)	Sharing credit of success

This is will help as KPI's for this output

SLO #4	An ability to take roles in collaborative teams
KPI (12)	Team Participation *(Cooperation)*
KPI (13)	Research and gather information *(Information Sharing)*
KPI (14)	Facilitates goal Accomplishment *(Knowledge of Other Disciplines)*
KPI (15)	Fulfill Team Roles Assigned

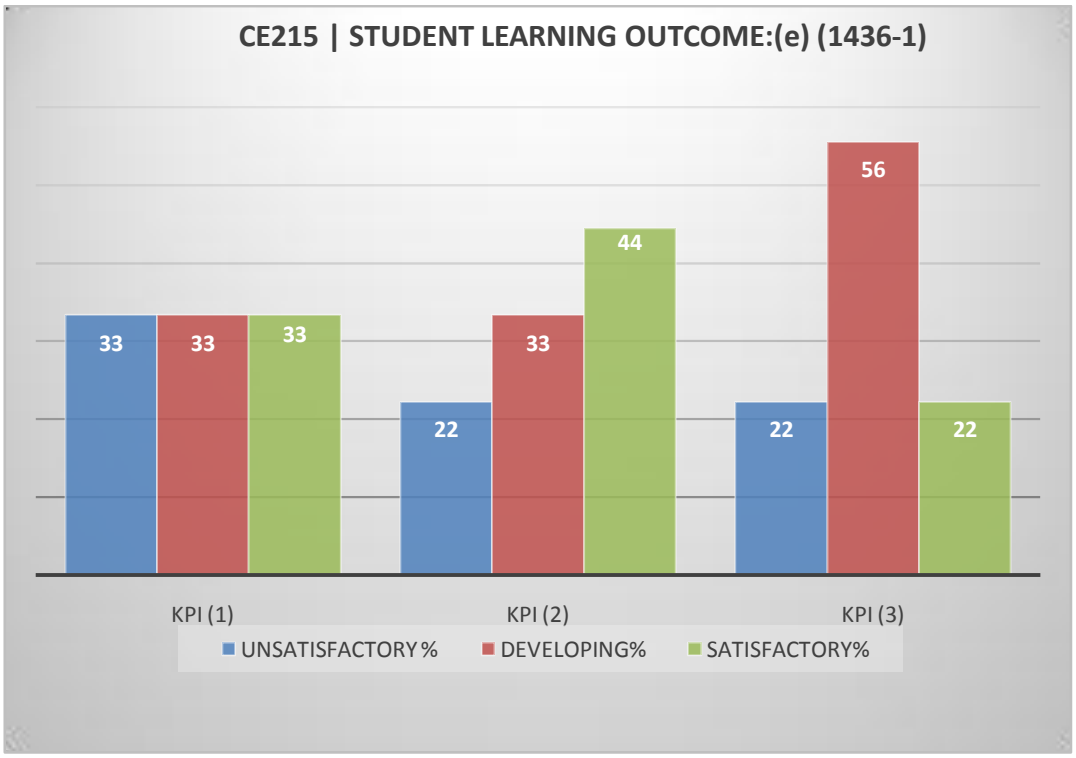
(A) Student Learning Outcome- Assessment Results

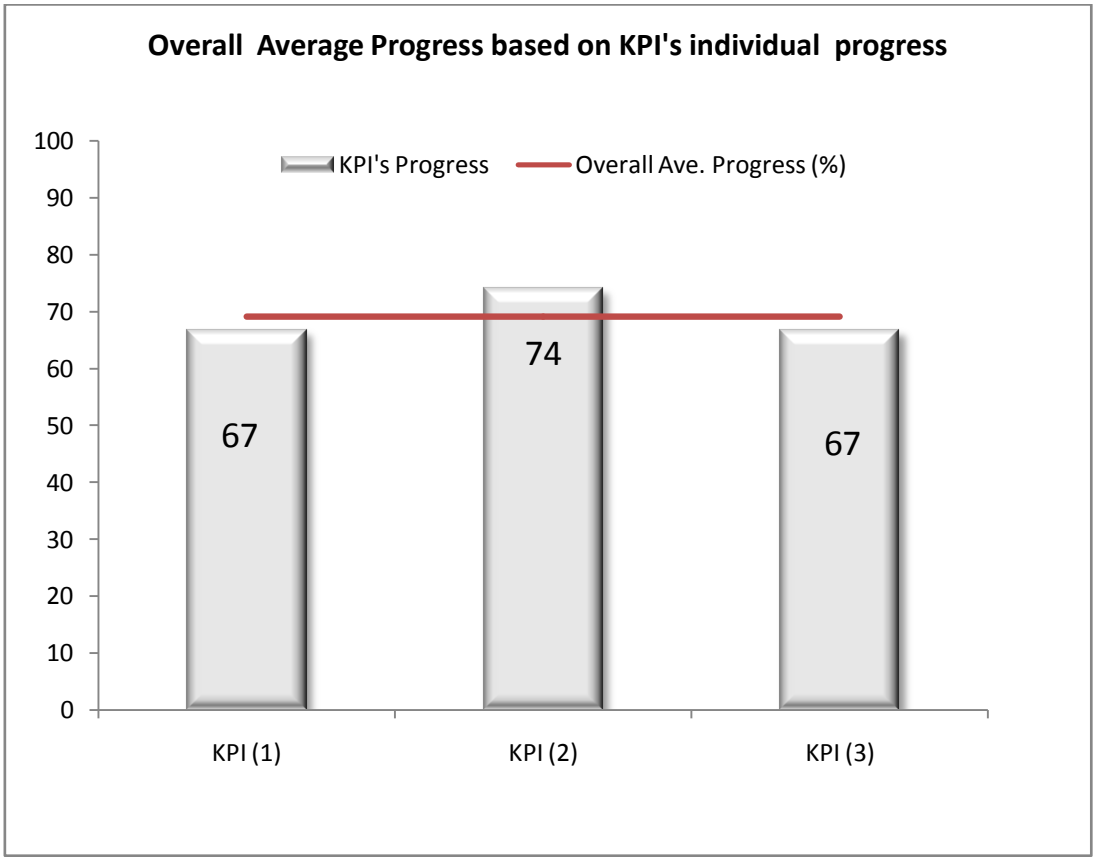
Code
MUP17

Learning Student Outcome Code: **(e)**
Course Number and Semester: **CE 215 - Semester (1) 36/1**
Number of Students: 9
Rubrics = 6

Target: ***An ability to identify, formulate, and solve engineering problems*.**

	Unsatisfactory		DEVELOPING		Satisfactory		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	3	33	3	33	3	33	2.00	67
KPI (2)	2	22	3	33	4	44	2.22	74
KPI (3)	2	22	5	56	2	22	2.00	67
Average		26		41		33		69




Overall Average Progress based on KPI's individual progress
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
67
74
67
KPI (1)
KPI (2)
KPI (3)

***Outcome (e)**: An ability to identify, formulate, and solve engineering problems*

Outcome e: An ability to identify, formulate, and solve engineering problems	Level 5: Satisfactory	Level 3: Developing	Level 1: Unsatisfactory
Solutions creativity alternatives	Demonstrates creative synthesis of solution and creates new alternatives by combining knowledge and information	Demonstrates solution with integration of diverse concepts or derivation of useful relationships involving ideas covered in course concepts; however, no alternative solutions are generated	Demonstrates solutions implementing simple applications of one formula or equation with close analogies to class/lecture problems
practical problem solving using theoretical concepts	Can relate theoretical concepts to practical problem solving	Connects theoretical concepts to practical problem-solving when prompted	Does not see the connection between theory and practical problem solving
predict and defend problem outcomes	Can predict and defend problem outcomes	Occasionally predicts and defends problem outcomes	Is unable to predict or defend problem outcomes
The uses of appropriate resources needed to solve problems	Uses appropriate resources to locate information needed to solve problems	Uses limited resources to solve problems	Uses no resources to solve problems
The integration of new information with previous knowledge	Takes new information and effectively integrates it with previous knowledge	Must be assisted in integrating previous knowledge and new information	Has no concept of how previous knowledge and new information relate
The understanding of how various pieces of the problem relate to each other and the whole	Demonstrates understanding of how various pieces of the problem relate to each other and the whole	Is missing some of the pieces of the whole problem	Does not realize when major components of the problem are missing
Strategies for solving problems	Formulates strategies for solving civil engineering problems	Has some strategies for problem-solving, but does not apply them consistently	Has no coherent strategies for problem solving
Correction of the answer	The answer is correct and properly labeled	The answer is nearly correct, but properly labeled (within reasonable and logical range of the correct answer-it's in the "ballpark")	The answer is incorrect and not checked for its reasonableness
Solutions: other ways	The solution is correct and checked in other ways when it can be; the interpretation is appropriate and makes sense	The solution is correct, but not checked in other ways	No attempt at checking the obviously incorrect solution--no commentary

(e)	
Ability to model engineering problems.	
KPI (1)	Solutions creativity alternatives
KPI (2)	practical problem solving using theoretical concepts
KPI (3)	predict and defend problem outcomes

This is will help as KPI's for this output

SLO #5	Ability to model engineering problems.
KPI (16)	Mini and major projects
KPI (17)	Evaluating students Prototypes introduced by students and testing their ability of problem validation. *(Engineering Application)*
KPI (18)	Use of computers for simulation and modeling
KPI (19)	Ability to identify key points of the project. Ability to formulate an approach to solve.

