جامعة المجمعة
Majmaah University

# Course Report

**College:** College of Engineering
**Programme** Electrical Engineering
**Course :** Electric Energy Utilization

May 2017

This form compatible with NCAAA Edition

# Course Report

| | |
|---|---|
| Institution : Majmaah university | Date of CR 20 / 05/ 2017. |
| College/ Department .....Engineering / .....Electrical Engineering..... | |

## A Course Identification and General Information

| | | | |
|---|---|---|---|
| 1. Course title: **Electric Energy Utilization** | Code EE 480 | Section **389** | |
| 2. Name of course instructor Dr. El Manaa Barhoumi | Location : | **Electrical Engineering Department** | |
| 3. Year and semester to which this report applies: 2016/2017- Term 2 | | | |
| 4. Number of students starting the course? **15** | Students completing the course? **15** | | |

5. Course components:

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

## B- Course Delivery:

### 1. Coverage of Planned Program

| Topics Covered | **Planned** Contact Hours | **Actual** Contact Hours | **Reason for Variations (*)** |
|---|---|---|---|
| Introduction | 08 | 08 | |
| Illumination<br>Illumination: types of lamps, illumination schemes, calculation of illumination, requirements of proper lighting. | 08 | 08 | |
| Electric Heating: advantages of electrical heating, heating methods, design of resistance heating element. | 08 | 08 | |
| Electric Welding: advantages of electric welding, welding methods, comparison between AC and DC arc welding, welding control circuits. | 08 | 08 | |
| Electrolytic Processes: laws of electrolysis, process of electro-deposition, factors affecting electro-deposition, manufacturing of chemicals by electrolysis process. | 08 | 08 | |

| | | | |
|---|---|---|---|
| Refrigeration and Air Conditioning: principle of air conditioning, refrigeration cycle, eco-friendly refrigerants, electrical circuits used in refrigerator and air-conditioner. | 08 | 08 | |
| Electric Traction: advantages of electric traction, systems of electric traction, types of motors used for electric traction, starting and braking of traction motors | 12 | 4 | According to the ministry of higher education, the term has been reduced to 13 weeks |

( * ) 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 |
|---|---|---|
| None | ……. | ……. |
| ……. | ……. | ……. |
| ……. | ……. | ……. |

## 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** | **……** | ……. | ……. |
| **2.0** | **Cognitive Skills** | | |
| **2.1** | The student will be able to solve problems related to the illumination. | Q1 -Final exam | 80% |
| **2.2** | The student will be able to design electric heater for specific application | Q2 -Final exam | 80% |
| **2.3** | The student will be able to identify different welding control circuits. | | |
| **2.4** | The student will be able to solve problems related to electrolysis. | | |
| **2.5** | The student will be able to identify the electrical circuits for refrigerators and air-conditioning systems. | | |
| **2.6** | The student will be able to solve problems related to electric traction. | | |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| **3.1** | **……** | ……. | ……. |
| **3.2** | **……** | ……. | ……. |
| **4.0** | **Communication, Information Technology, Numerical** | | |

| List course learning outcomes | | List methods of assessment for each LO | Summary analysis of assessment results for each LO |
|---|---|---|---|
| 4.1 | ..... | ..... | ..... |
| 4.2 | ..... | ..... | ..... |
| 5.0 | Psychomotor | | |
| 5.1 | ..... | ..... | ..... |
| 5.6 | ..... | ..... | ..... |

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

| |
|---|
| More examples and problems related to the design of electric heaters and illumination systems are required. |

### 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 | |
| Lecture, free Discussion, Case Studies | | Y | None |
| Slides, Implication Studies | | Y | None |

