



جامعة المجمعة
Majmaah University

رؤية
VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

COURSE REPORT (CR)

Ramadan 1438 H , June 2017

Institution:	Majmaah University
Academic Department :	Civil and Environmental Engineering
Programme:	Civil Engineering
Course title and code:	Photogrammetry – CE 474.
Report Approved Date:	29/ 08 / 1439 H

A separate Course Report (CR) should be submitted for every course and for each section or campus location where the course is taught, even if the course is taught by the same person. Each CR is to be completed by the course instructor at the end of each course and given to the program coordinator. A combined, comprehensive CR should be prepared by the course coordinator and the separate location reports are to be attached.

Course Report

Institution: Majmaah University	Date of CR: 14/05/2018
College/ Department: Engineering - Civil and Environmental Engineering	

A Course Identification and General Information

1. Course title: Photogrammetry	Code # CE 474	Section # 630
2. Name of course instructor: Dr. Sameh S Ahmed		Location: Majmaah
3. Year and semester to which this report applies: 2017/18-S		
4. Number of students starting the course? <input style="width: 40px; text-align: center;" type="text" value="2"/>	Students completing the course? <input style="width: 40px; text-align: center;" type="text" value="2"/>	
5. Course components (actual total contact hours and credits per semester): 3[3,1,0]		

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planed	45	15	-			60
	Actual	43	15	-			58
Credit	Planed	3	1	0			3
	Actual	3	1	0			3



B- Course Delivery

1. Coverage of Planned Program			
Topics Covered	Planned Contact Hours	Actual Contact Hours	Reason for Variations if there is a difference of more than 25% of the hours planned
History of photogrammetry	4	4	
Aerial cameras and Camera calibration	8	8	
Geometry of the aerial photograph: Principles points - Ground points - Control points - Central Projection - Interior and Exterior Orientation - Image Capture Practicalities	8	8	
Stereoscopy and stereoscopes	4	4	
Parallax theory and techniques of plotter orientation	4	4	
Midterm 1			
Extraction of engineering information from single aerial photo	4	4	
Extraction of engineering information from two aerial photos	8	8	
Least squares, preparation and measuring of coordinates from aerial photos	4	2	Principles given but application not completed due time
Planning a photogrammetric project	4	4	
Midterm-II	-	-	
Project #2, Cont.	4	4	
Applications using computer software's	8	8	
Total	60	58	



2. Consequences of Non Coverage of Topics

For any topics where the topic was not taught or practically delivered, comment on how significant you believe the lack of coverage is for the course learning outcomes or for later courses in the program. Suggest possible compensating action.

Topics (if any) not Fully Covered	Effected Learning Outcomes	Possible Compensating Action
Least squares	No much effect, 2.5%	Will be covered Remote Sensing

3. Course learning outcome assessment.

	List course learning outcomes	List methods of assessment for each LO	Summary analysis of assessment results for each LO
1.0	Knowledge		
1.1	The students will be able to know the history of developing the subject of photogrammetric surveying.	<ul style="list-style-type: none"> Regularly asking questions on different topics and concepts. Midterm and End-semester examinations that will force the student to think and apply the knowledge. Reports and discussions. 	Average = 2.17/3 72.2%
1.2	The students will be able to write about different cameras used in photogrammetric surveying		
1.3	The students will be able to tell types of aerial photos		
1.4	The students will be able to recognize the use of photogrammetric surveying.		
1.5	The students will be able to describe digital mapping process.		
2.0	Cognitive Skills		
2.1	The students will be able to calculate, design and measure distances and areas from aerial photographs	<ul style="list-style-type: none"> Asking the student to solve the problems on white board guiding him when required. Asking students to participate in oral discussion during the class. Assignment and mini project Questions in Quiz, Midterm and End exam. 	Average = 1.5/3
2.2	The students will be able to estimate and calculate the height of objects from aerial photographs		Average = 2.50/3