(A) Student Learning Outcome- Assessment Results

Code
MUP17

Learning Student Outcome Code: **(f)**
Course Number and Semester: **CE 362 - Semester (1) 36/1**
Number of Students: _____

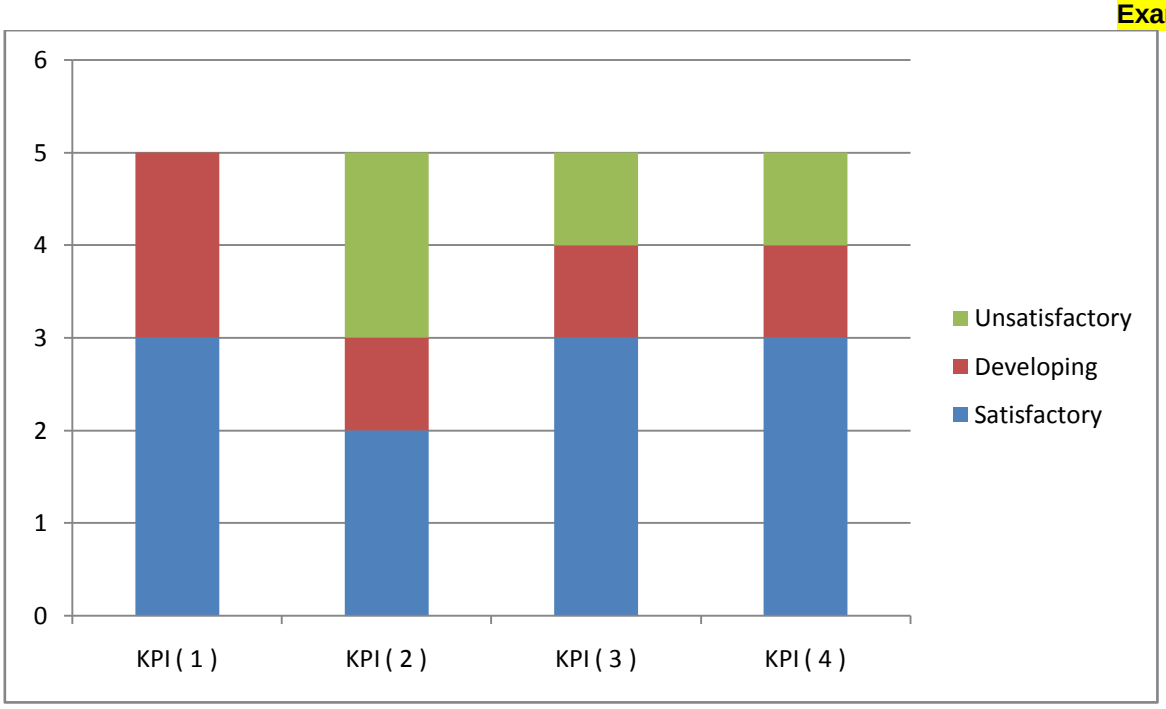
Target: ***An understanding of professional and ethical responsibility***

		Rubric		
		Satisfactory	**Developing**	**Unsatisfactory**
KPIs	KPI (1)	3	2	0
	KPI (2)	2	1	2
	KPI (3)	3	1	1
	KPI (4)	3	1	1

(5) Student Number

SLO as defined in CE 362 -CS:

Example



Outcome (f)*: *An understanding of professional and ethical responsibility

Rubric #6

	Satisfactory	Developing	Unsatisfactory
KPI (45)	Student understands and abides by the International Civil code of Ethics	Student is aware of the existence of the Civil engineering Code of Ethics and other bases for ethical behavior	Student is not aware of any civil engineering codes for ethical behavior
KPI (46)	Participates in class discussions and exercises on ethics and professionalism	Does not take the discussion of ethics seriously but is willing to accept its existence	Does not participate in or contribute to discussions of ethics; does not accept the need for professional ethics
KPI (47)	Demonstrates ethical behavior among peers and faculty	Does not model ethical behavior among peers and faculty	Student has been caught cheating or plagiarizing the work of others
KPI (48)	Takes personal responsibility for his/her actions	Doesn't recognize the need to take personal responsibility for his/her actions	Blames others for own issues and problems
KPI (49)	Is punctual, professional, and collegial; attends classes regularly	Sometimes exhibits unprofessional behavior; is sometimes absent from class without reason	Is frequently absent from class and is generally not collegial to fellow students, staff, and faculty
KPI (50)	Evaluates and judges a situation in practice or as a case study, using facts and a professional code of ethics	Evaluates and judges a situation in practice or as a case study using personal understanding of the situation, possibly applying a personal value system	Evaluates and judges a situation in practice or as a case study using a biased perspective without objectivity
KPI (51)	Uses personal value system to support actions, but understands the role of professional ethical standards for corporate decisions	Uses personal value system to support actions, but confuses personal ethics with professional ethics	Uses personal value system to support actions to the exclusion of all other ethical standards

(f)	
An ability to take professional and ethical responsibility	
KPI (1)	Civil Engineering code of Ethics understanding
KPI (2)	In class discussions and exercises on ethics and professionalism
KPI (3)	Ethical behavior among peers and faculty
KPI (4)	Personal responsibility for his/her actions

This is will help as KPI's for this output

SLO #6	An ability to take professional and ethical responsibility
KPI (20)	Recognize ethical issues involved in professional setting. *(Knowledge of Standardized Code of Ethics)*
KPI (21)	Understanding of professional responsibility (e.g,.safety, environmental, legal, regulatory, intellectual property, project management, risk) *(Being Objectivity)*
KPI (22)	Understanding of ethical responsibility (e.g., Code of Ethics defined civil engineering) + *(Behavior)*

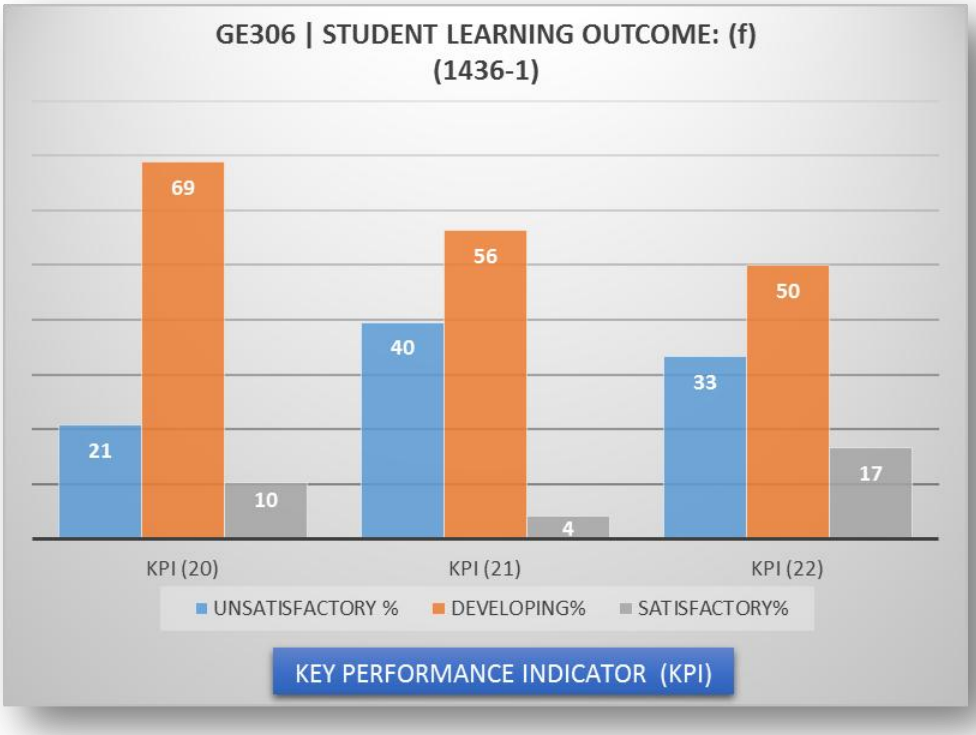
(A) Student Learning Outcome- Assessment Results

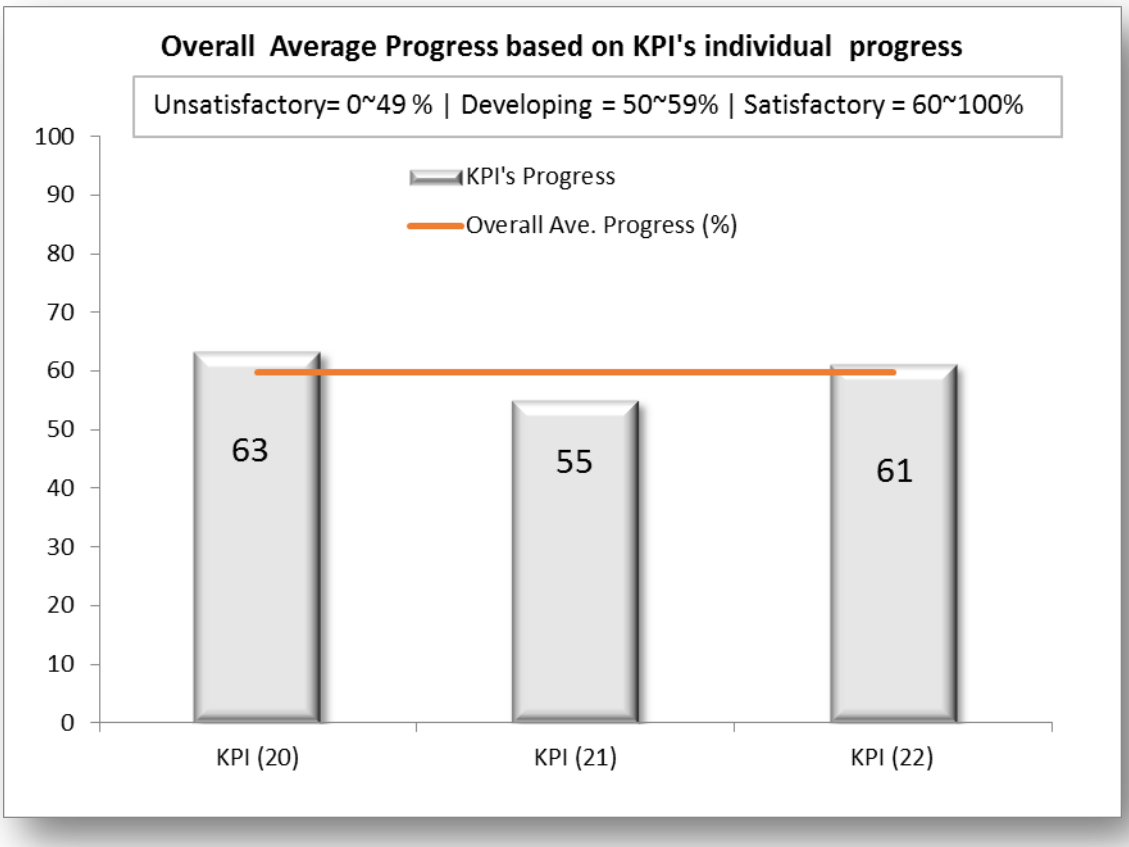
Code
MUP17

Learning Student Outcome Code: **(f)**
Course Number and Semester: **GE 306 - Semester (1) 36/1**
Number of Students: 48
Rubrics = 6