## C. Results

### 1. Distribution of Grades

| Letter Grade | Number of Students | Student Percentage | Analysis of Distribution of Grades |
|---|---|---|---|
| **A+** | 1 | 6.66% | This student has excellent level<br>The attendance percentage of this student is 100%. |
| **A** | 0 | 0 % | |
| **B+** | 1 | 6.66% | This student has a good level |
| **B** | 2 | 13.33% | These two students can get better than this result |
| **C+** | 4 | 26.66% | |
| **C** | 4 | 26.66% | Students can get better than this result |

| | | | |
|---|---|---|---|
| **D+** | 1 | 6.66% | |
| **D** | 2 | 13.33% | Two students need more motivation to get better results |
| **F** | 0 | 0% | |
| Denied Entry | 0 | 0% | …….. |
| In Progress | 0 | 0% | …….. |
| Incomplete | 0 | 0 % | …….. |
| Pass | 15 | 100 % | The most of topics in this course are based on previous courses and basics laws in electrical engineering (such as electrical heating, electrical welding and illumination) are based on Ohm law. The topic electric traction is related to electrical machines courses. The students presented a good ability to understand and solve the problems in this course. |
| Fail | 0 | 0% | …….. |
| Withdrawn | 0 | 0 % | …….. |

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

- Good results, No special factors 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 |
|---|---|
| 2nd Midterm exam was cancelled. | According to the ministry of higher education, the semester has been reduced to 13 weeks |

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

| Variation | Reason |
|---|---|
| None | …… |

### 4. Student Grade Achievement Verification :

| Method(s) of Verification | Conclusion |
|---|---|
| All final papers are reviewed by independent reviewer from the department who will double check the sum of the total marks | Level of fairness in correction is fairly high |
| Grades are approved by Head of department and the vice-dean for academic affairs of the Engineering College. | Grades approved by Head of department and the vice-dean for academic |

## D. Resources and Facilities

| Difficulties in access to resources or facilities (if any) | Consequences of any difficulties experienced for student learning in the course |
|---|---|
| None | |
| …… | …… |
| …… | …… |

## E. Administrative Issues

| Organizational or administrative difficulties encountered (if any) | Consequences of any difficulties experienced for student learning in the course |
|---|---|
| None | None |
| …… | …… |
| …… | …… |

## F Course Evaluation

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

a. List the most important recommendations for improvement and strengths

- Principal facilities were not available
- A lot of home works and quizzes, case study were assigned in this course
- Relation of this course with other course was not clear (14%)

b. Response of instructor or course team to this evaluation

- Text books are available in the library of the college of engineering
- All materials (presentations and solved problems) are available on D2L system
- The instructor should explain the relation of the course with other courses through different case studies.

### 2. Other Evaluation :

| |
|---|
| a. List the most important recommendations for improvement and strengths<br>None |
| b. Response of instructor or course team to this evaluation :<br>• ……<br>• ……<br>• ……<br>• …… |

## 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 |
|---|---|---|---|
| Text book should be updated Proposed text book; Generation and Utilization of Electrical Energy, S. Sivanagaraju and M. Balasubba, New Delhi, India 2010 | None | Hard copies of the text book are available in the library of the college of Engineering | UPC is working on the update of the curriculum |
| Update Course Specifications ,CLO and SLO | UPC is working on the update of the curriculum | The new curriculum will be approved. | UPC is working on the update of the curriculum. The new curriculum will be approved |

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

- More activities and homework were proposed
- The method of Problem Based learning was effective.
- ……
- ……

### 3. Action Plan for Next Semester/Year

| Actions Recommended for Further Improvement | Intended Action Points (should be measurable) | Start Date | Completion Date | Person Responsible |
|---|---|---|---|---|
| Update Course Specifications | Course specifications conformed to the course description | 10/09/2017 | 10/12/2017 | UPC |
| Update the CLO and SLO in the course specification. | SLO and CLO updated in the course specification | 10/09/2017 | 10/12/2017 | UPC |

**Course Instructor:**

Name: Dr El Manaa Barhoumi

Signature: ..... Date Report Completed: 22/05/2017

**Program Coordinator:**

Name: .....