2.3	The students will be able to prepare the stereoscopes vision for a pair of photographs and conduct necessary measurements	No tested practically	Average = 1.00/3
2.4	The students will be able to Explain Parallax theory and techniques of plotter orientation		Average = 2.5/3
2.5	The students will be able to extraction of engineering information from single and two aerial photo and analyse the data		Average = 2.00/3
2.6	The students will be able to plan a photogrammetric project and to calculate number of required photos and films for the task		Average = 2.50/3
3.0	Interpersonal Skills & Responsibility		
3.1	The students will be able to demonstrate their teamwork and leadership skills through functioning in groups during field measurements and calculations	Group work in laboratory work and team activity. • Bonus marks to those who are improving and participating effectively in the class.	Average = 2.5/3 83.3%
4.0	Communication, Information Technology, Numerical		
4.1	The students will be able to communicate effectively and engage in long life learning	Reports and seminars	Evaluation of student ability to report and present facts 83.3%
5.0	Psychomotor		
5.1	NA		

Note: In order to analyze the assessment of student achievement for each course learning outcome, student performance results can be measured and assessed using a KPI, a rubric, or some grading system that aligns student work, exam scores, or other demonstration of successful learning.



Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.

Enhance the following points in the teaching strategies of the course:

- Asking the student to solve the problems on white board guiding him when required.
- Setting assignment problems or mini project which will apply principles and concepts.
- Use of computer for solving some practical problems via ARC/GIS software.

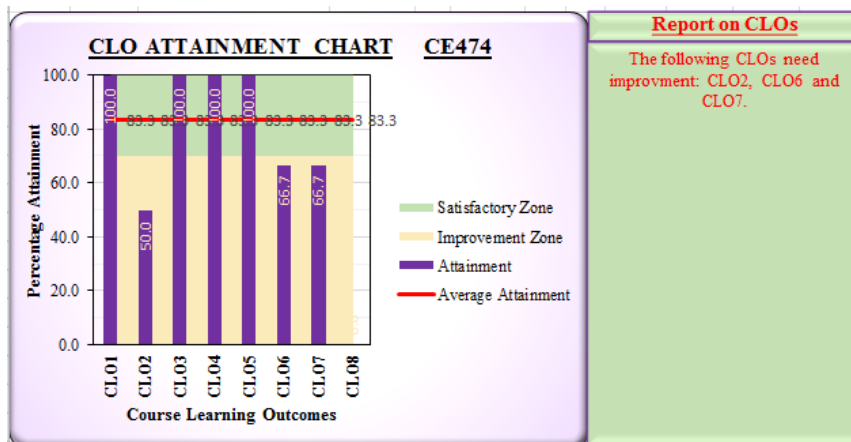
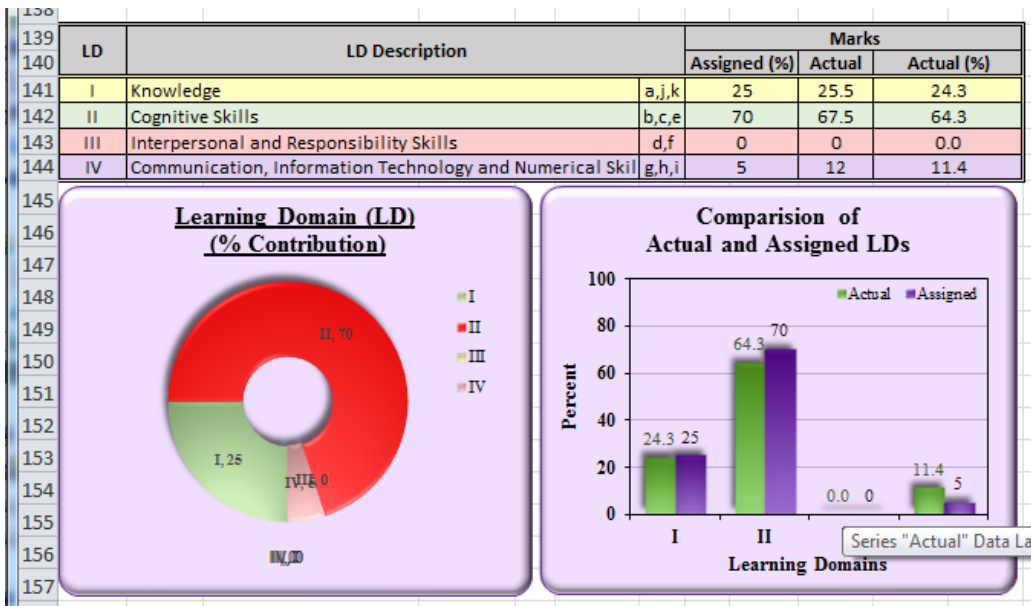
4. Effectiveness of used Teaching Strategies for Learning Outcomes set out in the Course Specification. (Refer to planned teaching strategies in Course Specification and description of Domains of Learning Outcomes in the National Qualifications Framework)