Target: ***An understanding of professional and ethical responsibility***

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (20)	10	21	33	69	5	10	1.90	63
KPI (21)	19	40	27	56	2	4	1.65	55
KPI (22)	16	33	24	50	8	17	1.83	61
Average		31		58		10		60




Overall Average Progress based on KPI's individual progress
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
100
90
80
70
60
50
40
30
20
10
0
KPI's Progress
Overall Ave. Progress (%)
63
55
61
KPI (20)
KPI (21)
KPI (22)

Outcome (f)*: *An understanding of professional and ethical responsibility

Rubric #6

	Satisfactory	Developing	Unsatisfactory
KPI (45)	Student understands and abides by the International Civil code of Ethics	Student is aware of the existence of the Civil engineering Code of Ethics and other bases for ethical behavior	Student is not aware of any civil engineering codes for ethical behavior
KPI (46)	Participates in class discussions and exercises on ethics and professionalism	Does not take the discussion of ethics seriously but is willing to accept its existence	Does not participate in or contribute to discussions of ethics; does not accept the need for professional ethics
KPI (47)	Demonstrates ethical behavior among peers and faculty	Does not model ethical behavior among peers and faculty	Student has been caught cheating or plagiarizing the work of others
KPI (48)	Takes personal responsibility for his/her actions	Doesn't recognize the need to take personal responsibility for his/her actions	Blames others for own issues and problems
KPI (49)	Is punctual, professional, and collegial; attends classes regularly	Sometimes exhibits unprofessional behavior; is sometimes absent from class without reason	Is frequently absent from class and is generally not collegial to fellow students, staff, and faculty
KPI (50)	Evaluates and judges a situation in practice or as a case study, using facts and a professional code of ethics	Evaluates and judges a situation in practice or as a case study using personal understanding of the situation, possibly applying a personal value system	Evaluates and judges a situation in practice or as a case study using a biased perspective without objectivity
KPI (51)	Uses personal value system to support actions, but understands the role of professional ethical standards for corporate decisions	Uses personal value system to support actions, but confuses personal ethics with professional ethics	Uses personal value system to support actions to the exclusion of all other ethical standards

(f)	
An ability to take professional and ethical responsibility	
KPI (1)	Civil Engineering code of Ethics understanding
KPI (2)	In class discussions and exercises on ethics and professionalism
KPI (3)	Ethical behavior among peers and faculty
KPI (4)	Personal responsibility for his/her actions

This is will help as KPI's for this output

SLO #6	An ability to take professional and ethical responsibility
KPI (20)	Recognize ethical issues involved in professional setting. *(Knowledge of Standardized Code of Ethics)*
KPI (21)	Understanding of professional responsibility (e.g,.safety, environmental, legal, regulatory, intellectual property, project management, risk) *(Being Objectivity)*
KPI (22)	Understanding of ethical responsibility (e.g., Code of Ethics defined civil engineering) + *(Behavior)*

(A) Student Learning Outcome- Assessment Results

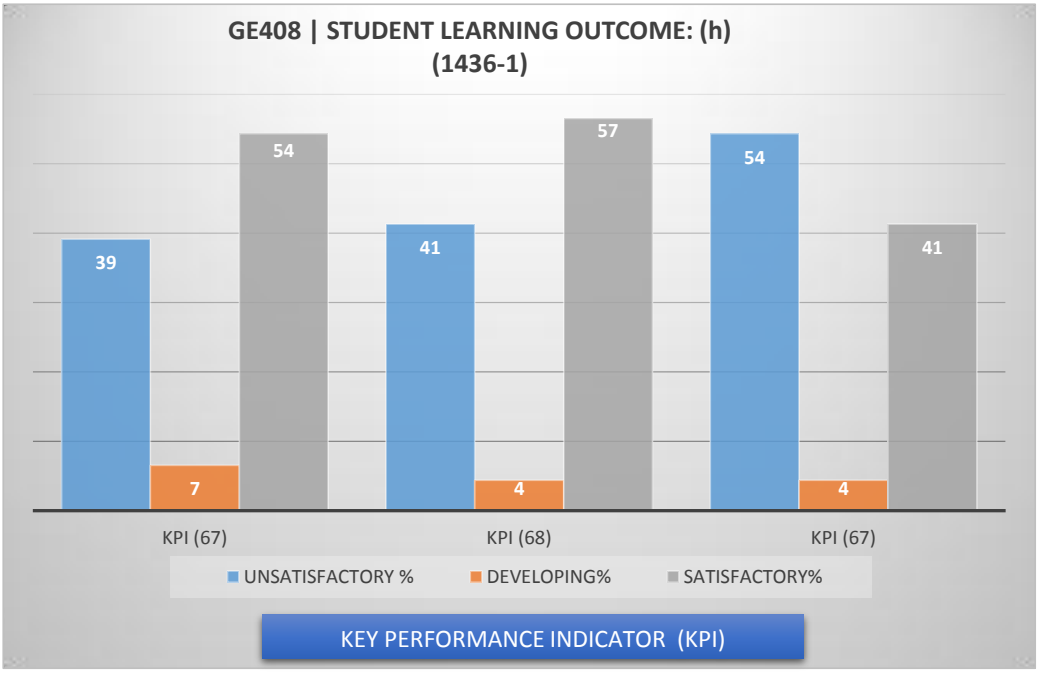
Code
MUP17

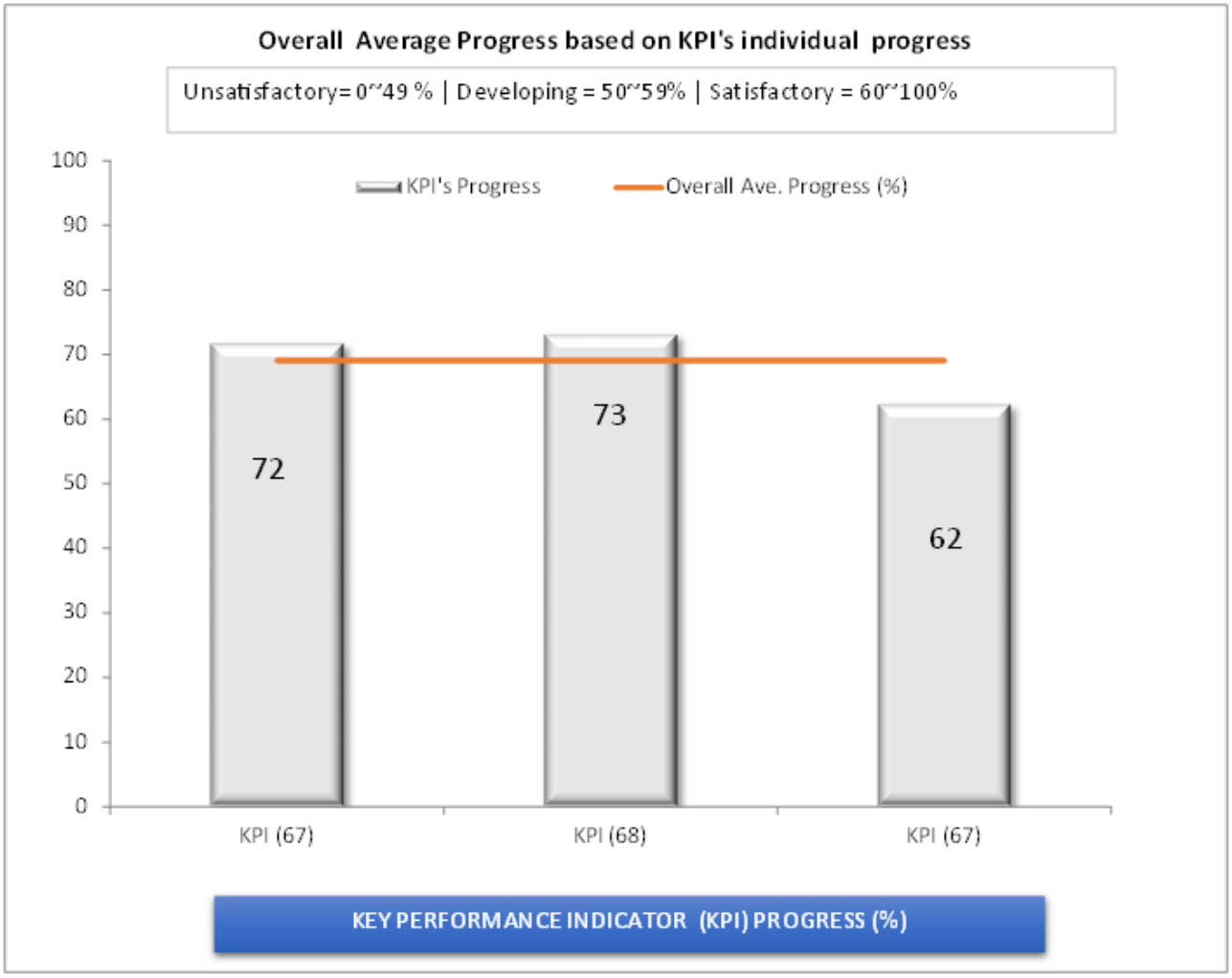
Learning Student Outcome Code: **(h)**
Course Number and Semester: **GE 408 - Semester (1) 36/1**
Number of Students: 46