Signature: ..... Date Received : ...../…../2017

## 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

اسئلة خاصة ببداية المقرر

| الأسئلة | عدد المقيمين | لا اوافق مطلقا (1) | لا اوافق (2) | اوافق الى حد ما (3) | أوافق (4) | أوافق بشدة (5) |
|---|---|---|---|---|---|---|
| كانت الخطوط الأساسية ( بما في ذلك المعلومات والمهارات التي صمم المقرر لتطويرها ) واضحة بالنسبة لي . | 15 | 6.7 | 0.0 | 33.3 | 40.0 | 20.0 |
| كانت متطلبات النجاح في المقرر ( بما في ذلك الواجبات التي يتم التقييم بناء عليها ، ومحكات التقييم ) واضحة بالنسبة لي . | 15 | 6.7 | 0.0 | 26.7 | 33.3 | 33.3 |
| كانت مصادر مساعدتي في المقرر ( بما في ذلك الساعات المكتبية لعضو هيئة التدريس ، والمراجع ) واضحة بالنسبة لي . | 15 | 6.7 | 0.0 | 33.3 | 33.3 | 26.7 |

اسئلة خاصة بما حدث خلال المقرر

| الأسئلة | عدد المقيمين | لا اوافق مطلقا (1) | لا اوافق (2) | اوافق الى حد ما (3) | أوافق (4) | أوافق بشدة (5) |
|---|---|---|---|---|---|---|
| كان تنفيذ المقرر والأشياء التي طلب مني أداؤها متسقة مع الخطوط الأساسية للمقرر . | 15 | 6.7 | 0.0 | 33.3 | 33.3 | 26.7 |
| كان عضو هيئة التدريس ملتزما بإعطاء المقرر بشكل كامل (مثل : بدأ المحاضرات في الوقت المحدد ، تواجد عضو هيئة التدريس بشكل دائم ، الإعداد الجيد للمواد المساعدة في التدريس ، وهكذا ) . | 15 | 6.7 | 0.0 | 20.0 | 46.7 | 26.7 |
| لدى عضو هيئة التدريس الذي يقوم بتقديم هذا المقرر إلمام كامل بمحتوى المقرر . | 15 | 6.7 | 0.0 | 40.0 | 33.3 | 20.0 |
| كان عضو هيئة التدريس موجودا للمساعدة خلال الساعات المكتبية . | 15 | 6.7 | 0.0 | 26.7 | 26.7 | 40.0 |
| كان عضو هيئة التدريس متحمسا لما يقوم بتدريسه . | 15 | 6.7 | 0.0 | 26.7 | 33.3 | 33.3 |
| كان عضو هيئة التدريس مهتما بمدى تقدمي وكان معينا لي . | 15 | 6.7 | 0.0 | 20.0 | 46.7 | 26.7 |
| كان كل ما يقدم في المقرر حديثا ومفيدا ، ( النصوص المقروءة ، التلخيصات ، المراجع ، وما شابهها ) . | 15 | 6.7 | 0.0 | 26.7 | 26.7 | 40.0 |
| كانت المصادر التي احتجتها في هذا المقرر متوافرة كلما أحتاج إليها . | 15 | 6.7 | 6.7 | 26.7 | 33.3 | 26.7 |
| كان هناك استخدام فعال للتقنية لدعم تعليمي في هذا المقرر . | 15 | 6.7 | 0.0 | 33.3 | 26.7 | 33.3 |
| وجدت تشجيعا لإلقاء الأسئلة وتطوير أفكاري الخاصة في هذا المقرر . | 15 | 6.7 | 0.0 | 26.7 | 46.7 | 20.0 |
| شجعت في هذا المقرر على تقديم أفضل ما عندي . | 15 | 6.7 | 0.0 | 26.7 | 26.7 | 40.0 |
| ساعدت الأشياء التي طلبت مني في هذا المقرر ( الأنشطة الصفية ، المعامل ، وهكذا ) في تطوير معرفتي ومهاراتي التي يهدف المقرر لتعليمها . | 15 | 6.7 | 0.0 | 13.3 | 46.7 | 33.3 |
| كانت كمية العمل في هذا المقرر متناسبة مع عدد الساعات المعتمدة المخصصة للمقرر . | 15 | 6.7 | 6.7 | 20.0 | 26.7 | 40.0 |
| قدمت لي درجات الواجبات والاختبارات في هذا المقرر خلال وقت معقول . | 15 | 6.7 | 0.0 | 26.7 | 33.3 | 33.3 |
| كان تصحيح واجباتي واختباراتي عادلا ومناسبا . | 15 | 6.7 | 0.0 | 13.3 | 46.7 | 33.3 |
| وضحت لي الصلة بين هذا المقرر والمقررات الأخرى بالبرنامج ( القسم ) . | 15 | 6.7 | 6.7 | 13.3 | 53.3 | 20.0 |

