جامعة المجمعة
Majmaah University

Course Report

College: College of Engineering
Programme Electrical Engineering (Power Track)

Course : Electric Machines (EE 389)

Muharram 1437 H

This form compatible with NCAAA Edition

Course Report

Institution :	Majmaah University	Date of CR	28/5/2017
College/ Department	College of Engineering / Electrical Engineering		

A Course Identification and General Information

1. Course title: Electric Machines Code EE 389 Section 377
2. Name of course instructor Dr. Praveen R.P. Location : Complex Building
3. Year and semester to which this report applies: 2016/2017/ Semester (2)
4. Number of students starting the course? 20 Students completing the course? 14
5. Course components:

	Lecture	Tutorial	Laboratory/ Studio	Practical	Other	**Total**
Contact Hours	45	15	……..	……..	……..	**60**
Credit	3	0	……..	……..	……..	**3**

B- Course Delivery :

1. Coverage of Planned Program

Topics Covered	**Planned** Contact Hours	**Actual** Contact Hours	**Reason for Variations (*)**
Introduction to AC machinery	4	4	……..
3-phase induction machines – Construction and Principle of Operation	5	4	……..
3-phase induction machines – Equivalent Circuit and Performance calculations	10	9	……..
3-phase Induction machines – Starting and Speed Control Methods	8	8	……..
Single-phase induction motors	8	8	……..
Reluctance motors, Stepper motors	8	6	Due to the sudden wind up of the semester the portions were covered fast
Fundamentals of D.C machines, DC machines (components, classification, performance, motor characteristics)	9	6	Due to the sudden wind up of the semester the portions were covered fast by giving more exercise questions as homework and assignment
Starting and speed control of DC motors	4	2	Due to the sudden wind up of the

			semester the portions were covered fast by giving hand outs to the students and subsequent discussion
Servo motors and Universal motors	4	1	Due to the shortage of time a brief introduction to the topic was given

(*) 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
Servo motors and Universal motors		A brief introduction to the topic was given and since the students was taught with D.C Machines they can easily understand the working of universal and servomotors and hence no compensating action is required.
.....	.....	.....
.....	.....	.....
.....	.....	.....

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	**.....**	.....	.....
1.3	**.....**	.....	.....
1.4	**.....**	.....	.....
1.5	**.....**	.....	.....
1.6	**.....**	.....	.....
2.0	**Cognitive Skills**		
c			
1.	Analyze a drive circuit for stepper motors for control applications.	Exams, Quizes	Overall Performance : 61.66% (Final Exam) Q6, Total marks :4 Attachment at the end of the report

List course learning outcomes		List methods of assessment for each LO	Summary analysis of assessment results for each LO
2.	Analyze a drive circuit for servo motors	.....	.....
e			
1.	Formulate equivalent circuits representing single phase and three-phase induction motor to calculate and predict the performance of machines.	……..	…….
2	Formulate, and solve engineering problems by using DC machines, servo motors, universal motors and stepper motors	Exams	Overall Performance : 76.66% (Final Exam) Q7(b), Total marks :4 Attachment at the end of the report
2.5	.....	.....	.....
2.6	.....	.....	.....
3.0	**Interpersonal Skills & Responsibility**		
3.1	.....	.....	.....
3.2	.....	.....	.....
3.3	.....	.....	.....
3.4	.....	.....	.....
3.5	.....	.....	.....
3.6	.....	.....	.....
4.0	**Communication, Information Technology, Numerical**		
a			
1	Illustrate the construction, connections, principle of operation of three-phase and single phase induction motor, stepper motors, servo and reluctance motors.	.....	.....
2	Determine the performance characteristics (current/speed and torque/speed) of the three-phase and single phase induction motor.	Exams, Quizes	Overall Performance : 61.66% (Final Exam) Q5, Total marks :4 Attachment at the end of the report
4.3	.....	.....	.....
4.4	.....	.....	.....
4.5	.....	.....	.....
4.6	.....	.....	.....
5.0	**Psychomotor**		
5.1	.....	.....	.....
5.2	.....	.....	.....
5.3	.....	.....	.....

