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|  | **Mutah University** **Detailed Syllabus Form** | Description: C:\Users\lamasat.lamasat-PC\Pictures\Picture1.png |

**First :** Course Information**:**

|  |  |
| --- | --- |
| * Course Number: 0302793

 | * Course Title: Special Topics
 |
| * Credit Hours:3
 | * College: Science
 |
| * Pre-requisite: non
 | * Department: Physics
 |
| * Instructor: Dr Hmoud Al Dmour
 | * Semester & Academic Year:

 Ist-2016-2017 |
| * the time of the lecture:

 **Wednesday 2-5**  | * Office Hours:

**Sunday 11-12, Thursday 11-12, Tuesday 11-12** |

**Second :** General Course Description

Over the last ten years, Photovoltaics has emerged to become an application of recognized potential and has attracted an interest of increasing numbers of student s and researchers. The purpose of this course is to provide an introduction to , and overview of , the physics of the photovoltaic cell. The focus is an the basic semiconductor physics relevant to photovoltaics , physical models of photovoltaic devices and how these relate to the design and function of practical devices .

**Third :** Course Objectives

1. Introduces the solar cell as a simple current generator and defines the performance characteristics which are used to describe and compare solar cell,
2. Operation of organic solar cells
3. Basic Physics of the semiconductor
4. Analysis and study previous works and researches done on organic solar cells
5. Fabricating and testing solar cells .

 **Fourth:** Expected Learning Outcomes

1. Understand how the solar cells work
2. Understand the concept and models of solar cell device physics
3. Formulate and solve relevant physical Problems

**Fifth :** Course Plan Distribution & Learning Resources

|  |  |  |
| --- | --- | --- |
| **Learning Resources**  | **Topics to be Covered** | **Week****No.** |
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**Sixth :** Teaching Strategies and Methods

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| --- | --- |
| **Teaching Strategies and Methods** | No  |
| Lecture by teacher | **1** |
| Class discussion conducted by teacher | **2** |
| Textbook assignments | **3** |

**Seventh :** Methods of Assessment

|  |  |  |  |
| --- | --- | --- | --- |
| **Proportion of Final Evaluation** | **Evaluation Methods of**  | **Week & Date** | **No.** |
| **25** | First Exam | **6th week** | **1.** |
| **25** | Second exam  |  **13th week** | **2.** |
| **50** | Final Exam  |  **16th week** | **3.** |
|  |  |  | **4.** |
|  |  |  | **5** |
|  |  |  | **6** |
| **(100%)** |  | **Total** |

**Eighth :** Required Textbooks

**- Primary Textbook:**

The Physics Of Solar cells - Jenny Nelson

 **-** **Secondary References**

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**Ninth :** General Instructions

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| **Additional Notes, Office hours, Incomplete Exams, Reports, Papers, …etc** | **No**  |
|  | **1** |
|  | **2** |
|  | **3** |
|  | **4** |
|  | **5** |