Target: ***An ability to account for environmental, economic and safety factors in solving engineering problems***

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (67)	18	39	3	7	25	54	2.15	72
KPI (68)	19	41	2	4	26	57	2.20	73
KPI (67)	25	54	2	4	19	41	1.87	62
KPI (68)	18	39	5	11	23	50	2.11	70
Average		45		5		51		69

SLO as defined in GE408 -CS:




Overall Average Progress based on KPI's individual progress
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
72
73
62
KPI (67)
KPI (68)
KPI (67)
KEY PERFORMANCE INDICATOR (KPI) PROGRESS (%)

Outcome (h): the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context

Rubric
#8

	Satisfactory	Developing	Unsatisfactory
KPI (67)	Is familiar with the current trends in the civil and environmental engineering discipline	Is aware of current events in society	Is unaware of current events
KPI (68)	Respects the historical aspects of civil engineering solutions and their impacts	Is aware of historical aspects of civil engineering solutions, but is not influenced by them	Is unaware of historical effect of civil engineering solutions
KPI (69)	Reads and is familiar with the content of periodicals that are relevant to understanding the global and societal impact of civil engineering	Is aware of the existence of technical periodicals - would know where to look to find them	Is not familiar with any technical periodicals
KPI (70)	Has a personal perspective on the importance (or lack thereof) of civil engineering in today's world	Is interested in civil engineering because of what the discipline offers him/her personally	Isn't sure why he/she is studying civil engineering

(h)	
An ability to account for environmental, economic and safety factors in solving engineering problems	
KPI (1)	Awareness of current trends and events
KPI (2)	Historical aspects of engineering solutions
KPI (3)	Technical periodicals
KPI (4)	Personal Perspective in civil engineering

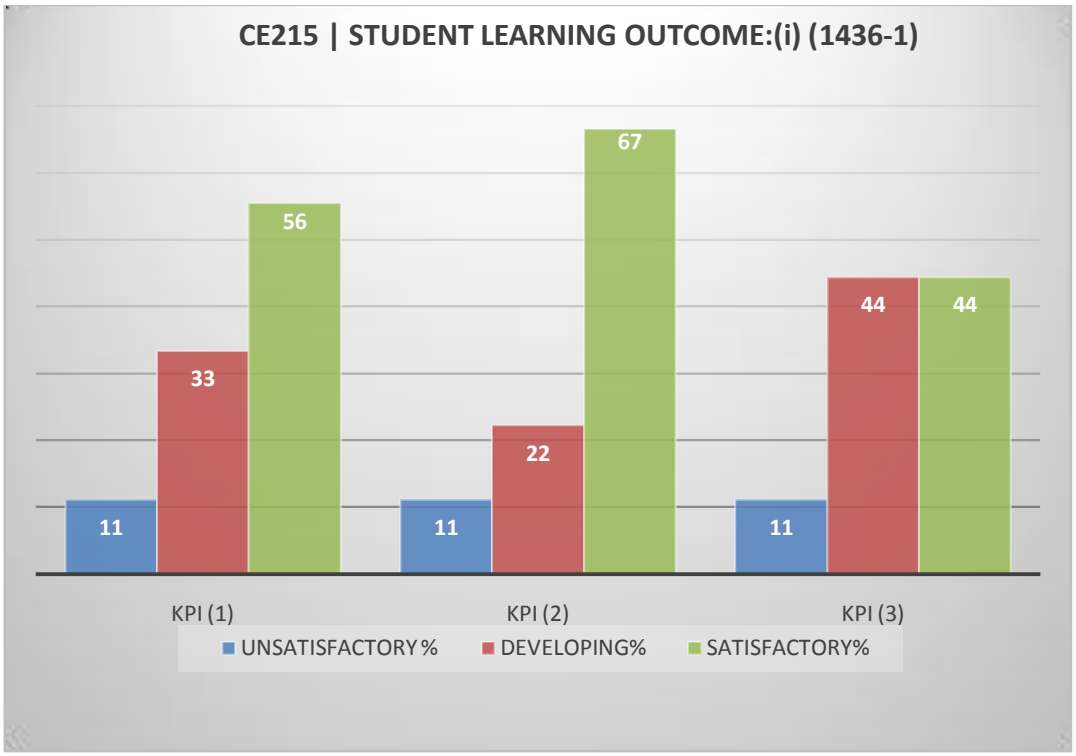
This is will help as KPI's for this output

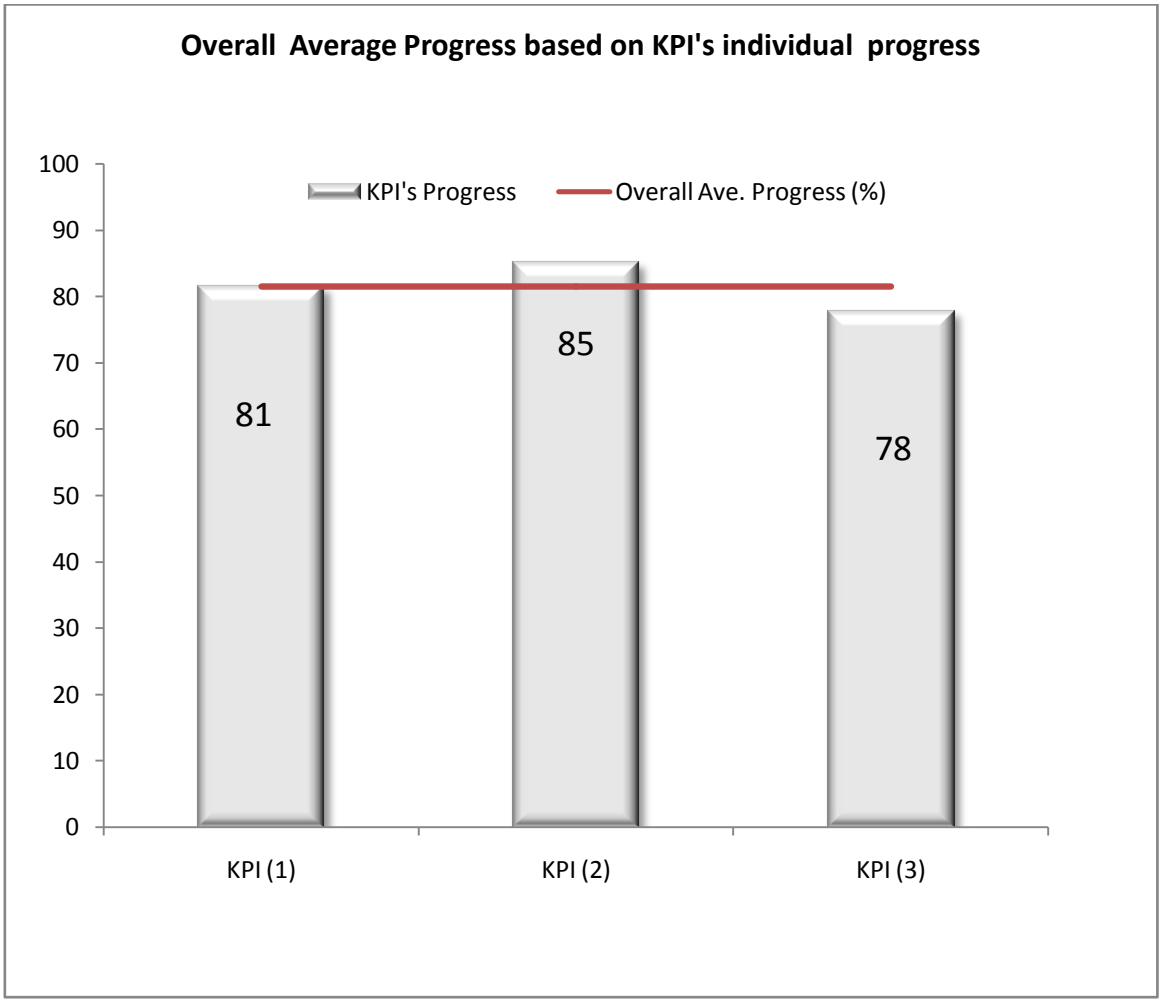
SLO #8	An ability to account for environmental, economic and safety factors in solving engineering problems
KPI (27)	Conducting workshops, painting competitions, poster presentation that reflects his awareness with the global environmental, economic and safety factors. *(Valuation of Engineering Discipline*
KPI (28)	Invited lectures by experts of relevant field *(Measure student's knowledge of historical and technical aspects)*

Learning Student Outcome Code: **(i)**

Course Number and Semester: **CE 215 - Semester (1) 36/1**
Number of Students: 9
Rubrics = 6

Target: ***a recognition of the need for and an ability to engage in lifelong learning***




Overall Average Progress based on KPI's individual progress
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
81
85
78
KPI (1)
KPI (2)
KPI (3)

***Outcome (i)*: : a recognition of the need for and an ability to engage in lifelong learning**

Outcome i: a recognition of the need for and an ability to engage in lifelong learning	Level 5: Satisfactory	Level 3: Developing	Level 1: Unsatisfactory
Independent learning	Demonstrates ability to learn independently	Requires guidance as to expected outcome of task or project	Requires detailed or step-by-step instructions to complete a task
Assignment completion	Goes beyond what is required in completing an assignment and brings information from outside sources into assignments	Completes only what is required	Has trouble completing even the minimum required tasks
Continuous improvement	Learns from mistakes and practices continuous improvement	Sometimes is able to avoid repeating the same mistakes	Is unable to recognize own shortcomings or deficiencies
Capability to think for one's self	Demonstrates capability to think for one's self	Does not always take responsibility for own learning	Assumes that all learning takes place within the confines of the class
Responsibility for creating one's own learning opportunities	Demonstrates responsibility for creating one's own learning opportunities	Seldom brings information from outside sources to assignments	Shows little or no interest in outside learning resources
Applying learned materials and concepts in a format different from that taught in class	Is able to understand, interpret, and apply learned materials and concepts in a format different from that taught in class (e.g. different nomenclature, understand equation from different textbook)	Has some trouble using materials and concepts that are in a different format from that taught in class	Cannot use materials outside of what is explained in class
Participation in professional and technical societies	Participates and takes a leadership role in professional and technical societies available to the student body	Occasionally participates in the activities of local professional and technical societies	Does not show any interest in professional and/or technical societies

(i)	
An ability to engage in life-long learning	
KPI (1)	**Independent learning**
KPI (2)	**Assignment completion**
KPI (3)	**Continuous improvement**

This is will help as KPI's for this output

SLO #9	An ability to engage in life-long learning
KPI (29)	Reading of technical magazines, Journals, and research articles. *(Initiative – Development)*
KPI (30)	Group discussions, debates, role play, and participation in workshops and conferences
KPI (31)	Description / discussion of use of external sources of information to complete class projects and other problem solving tasks. *(Outside Sources)*
KPI (32)	Awareness of learning activities outside of the classroom, including participation in professional and technical societies learning, communities, industry experiences.