List course learning outcomes		List methods of assessment for each LO	Summary analysis of assessment results for each LO
5.4	**.....**	.....	.....
5.5	**.....**	.....	.....
5.6	**.....**	.....	.....

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

1. The measured CLO (1) under SLO (c) needs revision as analysis of the drive circuit of a stepper motor is an advanced topic which should be covered in detail in the subject Special Electrical Machines.
2. The six students who failed in the course lacked fundamental knowledge on mathematics, Electric Machines (EE 288) course which is a pre-requisite and very poor communication skills. Special attention can be given to these weak students in tutorial hours.

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

List Teaching Methods 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	
Class room lectures		X	Class room and white board size is very small.
.....			.....
.....			.....
.....			.....

C. Results

1. Distribution of Grades

Letter Grade	Number of Students	Student Percentage	Analysis of Distribution of Grades
A+	3	15 %	
A	1	5 %	……
B+	0	0%	……..
B	0	0 %	……..
C+	4	20 %	Most of the students in the C+ and C category lacked the required English language skills which prevented them from explaining the concepts and hence higher grades
C	1	5%	
D+	2	10 %	……
D	3	15%	
F	6	30 %	Majority of the students are from old batches and their fundamental skill set required to meet the requirements of the course were weak
Denied Entry	0	0 %	……..
In Progress	0	0 %	……..
Incomplete	0	0 %	……..
Pass	14	70 %	……..
Fail	6	30 %	……..
Withdrawn	0	0 %	……..

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

- The mathematical background of the old batch students are weak.
- Majority of the students have low proficiency in English language which is preventing them from explaining the concepts and hence affecting the results.

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

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

Variation	Reason
Mid Exam II was not conducted	According to the direction from Ministry of Education the semester was cut short.
……	……
……	……

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
……	……

E. Administrative Issues

Organizational or administrative difficulties encountered (if any)	Consequences of any difficulties experienced for student learning in the course
……	……
……	……
……	……

F Course Evaluation

1 Student evaluation of the course (Attach summary of survey results)

a. List the most important recommendations for improvement and strengths

- Students were overall satisfied with the Assignments, content delivery and the quality of materials they were provided with.
-

b. Response of instructor or course team to this evaluation

- The feedback received from the students are satisfactory according to the survey results.
- ……

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
a) CLO and SLO Revision	The CLO's and SLO's of the course were revised and pending approval	……	……..
b) Group Activity	Case study and Assignments were given on various topics and subsequent	Improvement in the outcome (c) from previous semester assessment	The results of the outcome (c) improved from 48% in the last semester to 61.66% in the current semester

	discussion on it were held during tutorial hours.		
c) ……	……	……	……
d) ……	……	……	……

2. List what other actions have been taken to improve the course

- ……
- ……

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) Weak Students can be given with more exercise questions and application oriented questions as Assignments and Homework.	This will increase the ability of the students to solve application oriented questions without making errors during exams as well. The students who have weak mathematical background needs to be identified and should be given special attention during tutorial hours	Beginning of first semester of 2017-2018	End of first semester of 2017-2018	Instructor
b). Encouraging the students to present information on the latest developments in the field	Open Discussion on Assignments and latest developments in the field will be held by way of Assignments and Case studies	Beginning of first semester of 2017-2018	End of first semester of 2017-2018	Instructor
c) ……	……	…/…/1437 H	…/…/1437 H	…….….
d) ……	……	…/…/1437 H	…/…/1437 H	…….….
e) ……	……	…/…/1437 H	…/…/1437 H	…….….

Course Instructor:

Name: Dr. Praveen R.P.

Signature:	Date Report Completed: 28/05/2017

Program Coordinator:

Name: Dr Abdullah Almuhaisen	
Signature:	Date Received :

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

Survey Results :