List Teaching Strategies set out in Course Specification	Were They Effective?		Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal with Those Difficulties.
	No	Yes	
<ul style="list-style-type: none"> - Course delivery by citing real life examples and problems. - Emphasis on understanding concepts and illustrating applications to problems. - Conduct field measurements and creates maps for an urban area. - Revise some principles and rule in Algebra and integration. - Placing before the class mind-provoking and thinking questions. 		Y	<ul style="list-style-type: none"> - There is no sufficient time to do all the planned actions.
<ul style="list-style-type: none"> - Solving surveying problems through assignments on each topic. - Explaining principles and concepts through real life problems. - Asking the students to suggest a solution before giving them the correct answer. - Asking the students to explain the steps adopted in the problem and ensures that they understand the problem. - Asking searching questions on topic fundamentals. - Setting M-1 and M-2 + quizzes and mini projects so that students can apply the knowledge gained. 		Y	<p>There is a need to ensure that the students are doing their assignments by themselves and they do not copy form each other.</p>

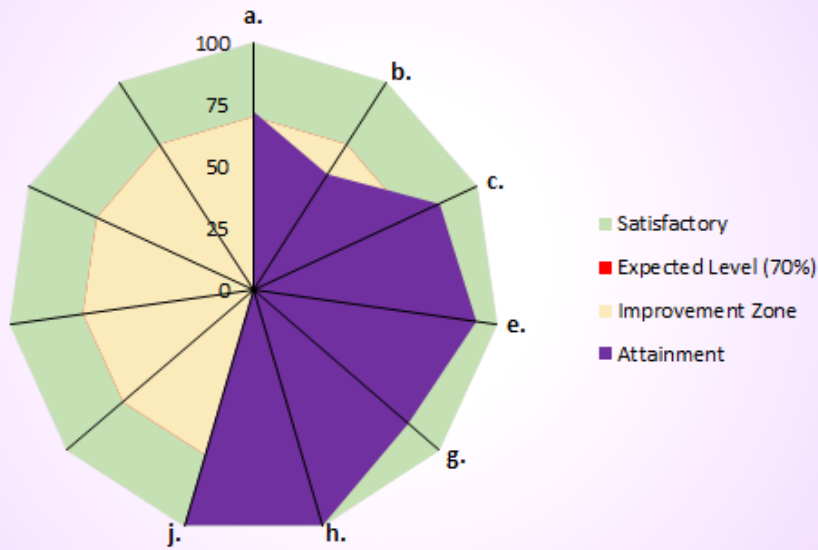


<ul style="list-style-type: none"> - Different access to the student to be close with the teacher using, email, website and even phone calls in urgent. - Asking the students to express his opinion on a particular topic. - Divided the students into small groups during mini project and re-arranging the groups. 	Y	
<ul style="list-style-type: none"> - Make the class attractive and full of activations by raising questions and discussions that requires straight thinking and also reverse thinking. - Questioning the students on solving the problem in a reverse manner. 	Y	

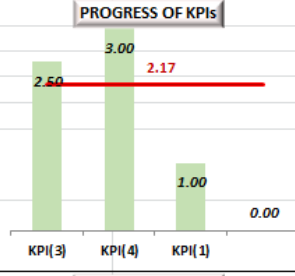
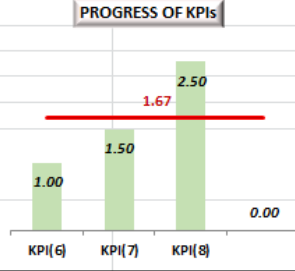
C. Results