(A) Student Learning Outcome- Assessment Results

Code
MUP17

Learning Student Outcome Code: **(i)**
Course Number and Semester: **CE 360 - Semester (1) 36/1**
Number of Students: _____

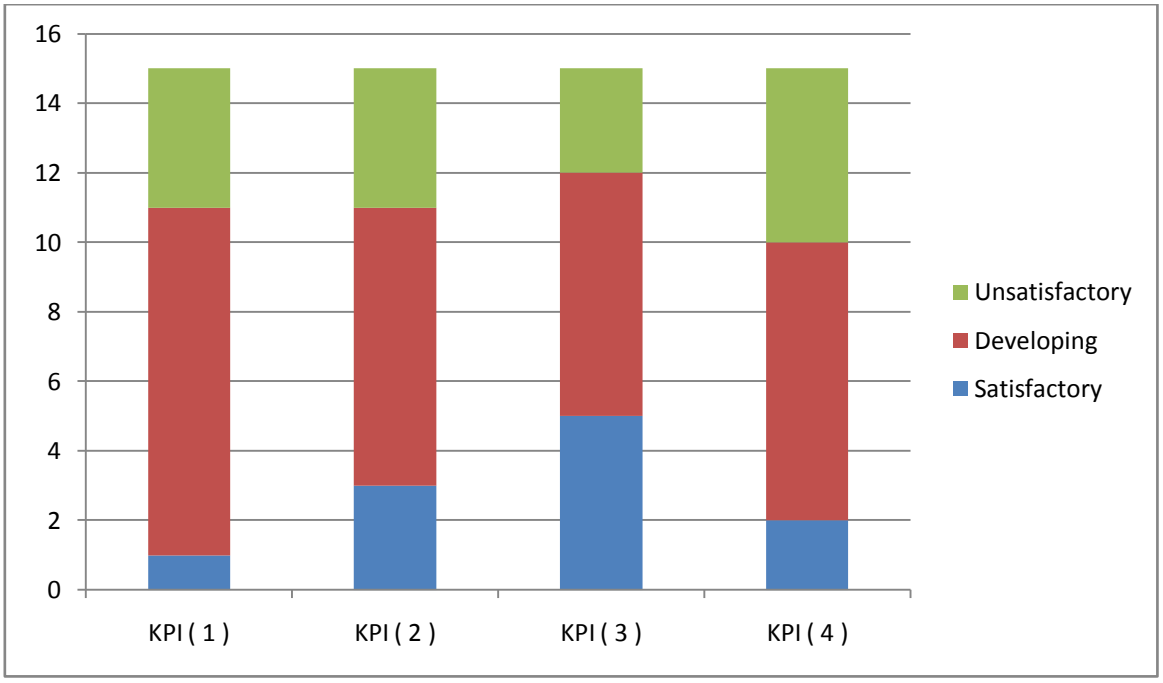
Target: ***An ability to engage in life-long learning***

		Rubric		
		Satisfactory	**Developing**	**Unsatisfactory**
KPIs	KPI (1)	1	10	4
	KPI (2)	3	8	4
	KPI (3)	5	7	3
	KPI (4)	2	8	5

(**15**) Student Number

SLO as defined in CE360 -CS:

Example



***Outcome (i)*: An ability to engage in life-long learning**

Rubric #9

	Satisfactory	Developing	Unsatisfactory
KPI (71)	Demonstrates ability to learn independently	Requires guidance as to expected outcome of task or project	Requires detailed or step-by-step instructions to complete a task
KPI (72)	Goes beyond what is required in completing an assignment and brings information from outside sources into assignments	Completes only what is required	Has trouble completing even the minimum required tasks
KPI (73)	Learns from mistakes and practices continuous improvement	Sometimes is able to avoid repeating the same mistakes	Is unable to recognize own shortcomings or deficiencies
KPI (74)	Demonstrates capability to think for one's self	Does not always take responsibility for own learning	Assumes that all learning takes place within the confines of the class
KPI (75)	Demonstrates responsibility for creating one's own learning opportunities	Seldom brings information from outside sources to assignments	Shows little or no interest in outside learning resources
KPI (76)	Is able to understand, interpret, and apply learned materials and concepts in a format different from that taught in class (e.g. different nomenclature, understand equation from different textbook)	Has some trouble using materials and concepts that are in a different format from that taught in class	Cannot use materials outside of what is explained in class
KPI (77)	Participates and takes a leadership role in professional and technical societies available to the student body	Occasionally participates in the activities of local professional and technical societies	Does not show any interest in professional and/or technical societies

(i)	
An ability to engage in life-long learning	
KPI (1)	Independent learning
KPI (2)	Assignment completion
KPI (3)	Continuous improvement
KPI (4)	Capability to think for one's self

This is will help as KPI's for this output

SLO #9	An ability to engage in life-long learning
KPI (29)	Reading of technical magazines, Journals, and research articles. *(Initiative – Development)*
KPI (30)	Group discussions, debates, role play, and participation in workshops and conferences
KPI (31)	Description / discussion of use of external sources of information to complete class projects and other problem solving tasks. *(Outside Sources)*
KPI (32)	Awareness of learning activities outside of the classroom, including participation in professional and technical societies learning, communities, industry experiences.

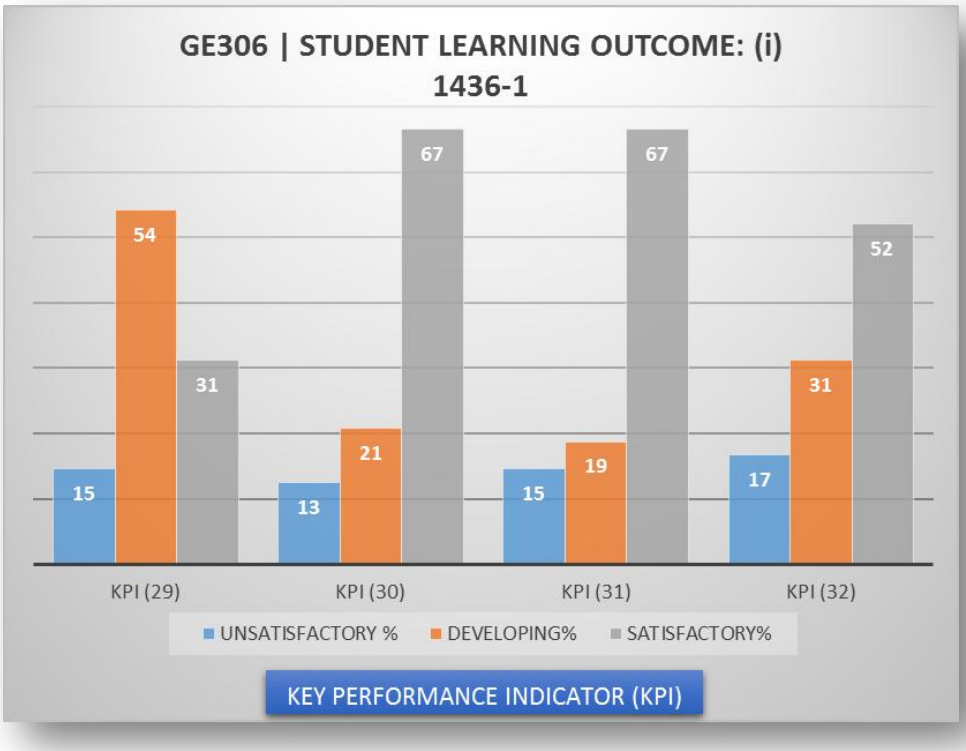
(A) Student Learning Outcome- Assessment Results

