ABET OUTCOMES

مخرجات ابت الخاصة بالحقيبة التدريسية للمواد النظرية

إعداد

د. أحمد عدنان عبد الجبار

مدير شعبة الجودة / قسم الهندسة الميكانيكية

OUTCOME “ H “THE BROAD EDUCATION NECESSARY TO UNDERSTAND THE IMPACT OF ENGINEERING SOLUTIONS IN A GLOBAL, ECONOMIC, ENVIRONMENTAL, AND SOCIETAL CONTEXT”

- **Performance Indicators:**

- 1. Understands the need to consider engineering solutions from other view points.
- فهم الحاجة إلى النظر إلى الحلول الهندسية من وجهات نظر مختلفة
- 2. Can identify global, economic, environmental, and societal issues that must be considered when proposing and engineering solution.
- يمكن تحديد القضايا العالمية والاقتصادية والبيئية، والاجتماعية التي يجب إعادة النظر فيها عند اقتراح حلول هندسية.
- 3. Can describe examples of engineering solutions that did not adequately address some or all of these areas
- يمكن وصف أمثلة من الحلول الهندسية التي لم تعالج بشكل كاف بعض أو كل ما تم ذكره أعلاه

Assessment tools (Interview and / or student design reports)

SCORING RUBRIC "A SCORING GUIDE USED TO EVALUATE THE QUALITY OF STUDENTS' CONSTRUCTED RESPONSES"

	4- Exceeds	3- Meets	2-Progressing	1-Below
Understands need to consider other viewpoints	Can describe why each category plays a role in many engineering solutions and the potential impact of not considering them	Can describe why at least three categories must be considered when developing engineering solutions	Can describe only why these issues may be important domestically. Does not have a good understanding of these categories from a global perspective	Does not understand why these categories are important
Can identify issues to be considered	Can provide examples of global issues in each of the categories	Can provide examples of global issues in most of the categories	Can provide examples of domestic issues in two or fewer categories	Can not provide examples of issues for more than one of the categories
Can describe examples where issues were not accounted for.	Has a good command of examples and can provide several	Can identify at least one example	Has trouble providing an example and is unable to go into much depth	Can not provide any examples

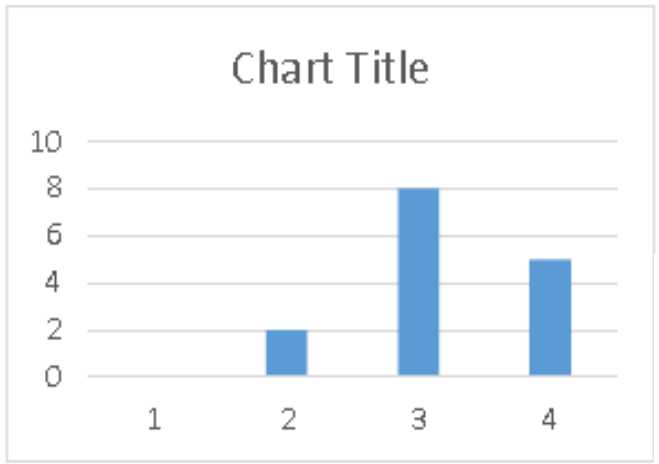
EXAMPLE

- Assume we have 12 students.
- Any class with reports and presentation say Theory of Machine
- Now a simple gob or home work must evaluated according to performance indicator by 1/5 of degree points for each one.
- So according to Rubric table let us assume the students groups indicators were as follow:

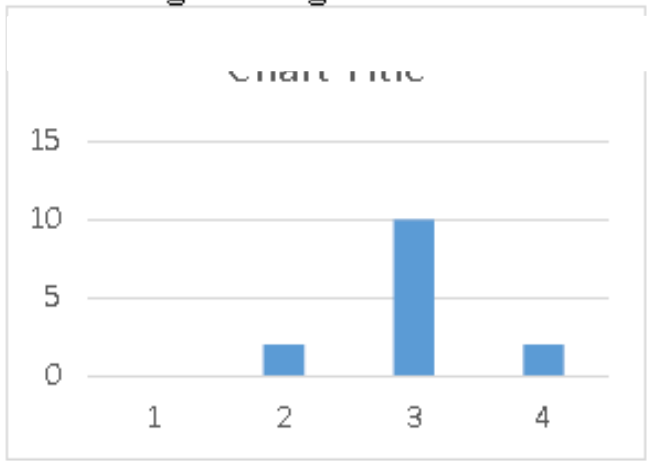
	4- Exceeds	3- Meets	2-Progressing	1-Below	
Understands need to consider other viewpoints		IIIII IIIII I			11*3=33, ave = 33/11=3
Can identify issues to be considered	III	II		IIIII I	3*4+2*3+6*2=30, ave =30/11= 2.72
Can describe examples where issues were not accounted for.	III	II		IIIII I	3*4+2*3+6*2=30, ave = 30/11=2.72

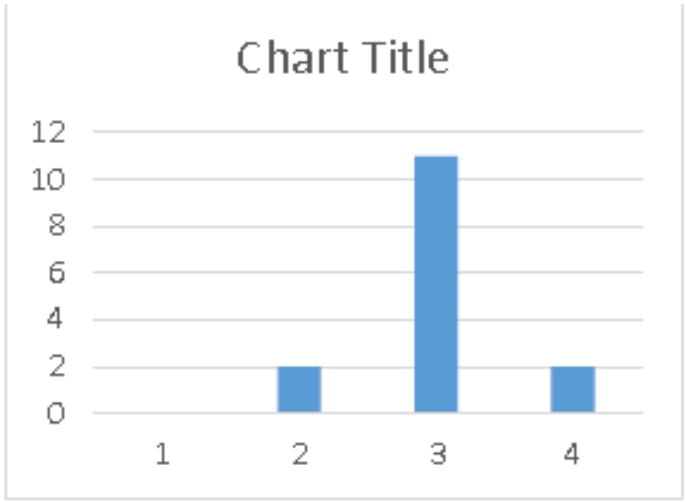
- Average = (3+2.72+2.72) / 3 = 2.815
- So the final grad for outcomes H = 2.815/4

PERFORMANCE INDICATOR CHARTS RESULT



Use of engineering





- **Students Works Rating:**
- Lecturer should also made a students works rating which is a number of 1~ 4 of their understanding for the performance indicator.
- Then calculating the Average (x of 4) and final grade (x/4)
- It's related to lecturer to do students works rating chart and it should loke like the performance indicator one.
- SD " Standard deviation is needed for both. Hint/ you could use the web to do it easily. Also it is good if less than 1

STUDENT AND FACULTY EVALUATIONS OF LEARNING OUTCOMES

Students Outcomes	Students Rating	SD	Instructor Rating	SD	Instructor Comments
H	Assume 3. 118	0.77	2.815	0.253	Acceptable difference
Assessment of Changes/Improvements Made this year, 2016/2017			No improvement is made		
Changes/Improvements That Will Be Made Next Time the Course is Offered			We hope that next year will be improved by:		