تقويم المقرر

| الأسئلة | عدد المقيمين | لا اوافق مطلقا (1) | لا اوافق (2) | اوافق الى حد ما (3) | أوافق (4) | أوافق بشدة (5) |
|---|---|---|---|---|---|---|
| ما تعلمته في هذا المقرر مهم وسيفيدني مستقبلا . | 15 | 6.7 | 0.0 | 26.7 | 33.3 | 33.3 |
| ساعدني هذا المقرر على تحسين قدرتي على التفكير وحل المشكلات بدلا من حفظ المعلومات فقط . | 15 | 6.7 | 6.7 | 26.7 | 20.0 | 40.0 |
| ساعدني هذا المقرر على تحسين مهاراتي في العمل على شكل فريق . | 15 | 6.7 | 0.0 | 26.7 | 40.0 | 26.7 |
| ساعدني هذا المقرر على تحسين قدرتي على الاتصال بفاعلية . | 15 | 6.7 | 0.0 | 33.3 | 33.3 | 26.7 |

التقويم العام

| الأسئلة | عدد المقيمين | لا اوافق مطلقا (1) | لا اوافق (2) | اوافق الى حد ما (3) | أوافق (4) | أوافق بشدة (5) |
|---|---|---|---|---|---|---|
| أشعر بالرضا بشكل عام على مستوى جودة هذا المقرر . | 15 | 6.7 | 6.7 | 26.7 | 26.7 | 33.3 |

Academic Year:2016_2017Semester:Second (Spring)

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Course Title: Electric Energy Utilization
The course Section:1
The instructor name:El Manaa  Barhoumi

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The learning Outcome: (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
The Course Learning Outcome: CLO1
The unit Learning Outcome: ULO1

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The key Performance Indicator: Developing a design strategy
The benchmark: 75
Bloom's Level: Summarizing
Weight (%): 15
The assessment Method: Written examination

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Number of Students: 15
Question Number: 2
Question Mark: 8
The Exam Type: Final Exam

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The evaluation Result: 80
Unsatisfactory: 2
Developing: 5
Satisfactory: 8
Your result is above the benchmark. No actions needed

Academic Year:2016_2017Semester:Second (Spring)

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Course Title: Electric Energy Utilization
The course Section:1
The instructor name:El Manaa  Barhoumi

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The learning Outcome: (e) an ability to identify, formulate, and solve engineering problems
The Course Learning Outcome: CLO1
The unit Learning Outcome: ULO1

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The key Performance Indicator: Solutions creativity alternatives
The benchmark: 75
Bloom's Level: Summarizing
Weight (%): 15
The assessment Method: Written examination

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Number of Students: 15
Question Number: 1
Question Mark: 6
The Exam Type: Final Exam

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The evaluation Result: 80
Unsatisfactory: 2
Developing: 5
Satisfactory: 8
Your result is above the benchmark. No actions needed