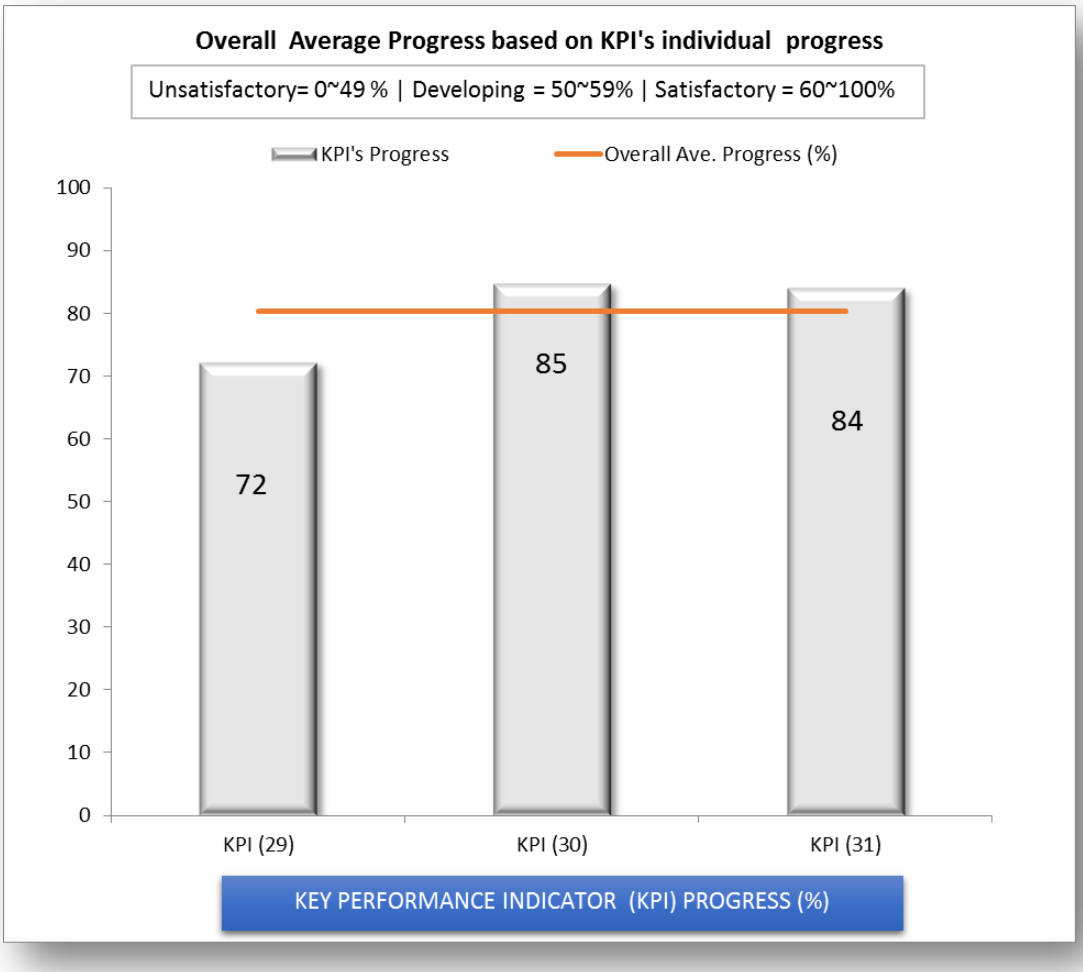
Code
MUP17

Learning Student Outcome Code: **(i)**
Course Number and Semester: **GE 306 - Semester (1) 36/1**
Number of Students: 48
Rubrics = 9

Target: ***An ability to engage in life-long learning***

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (29)	7	15	26	54	15	31	2.17	72.22
KPI (30)	6	13	10	21	32	67	2.54	84.72
KPI (31)	7	15	9	19	32	67	2.52	84.03
KPI (32)	8	17	15	31	25	52	2.35	78.47
Average		15		31		54		80




Overall Average Progress based on KPI's individual progress
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
72
85
84
KPI (29)
KPI (30)
KPI (31)
KEY PERFORMANCE INDICATOR (KPI) PROGRESS (%)

***Outcome (i)*: An ability to engage in life-long learning**

Rubric #9

	Satisfactory	Developing	Unsatisfactory
KPI (71)	Demonstrates ability to learn independently	Requires guidance as to expected outcome of task or project	Requires detailed or step-by-step instructions to complete a task
KPI (72)	Goes beyond what is required in completing an assignment and brings information from outside sources into assignments	Completes only what is required	Has trouble completing even the minimum required tasks
KPI (73)	Learns from mistakes and practices continuous improvement	Sometimes is able to avoid repeating the same mistakes	Is unable to recognize own shortcomings or deficiencies
KPI (74)	Demonstrates capability to think for one's self	Does not always take responsibility for own learning	Assumes that all learning takes place within the confines of the class
KPI (75)	Demonstrates responsibility for creating one's own learning opportunities	Seldom brings information from outside sources to assignments	Shows little or no interest in outside learning resources
KPI (76)	Is able to understand, interpret, and apply learned materials and concepts in a format different from that taught in class (e.g. different nomenclature, understand equation from different textbook)	Has some trouble using materials and concepts that are in a different format from that taught in class	Cannot use materials outside of what is explained in class
KPI (77)	Participates and takes a leadership role in professional and technical societies available to the student body	Occasionally participates in the activities of local professional and technical societies	Does not show any interest in professional and/or technical societies

(i)	
An ability to engage in life-long learning	
KPI (1)	Independent learning
KPI (2)	Assignment completion
KPI (3)	Continuous improvement
KPI (4)	Capability to think for one's self

This is will help as KPI's for this output

SLO #9	An ability to engage in life-long learning
KPI (29)	Reading of technical magazines, Journals, and research articles. *(Initiative – Development)*
KPI (30)	Group discussions, debates, role play, and participation in workshops and conferences
KPI (31)	Description / discussion of use of external sources of information to complete class projects and other problem solving tasks. *(Outside Sources)*
KPI (32)	Awareness of learning activities outside of the classroom, including participation in professional and technical societies learning, communities, industry experiences.

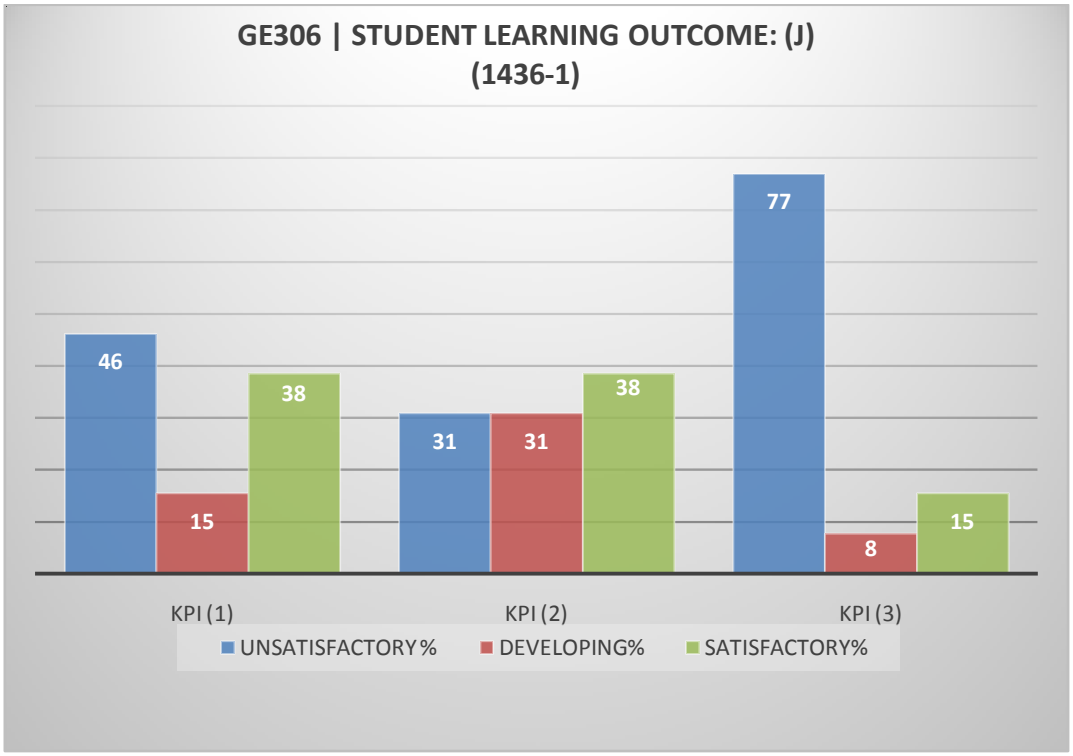
(A) Student Learning Outcome- Assessment Results