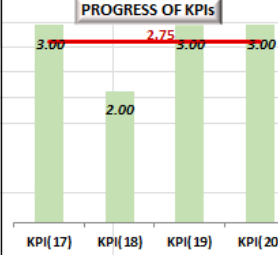

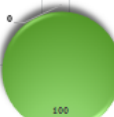


SO ATTAINMENT CHART FOR CE474



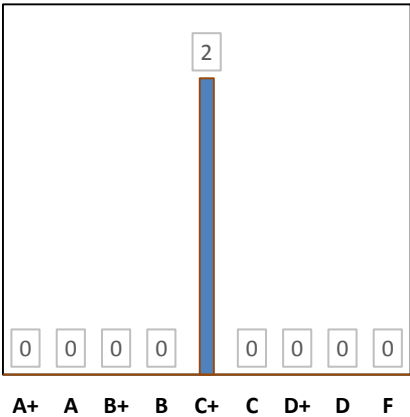
STUDENT OUTCOME BASED ON DIRECT ASSESSMENTS 2017-18 (Spring Semester)

Course	CE474		Photoqrammetric Engineering		Instructor: Dr. Sameh S Ahmed				
	No. of SOs:	7	Section:	630					
Domain	SO								
a.	An ability to apply knowledge of mathematics, science, and engineering	Students	2	Students	2	Students	2	Weighted Average	
		Exceeded (%)	0	Exceeded (%)	0	Exceeded (%)	100		
		Developing (%)	50	Developing (%)	0	Developing (%)	0		
		Not Started (%)	50	Not Started (%)	100	Not Started (%)	0		
		KPI(3)	2.50	KPI(4)	3.00	KPI(1)	1.00	2.17 (72.2%)	
b.	An ability to design and conduct experiments, as well as to analyze and interpret data	Students	2	Students	2	Students	2	Weighted Average	
		Exceeded (%)	100	Exceeded (%)	50	Exceeded (%)	0		
		Developing (%)	0	Developing (%)	50	Developing (%)	50		
		Not Started (%)	0	Not Started (%)	0	Not Started (%)	50		
		KPI(6)	1.00	KPI(7)	1.50	KPI(8)	2.50	1.67 (55.6%)	

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	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>100</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>KPI(9)</td><td>2.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	100	Not Started (%)	0	KPI(9)	2.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>50</td></tr> <tr><td>Not Started (%)</td><td>50</td></tr> <tr><td>KPI(11)</td><td>2.50</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	50	Not Started (%)	50	KPI(11)	2.50	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(12)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(12)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>2.50</td></tr> <tr><td></td><td>(83.3%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	2.50		(83.3%)	 <p>PROGRESS OF KPIs</p>				
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e.	Ability to identify, formulate, and solve engineering problems	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(17)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(17)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>50</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>50</td></tr> <tr><td>KPI(18)</td><td>2.00</td></tr> </table> 	Students	2	Successful (%)	50	Developing (%)	0	Not Started (%)	50	KPI(18)	2.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(19)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(19)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>2.75</td></tr> <tr><td></td><td>(91.7%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	2.75		(91.7%)	 <p>PROGRESS OF KPIs</p>				
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g.	An ability to communicate effectively	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(25)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(25)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>50</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>50</td></tr> <tr><td>KPI(26)</td><td>2.00</td></tr> </table> 	Students	2	Successful (%)	50	Developing (%)	0	Not Started (%)	50	KPI(26)	2.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>2.50</td></tr> <tr><td></td><td>(83.3%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	2.50		(83.3%)	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>2.50</td></tr> <tr><td></td><td>(83.3%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	2.50		(83.3%)	 <p>PROGRESS OF KPIs</p>		
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h.	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(32)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(32)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	 <p>PROGRESS OF KPIs</p>
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j.	A knowledge of contemporary issues	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>100</td></tr> <tr><td>KPI(37)</td><td>3.00</td></tr> </table> 	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	100	KPI(37)	3.00	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	<table border="1"> <tr><td>Students</td><td>2</td></tr> <tr><td>Successful (%)</td><td>0</td></tr> <tr><td>Developing (%)</td><td>0</td></tr> <tr><td>Not Started (%)</td><td>0</td></tr> <tr><td>Weighted Average</td><td>3.00</td></tr> <tr><td></td><td>(100.%)</td></tr> </table>	Students	2	Successful (%)	0	Developing (%)	0	Not Started (%)	0	Weighted Average	3.00		(100.%)	 <p>PROGRESS OF KPIs</p>
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1. Distribution of Grades

