



**College of Engineering** 

**Programme** Electrical Engineering (Power Track)

**Course:** Power Systems Protection (EE476)

Muharram 1437 H





# **Course Report**

Institution: Majmaa University Date of CR 24/05/2017.
College/ Department College of Engineering/ Electrical Engineering

## **A Course Identification and General Information**

1. Course ti	itle: Power Protec	•	Coo	le EE476	Section	398
2. Name of	course instru	ictor Dr. A	hmed Bilal	Awan Loca	ation: Coll	ege of
					Engi	ineering
3. Year and	semester to	which this re	port applie	s: Year 4/Se	emester 7 (Le	evel 9)
4. Number of	4. Number of students starting the course? 18 Students completing the course? 18					
5. Course c	omponents:					
	Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	45	15	0	0	0	60
Credit	3	0				3

# **B- Course Delivery:**

#### 1. Coverage of Planned Program

Topics Covered	Planned Contact Hours	Actual Contact Hours	Reason for Variations (*)
Protection system principles and components	8	8	
Short circuit calculations	8	8	
Protective instrument transformers : VT-CVT-CT	8	8	
Protective relays: Electromechanical relays, Static relays, Numerical relays	8	8	
Over-current protection	8	6	The semester was curtail to 13 weeks
Distance protection systems	8	6	The semester was curtail to 13 weeks
Power frequency and carrier systems	4	3	The semester was curtail to 13 weeks
Protection of generators- motors- transformers- busbars- reactors- capacitors; Protection of distribution system feeders	8	6	The semester was curtail to 13 weeks

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( st ) if there is a difference of more than 25% of the hours planned

# 2. Consequences of Non-Coverage of Topics

Topics not Fully Covered (if any)	Effected Learning Outcomes	Possible Compensating Action

# 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			
1.2			
١,٣			
١,٤			
١,٥			
١,٦			
2.0	Cognitive Skills		
2.1	Calculate faults current and voltages	- Exams -Quizzes -Home work	70 %
2.2	Use of instrument transformers:CT,CVT,VT	- Exams -Quizzes -Home work	70 %
۲,۳	Identify and analyze faults in a real power system.	- Exams -Quizzes -Home work	67 %
۲,٤	Design a protection scheme for distribution system, transmission lines, generators, motors, busbars etc.	- Exams -Quizzes -Home work	67 %
۲,٥	Configure the setting of protective relays for a particular application.	- Exams -Quizzes -Home work -Class activity	69 %
۲,٦			
3.0	Interpersonal Skills & Responsibility		
3.1			
3.2			
٣,٣			
٣,٤			
٣,٥			



	List course learning outcomes	List methods of assessment for each LO	Summary analysis of assessment results for each LO
٣,٦			
4.0	Communication, Information Technology, Numerical	-	
4.1	Identify basic components of protection system	- Exams	67 %
		-Quizzes	
		-Home work	
4.2			
٤,٣			
٤,٤			
٤,٥	••••••		
٤,٦	••••••		
5.0	Psychomotor		
5.1			
5.2			
٥,٣			
٥,٤			
٥,٥			
٥,٦			

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

A case study and class activities are recommended to boost the interest of students in the course.

# 4. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification

List Teaching Methods set out in Course Specification		They ctive?	Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal
		Yes	with Those Difficulties.
Class room lectures		X	Class room and white board size is very small.
Study semester projects		X	Student complained that they are already overloaded. Some students did not submitted the reports on time.

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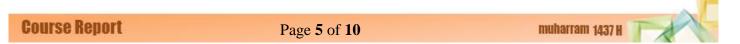
#### C. Results

#### 1. Distribution of Grades

Letter Grade	Number of Students	Student Percentage	Analysis of Distribution of Grades
<b>A</b> +	1	5.6%	
A	2	11.1 %	
В+	0	0 %	
В	4	22.2 %	
C+	0	0 %	
С	1	5.6 %	
D+	2	11.1 %	
D	4	22.2 %	Level of basic concepts was very low which lead to low grades
F	4	22.2 %	Level of basic concepts was very low which lead to low grades
Denied Entry	0	0 %	
In Progress	0	0 %	
Incomplete	0	0 %	
Pass	17	77.8 %	
Fail	2	22.2 %	
Withdrawn	0	0 %	

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

- Students are weak in mathematics. The College and Department should check the level of students in mathematics before admission.
- Some students have English comprehension and communication problems
- IQ level of students is low and they have problems to grasp complicated concepts





#### 3. Variations from planned student assessment processes (if any).

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

Variation	Reason
Midterm-2 exam was takes	Semester was curtail to 13 weeks. Time shortage did not permit to take the Mid-2 exam. That was utilized for classes

b. Variations (if any) from planned assessment processes in Domains of Learning

Variation	Reason		

#### 4. Student Grade Achievement Verification :

Method(s) of Verification	Conclusion		
Cross-check of grade validity	Validated		

# **D.** Resources and Facilities

Difficulties in access to resources or facilities (if any)	Consequences of any difficulties experienced for student learning in the course
Size of the white board is too small for engineering classes	Lot of time was wasted due to very small white boards and students cannot see everything on the white board in one glance.
Class rooms structure	Class rooms are rectangular and white boards are installed on the length side of the rectangle rather than width side. The students sitting at the corners cannot even see the white board.

# **E.** Administrative Issues

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encountered (if any)	student learning in the course

## **F** Course Evaluation

I bludelit evaluation of the course (fittuell summing of survey result	1	<b>Student evaluation of the course</b>	(Attach summary o	f survey results
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a. List the most important recommendations for improvement and strengths
<ul> <li>Result of the survey is above the bench mark of 75%. No further action plan is recommended.</li> </ul>
•
b. Response of instructor or course team to this evaluation
•
•
•
•

#### 2. Other Evaluation:

a. List the most important recommendations for improvement and strengths	
•	
•	
•	
b. Response of instructor or course team to this evaluation :	
•	
•	
•	
•	

# **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
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a) Improvement in SLO assessment	Class activities	Student has shown good interest.	Because of shortage of time in this semester no visible improvement in students learning outcomes is achieved. (Semester was squeezed to 13 weeks)
b) Text book is not available	Issue was raised	Still waiting	
c)			
d)			

<b>2.</b> 1	List	what	other	actions	have	been	taken	to	improve	the	cours	e
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•	More online quizzes were taken during the semester
•	
•	

# 3. Action Plan for Next Semester/Year

Actions Recommended for Further Improvement	Intended Action Points (should be measurable)	Start Date	Completion Date	Person Responsible
a) Improvement in SLO assessment	Including a case study in the teaching strategy	1/09/2017	01/01/2018	Instructor
b) Update for SLOs	Improving the link between CLOs and SLOs	1/09/2017	1/09/2017	Department and College
c)		//1438 H	//1438 H	
d)		//1438 H	//1438 H	
e)		//1438 H	//1438 H	

# **Course Instructor:**

	Dr. Ahmed Bilal Awan		
Signature:		Date Report Completed:	24/05/2017
Program Co	ordinator:		
Name:			
Signature:		Date Received:/.	/1438 H

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## **Important Notes:**

- A separate Course Report (CR) should be submitted for every course and for each ( section " Male & Female" or Academic Programme 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 (Separate reports attached ) and given to the program coordinator At the end of each course
- Course Reports are to discuss by the academic ( Programme ) Department Council