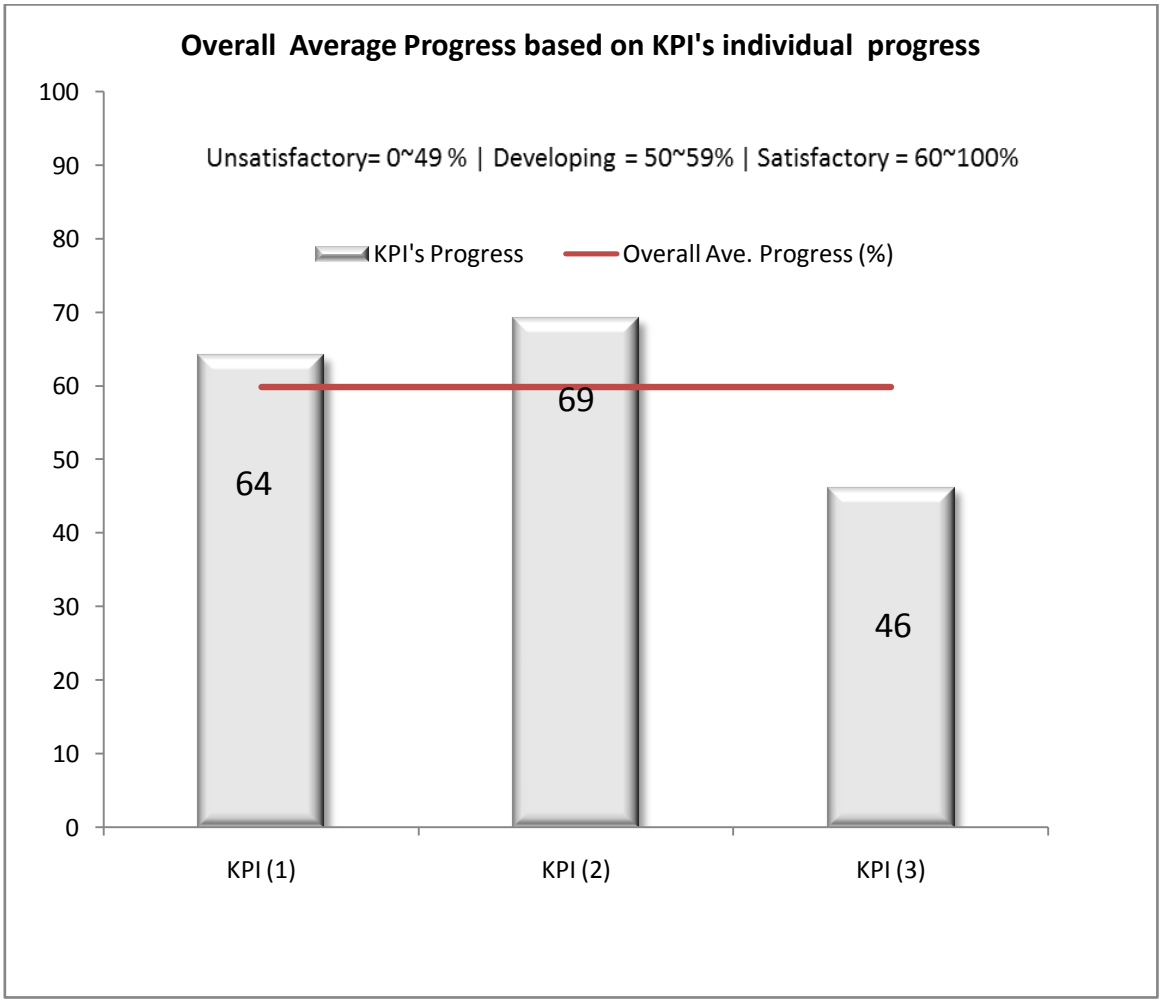
Code
MUP17

Learning Student Outcome Code: **(j)**
Course Number and Semester: **CEE 421 - Semester (1) 36/1**
Number of Students: 13
Rubrics = 10

Target: ***a knowledge of contemporary issues***

	Unsatisfactory		DEVELOPING		Satisfactory		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (1)	6	46	2	15	5	38	1.92	64
KPI (2)	4	31	4	31	5	38	2.08	69
KPI (3)	10	77	1	8	2	15	1.38	46
Average		51		18		31		60




Overall Average Progress based on KPI's individual progress
Unsatisfactory= 0~49 % | Developing = 50~59% | Satisfactory = 60~100%
KPI's Progress
Overall Ave. Progress (%)
100
90
80
70
60
50
40
30
20
10
0
64
69
46
KPI (1)
KPI (2)
KPI (3)

***Outcome (j)**: a knowledge of contemporary issues*

Rubric
#10

Outcome j: a knowledge of contemporary issues	Level 5: Satisfactory	Level 3: Developing	Level 1: Unsatisfactory
knowledge of current events in the computer engineering discipline	Has knowledge of current events in the civil engineering discipline and in society	Has some knowledge of current events	Has no clue about issues and events in the world
Current job market	Has a good perspective on the current job market	Has a somewhat narrow perspective on the current job market	Hopes that a job will fall into his/her lab
Ability to discuss major political issues at national, state and local levels	Able to discuss in-depth major political issues at national, state and local levels • Can summarize essence of several issues; take and defend a position on them • Is able to evaluate political solutions, or scenarios using a series of different measures - e.g., economic, quality of life; number of individuals affected; political ramifications; etc.	Able to comment on major political issues, but is not familiar enough with them to defend a position on them • Can summarize the facts of the issues • Can only comment on possible alternative political solutions, or scenarios using a few different measures - e.g., economic, quality of life; number of individuals affected; political ramifications; etc.	Unable to comment on political solutions or is unaware of world and local happenings

	(j)
	An ability to demonstrate knowledge of contemporary engineering issues
KPI (1)	knowledge of current events in the computer engineering discipline
KPI (2)	Current job market
KPI (3)	Ability to discuss major political issues at national, state and local levels

This is will help as KPI's for this output

SLO #10	An ability to demonstrate knowledge of contemporary engineering issues
KPI (33)	Solving engineering problems by applying theoretical knowledge and technical software's
KPI (34)	Undertake special projects/research projects to deal with contemporary issues
KPI (35)	Design of products and software's according to industrial need

(A) Student Learning Outcome- Assessment Results

Code MUP17

Learning Student Outcome Code: **(j)**
Course Number and Semester: **CE 241 - Semester (1) 36/1**
Number of Students: ___17_____

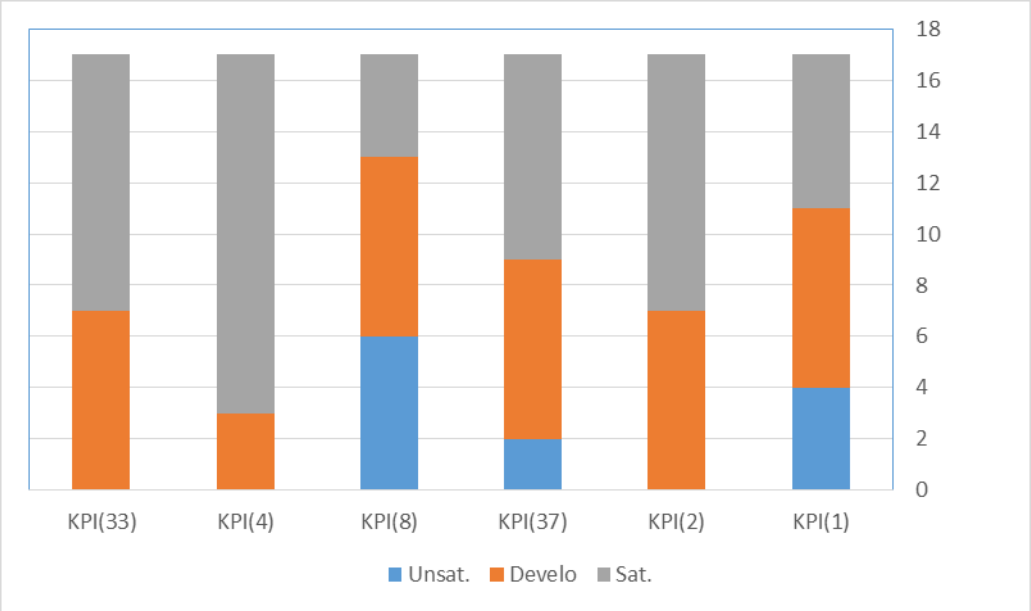
Target: **An ability to demonstrate *knowledge of* contemporary engineering *issues***

		Rubric		
		Satisfactory	**Developing**	**Unsatisfactory**
KPIs	KPI (1)	(6)	(7)	(4.)
	KPI (2)	(10)	(7)	(-.)
	KPI (37)	(8)	(7)	(2)
	KPI (8)	(4)	(7)	(6)
	KPI (4)	(14)	(3)	(-)
	KPI (33)	(10)	(7)	(-)

(.17) Student Number

SLO as defined in CE241 -CS:

C1	Ability to apply knowledge of fluid mechanics, hydraulics, and engineering to design of pipes and open channels.
C2	Understanding of professional and ethical responsibility.
C3	Ability to use the techniques, skills, and modern engineering tools necessary for hydraulic engineering practice.
C4	Ability to design a system, component, or process.
C5	Ability to design and conduct experiments, as well as to analyze and interpret data.
C6	Prepare and deliver an oral presentation about a topic of current interests in the field of water resources.



Outcome (j)*: *a knowledge of contemporary issues

Rubric #10

	Satisfactory	Developing	Unsatisfactory
KPI (78)	Has knowledge of current events in the civil engineering discipline and in society	Has some knowledge of current events	Has no clue about issues and events in the world
KPI (79)	Has a good perspective on the current job market	Has a somewhat narrow perspective on the current job market	Hopes that a job will fall into his/her lab
KPI (80)	Able to discuss in-depth major political issues at national, state and local levels • Can summarize essence of several issues; take and defend a position on them • Is able to evaluate political solutions, or scenarios using a series of different measures - e.g., economic, quality of life; number of individuals affected; political ramifications;	Able to comment on major political issues, but is not familiar enough with them to defend a position on them • Can summarize the facts of the issues • Can only comment on possible alternative political solutions, or scenarios using a few different measures - e.g., economic, quality of life; number of individuals affected;	Unable to comment on political solutions or is unaware of world and local happenings

	etc.	political ramifications; etc.	

