# Annual Course Report of

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| **Heat Transfer – MPE 221 2015- 2016** | |
| **University:** Ain Shams | **Faculty:** Engineering |
| 1. **Basic Information**  Title and code: Heat Transfer – MEP 221   * 1. **Programme on which the course is given:**   Manufacturing Engineering Program   * 1. **Year / Level of programme(s)**      1. **Units / Credit Hours:**         1. Lecture: 3         2. Tutorial / Practical: 2         3. Total: 5  Names of lecturers contributing to the delivery of the course:  * 1. Dr. Yaser Fangary   ii. ----------------------------------  iii. ----------------------------------  **Course coordinator:** Dr. Yaser Fangary  **External evaluator:** ------------- | |

# Statistical Information

No of students attending the course: 16

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|  |  |  | **Number** | **Percentage (%)** |
| **Students completing the course** | |  | 16 | 100% |
| **Results** | Passed |  | 16 | 100% |
| Failed |  | 0 | 0% |
| **Grading of successful students** | **Percentage** | **GPA** | **Number** | **Percentage (%)** |
| A+ | 97% and higher | 4.0 | 0 | 0% |
| A | 93% to less than 97% | 4.0 | 2 | 12.6% |
| A- | 89% to less than 93% | 3.7 | 1 | 6.3% |
| B+ | 84% to less than 89% | 3.3 | 4 | 25% |
| B | 80% to less than 84% | 3.0 | 6 | 37.5% |
| B- | 76% to less than 80% | 2.7 | 0 | 0% |
| C+ | 73% to less than 76% | 2.3 | 0 | 0% |
| C | 70% to less than 73% | 2.0 | 2 | 12.6% |
| C- | 67% to less than 70% | 1.7 | 1 | 6.3% |
| D+ | 64% to less than 67% | 1.3 | 0 | 0% |
| D | 60% to less than 64% | 1.0 | 0 | 0% |

# Professional Information

## Course Teaching:

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| **Topic** | **No. of**  **hours** | **Lecturer** |
| Introduction, definitions, and basic concepts | **6** | Dr. Yaser Fangary |
| Application of the laws of conduction, convection and radiation  to problems in heat transfer | **12** |
| Steady and transient conduction in solids | **6** |
| Energy, energy transfer (heat and work), | **10** |
| Laminar and turbulent convection. | **9** |
| Radiation heat transfer processes. | **6** |
| Heat exchangers. | **10** |

**Topics taught as percentage of the content specified:**

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| --- | --- | --- |
| **ʘ > 90%** | **70% - 90%** | **< 70%** |

**Reasons in details for not teaching any topic:**

N/A - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -- - - - - - - - - - - - - -

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# If any topics were taught which are not specified, give reasons in details:

N/A.- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

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# Teaching and learning methods:

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| Lectures |  |
| Practical training/laboratory | |
| Seminar / workshop | |
| Class activity |  |

**Case study:**

Other assignments / homework

If teaching and learning methods were used other than those specified, list and give reasons: N/A - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

# Student assessment:

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| **Method of assessment** | **Percentage of total** |
| Assignments | 10 % |
| Quizzes | 20% |
| Written midterm exam /Project | 25 % |
| Participation in class | 5 % |
| Written final exam | 40% |
| Total | 100% |

**Members of examination committee:**

Dr. Yaser Fangary

# Role of the external evaluator

To express his views on the course - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

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# Facilities and teaching materials:

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| Totally adequate | |
| Adequate to some extent |  |
| Inadequate | |

## List any inadequacies

**There is a need for teaching equipments for experiments on (**Conduction, convection free and forces, estimating the thermal conductivity, transient conduction, radiation, and performance of heat exchangers ......etc. **) - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -**

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**- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -**

1. **Administrative constraints**

**List any difficulties encountered**

None - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

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# Student evaluation of the course:

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| **Comments** | **Response of Course team** |
| - - - - - - - - - - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - - - - - - - - - - |
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1. **Comments from external evaluator(s)**

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| **Comments** | **Response of Course team** |
| - - - - - - - - - - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - - - - - - - - - - |
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1. **Course enhancement:**

**Progress on actions identified in the previous year's action plane:**

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| --- | --- |
| **Action** | **State whether or not completed and give reasons for any non-completion** |
| N/A - - - - - - - - - - - - - - - - - - - - - -  - **- - - - - - - - - - - - - - - - - - - - - - - - -**  **- - - - - - - - - - - - - - - - - - - - - - - - - -** | - - - - - - - - - - - - - - - - - - - - - - - **- - - -**  **- - - - - - - - - - - - - - - - - - - - - - - - - - -**  **- - - - - - - - - - - - - - - - - - - - - - - - - - -** |

1. **Action plan for academic year 2016-2017**

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| **Actions required** | **Completion date** | **Person responsible** |
| - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - |
| - - - - - - - - - - - - - - - - - - **-** | - - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - - - - - - - - |
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**Course Content/ILO Matrix**

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| Course Content | a1 | a2 | a3 | a4 | a5 | a6 | b1 | b2 | b3 | b4 | b5 | c1 | c2 | d1 | d2 | d3 |
| Introduction, definitions, and basic  concepts | • | • | • |  |  | • | • |  |  | • |  | • | • |  |  |  |
| Application of the laws of  conduction, convection and radiation to problems in heat transfer |  | • | • | • | • |  | • |  |  |  |  | • | • | • | • | • |
| Steady and transient conduction in  solids | • | • |  | • |  |  | • | • | • |  |  | • | • | • | • | • |
| Laminar and turbulent convection. | • |  |  | • |  |  | • |  |  | • |  | • | • | • | • | • |
| Radiation heat transfer processes. | • |  |  | • |  | • | • |  |  |  |  | • |  | • | • | • |
| Heat exchangers. | • |  |  | • | • |  |  |  |  | • | • | • | • | • | • | • |