Letter Grade	Number of Students	Student Percentage	Analysis of Distribution of Grades
A ⁺	0	0%	<div style="text-align: center;"> <p><u>Grades Distribution</u></p> <p>Total Students 2</p>  <p>A+ A B+ B C+ C D+ D F</p> </div>
A	0	0%	
B ⁺	0	0%	
B	0	0%	
C ⁺	2	100%	
C	0	0%	
D ⁺	0	0%	
D	0	0%	
F	0	0%	
DeniedEntry	0	0%	
In Progress	2	100%	
Incomplete	0	0%	
Pass	2	100%	
Fail	0	0%	
Withdrawn	0	0%	

2. Analyze special factors (if any) affecting the results

- No outstanding student in this group
- Highest grade was C+
- The two students got C+ matching the overall average of this group

3. Variations from planned student assessment processes (if any) (see Course Specifications).

Variations (if any) from planned assessment schedule (see Course Specifications)

Variation	Reason
No high grades	Nature of the group

4. Student Grade Achievement Verification (eg. cross-check of grade validity by independent evaluator).

Method(s) of Verification	Conclusion
All final papers are revised and checked by other faculty member.	Level of fairness in correction is fairly high.
Overall results are discussed with the head of department and vice Dean.	Results were logic considering the overall performance and nature of this group



D Resources and Facilities

1. Difficulties in access to resources or facilities (if any) Still, there is a need for aerial photographs	2. Consequences of any difficulties experienced for student learning in the course, and proposed action to overcome it. <ul style="list-style-type: none"> The two students do like to read texts books. Getting 2 pocket stereoscopic instruments Students did not pay sufficient care for reports
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E. Administrative Issues

1. Organizational or administrative difficulties encountered (if any) No real problem in this course	2. Consequences of any difficulties experienced for student learning in the course, and proposed action to overcome it.
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F Course Evaluation

1. Student evaluation of the course (Attach summary of survey results)
a. List the most important recommendations for improvement and strengths Explain the basics of Math needed for calculations before going deeply in the topic.
b. Response of instructor or course team to this evaluation Satisfy.
2. Other Evaluation (eg. by head of department, peer observations, accreditation review, other stakeholders)
a. List the most important recommendations for improvement and strengths Give more practical sessions for stereoscopic exercises
b. Response of instructor or course team to this evaluation Cannot be judged before getting the photographs and do exercises

G Planning for Improvement

1. Progress on actions proposed for improving the course in previous course reports (if any).			
Actions recommended from the most recent course report(s)	Actions Taken	Action Results	Action Analysis
a) More time for exercises solve real problems	Done	Improvement in student skills for calculations and understanding the results	
b) Ask students to complete solving some problems to the end during the class using calculators and Computer during	Done	Overall results remains almost constant	



exercise session.			
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2. List what other actions have been taken to improve the course (based on previous CR, surveys, independent opinion, or course evaluation).

- Force the students to use reference books.
- Insist to submit the homework on time.
- All exercises must be solved.

3. Action Plan for Next Semester/Year

Actions Recommended for Further Improvement	Intended Action Points (should be measurable)	Person Responsible
a) More exercises	More time for exercises in using photographs measurement to solve real problems	Instructor
b) Student participation	Ask students to complete solving some problems to the end during the class using calculators and Computer during lab session.	Instructor
c) Motivation	Encourage the students to anticipate questions on each topic	Instructor
d) Field work	Allow the students to participate in senior surveying project to get more experience.	Instructor

Name of Course Instructor: Dr. Sameh S Ahmed

Signature: *Sameh*

Date Report Completed: 14/05/2018

Program Coordinator: Dr. Abdullah Alshehri

Signature: *Alshehri*

Date Received: Meeting # 27 on 15/05/2018