	(j)
	A knowledge of contemporary issues
KPI (1)	knowledge of current events in the computer engineering discipline
KPI (2)	Current job market
KPI (3)	Ability to discuss major political issues at national, state and local levels

KPI's for this outcome

SLO #10	An ability to demonstrate knowledge of contemporary engineering issues
KPI (33)	Solving engineering problems by applying theoretical knowledge and technical software's
KPI (34)	Undertake special projects/research projects to deal with contemporary issues
KPI (35)	Design of products and software's according to industrial need

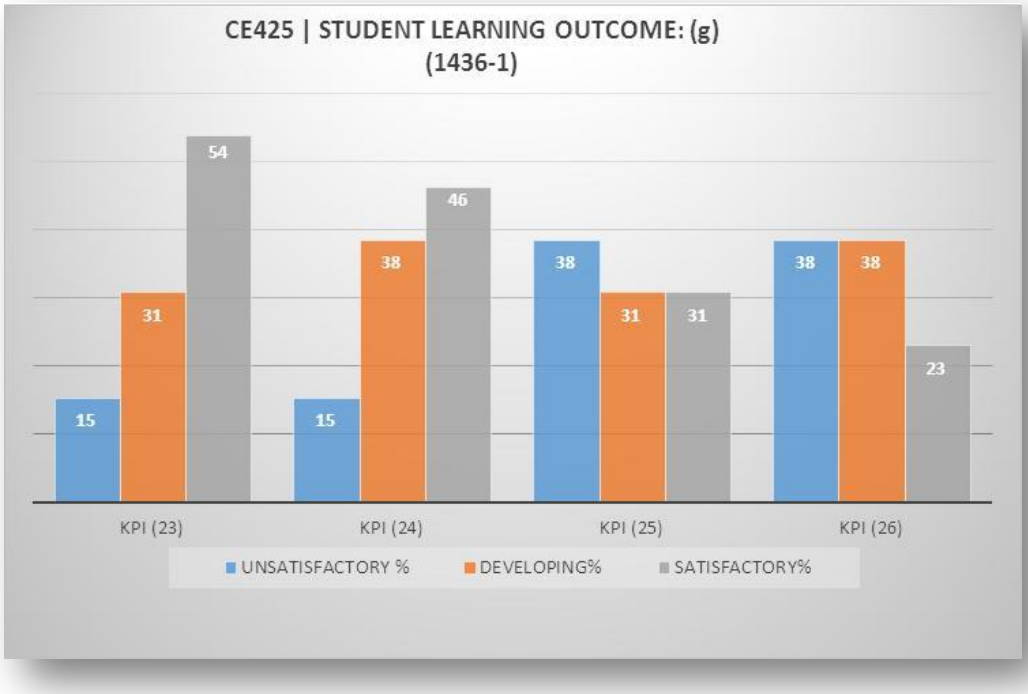
(A) Student Learning Outcome- Assessment Results

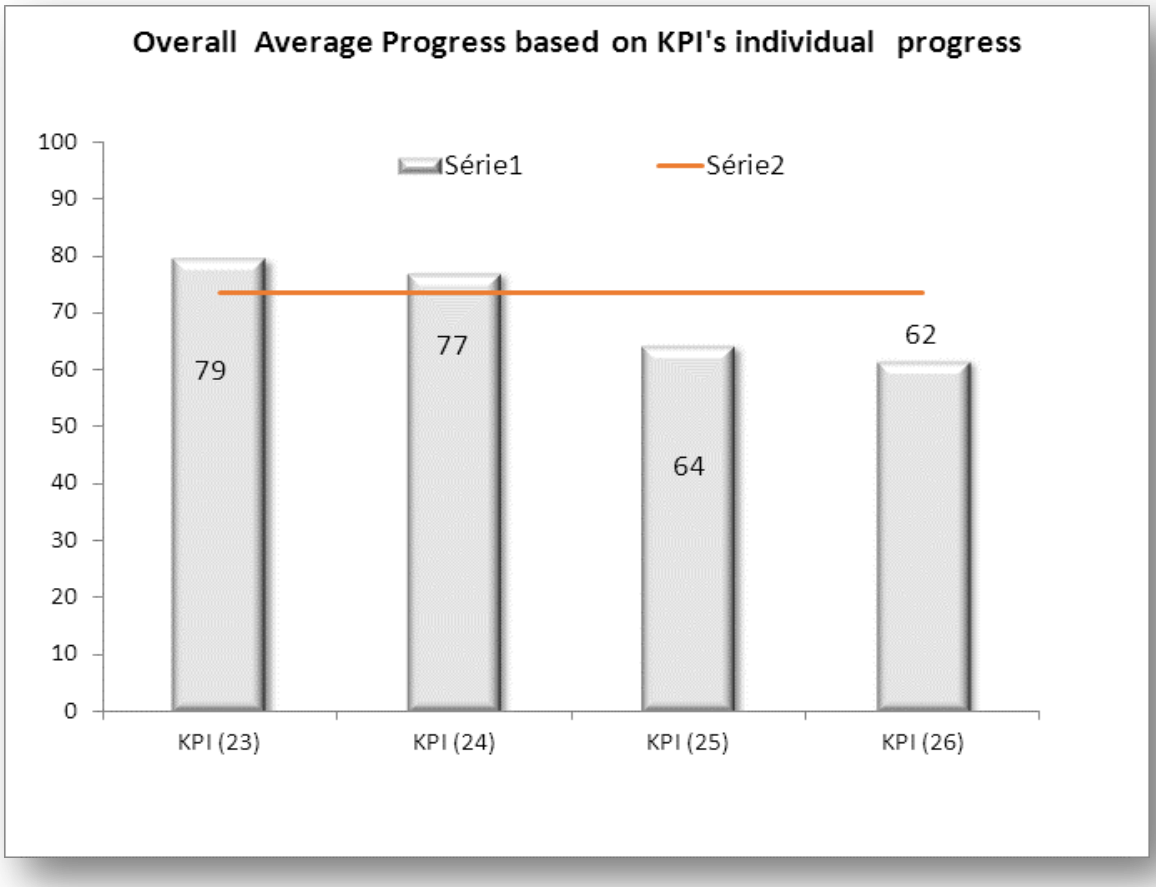
Code
MUP17

Learning Student Outcome Code: **(g)**
Course Number and Semester: **CE 425 - Semester (1) 36/1**
Number of Students: 13
Rubrics = 7

Target: ***An ability to communicate effectively***

	UNSATISFACTORY		DEVELOPING		SATISFACTORY		Average Score Level	%age Progress
Score Level	1		2		3			
	Student	%	Student	%	Student	%		
KPI (23)	2	15	4	31	7	54	2.38	79
KPI (24)	2	15	5	38	6	46	2.31	77
KPI (25)	5	38	4	31	4	31	1.92	64
KPI (26)	5	38	5	38	3	23	1.85	62
Average		23		33		44		74




Overall Average Progress based on KPI's individual progress
100
90
80
70
60
50
40
30
20
10
0
Série1
Série2
79
77
64
62
KPI (23)
KPI (24)
KPI (25)
KPI (26)

***Outcome (g)*: An ability to communicate effectively (written)**

Rubric #7

	Satisfactory	Developing	Unsatisfactory
KPI (52)	Articulates ideas clearly and concisely	Articulates ideas, but writing is somewhat disjointed, superfluous or difficult to follow	Text rambles, points made are only understood with repeated reading, and key points are not organized
KPI (53)	Organizes written materials in a logical sequence to enhance the reader's comprehension (paragraphs, subheading, etc.)	Material are generally organized well, but paragraphs combine multiple thoughts or sections and sub-sections are not identified clearly	Little or no structure or organization; no subheadings or proper paragraph structure used
KPI (54)	Uses graphs, tables, and diagrams to support points-to explain, interpret, and assess information	Uses graphs, tables, and diagrams, but only in a few instances are they applied to support, explain or interpret information	Graphs, tables or diagrams are used, but no reference is made to them
KPI (55)	Written work is presented neatly and professionally	Work is not neatly presented throughout	Work is not presented neatly
KPI (56)	Grammar and spelling are correct	One or two spelling/grammar errors per page	Spelling/grammar errors present throughout more than 1/3 of the paper
KPI (57)	Figures are all in proper format	Figures are present but are flawed-axes mislabeled, no data points, etc.	No figures or graphics are used at all
KPI (58)	Uses good professional writing style	Style is informal or inappropriate, jargon is used, improper voice, tense…	The writing style is inappropriate for the audience and for the assignment
KPI (59)	Conforms to the prescribed format (if any)	The prescribed format is only followed in some portions of the paper	The prescribed format is not followed

***Outcome (g)*: An ability to communicate effectively (oral)**

Rubric #7

	Satisfactory	Developing	Unsatisfactory
KPI (60)	Plans and delivers an oral presentation effectively; applies the principle of "(tell them)3" -- well organized	Presents key elements of an oral presentation adequately, but "tell them" not clearly applied	Talk is poorly organized, e.g. no clear introduction or summary of talk is presented
KPI (61)	Presentation has enough detail appropriate and technical content for the time constraint and the audience	Presentation contains excessive or insufficient detail for time allowed or level of audience	Presentation is inappropriately short or excessively long; omits key results during presentation
KPI (62)	Presents well mechanically: • Makes eye contact • Can be easily heard • Speaks comfortably with minimal prompts (notecards) • Does not block screen • No distracting nervous habits	Has some minor difficulties with the mechanical aspects of the presentation • Eye contact is sporadic • Occasionally difficult to hear or understand speaking • Overuses prompts or does not use prompts enough-occasionally stumbles or loses place; appears to have memorized presentation • Occasionally blocks screen • Some nervous habits (um, ah, clicking pointer, etc.)	Major difficulties with the mechanical aspects of the presentation • No eye contact • Difficult to hear or understand speaking • Reads from prepared script • Blocks the screen • Distracting nervous habits (um, ah, clicking pointer, etc.)
KPI (63)	Uses proper American English	Occasionally uses an inappropriate style of English-too conversational	Uses poor English
KPI (64)	Uses visual aides effectively	Visual aides have minor errors or are not always clearly visible	Multiple slides are unclear or incomprehensible
KPI (65)	Professional appearance	Appearance is too casual for the circumstances	Appearance is inappropriate
KPI (66)	Listens carefully and responds to questions appropriately; is able to explain and interpret results for various audiences and purposes	Sometimes misunderstands questions, does not respond appropriately to the audience, or has some trouble answering questions	Does not listen carefully to questions, does not provide an appropriate answer, or is unable to answer questions about presentation material

(g)	
An ability to communicate effectively	
KPI (1)	Articulation of ideas
KPI (2)	The organization of the written materials
KPI (3)	Oral presentation delivery
KPI (4)	Presentation details and appropriate technical content for the time constraint and the audience

This is will help as KPI's for this output

SLO #7	An ability to present technical & communication skills effectively
KPI (23)	Write technical report and deliver oral presentation
KPI (24)	Demonstration of written and graphical communication skills to communicate mathematical and scientific knowledge. *(Use of supporting Graphs, Tables, etc , Organization, Grammar and Spelling)*
KPI (25)	Group discussions, panel discussions, and interviews
KPI (26)	Oral Communication delivery *(Delivery - Listening and Response to Questions)*