**Course Report for Spring Semester-2017- 2018**

**MEP-281 MEASUREMENTS**

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| **Ain Shams University****Faculty of Engineering****Second Year Mechanical** | AIN |

#### **Course Report**

**A- Basic Information**

**1. Title and code: MEASUREMENTS, MEP281**

**2. Programme(s) on which this course is given: Mechatronics, Power, Automotive and Production Engineering**

**3. Year/ Level of programmes: Third year**

**4. Units/Credit hours: 3**

**Lectures: 3 Tutorial: - Practical: 2 Total: 5**

**5. Names of lecturers contributing to the delivery of the course**

Prof. Dr. Mohamed A El-Samanoudy

Dr. Ahmed Nabil El-Shimy

Course co-coordinator: Prof. Dr. Mohamed A El-Samanoudy

External evaluator N/A ……………………………

**B-1- Statistical Information**

No. of students attending the course: No 348 100%

No. of students completing the course: No: 348 100%

**Results:**

Passed: No. 315-------90.52 % Failed: No 33---9.48 %

**B-2- Statistical Information**

|  |  |  |
| --- | --- | --- |
|  **Grade** | **Number of Students** |  **Percentage %** |
| **Distinction** | **11** | **3.2** |
| **Very Good** | **38** | **10.9** |
| **Good** | **76** | **21.8** |
| **Pass** | **190** | **54.6** |
| **Weak** | **28** | **8.0** |
| **Very Weak** | **5** | **1.4** |
|  |  |  |
| **Total Number** | **348** | **100** |
| **Failed students** | **33** | **9.48** |

**C- Professional Information**

|  |  |  |
| --- | --- | --- |
| **Topics actually taught** | **No. of hours(Total)** | **Lecturer** |
| Performance Characteristics of measuring instruments: calibration, fixed and random errors, error estimation, sensitivity, linearity, dynamic characteristics. .Experiment (1): Statistical analysis of errors. experiment (1):Probability Analysis of Scattered data | 10 | Prof. Dr. Mohamed A El-Samanoudy |
| Pressure Measurements: mechanical pressure transducers, manometers,elastic pressure measurements, electrical pressure transducers, inductive transducers, piezo-electric transducer, strain gauges. Experiments (2,3): Calibration of pressure measuring device | 15 | Prof. Dr. Mohamed A El-Samanoudy |
| Flow Measurements: orifice nozzles, venturi, turbine flow meters, magnetic flow meters, rota-meters, positive displacement flow meters, ultrasonic meters. Experiments (4,5): Calibrating Different Kinds of flow Meters Fitted on an Experimental flow bench. | 10 | Dr. Ahmed Nabil El-Shimy |
| Velocity measurements: Pitot tube, laser Doppler velocimetry, hot wire anemometer. Experiment (6):Pitot tube velocity survey on a air flow pipe cross- section. | 10 | Dr. Ahmed Nabil El-Shimy |
| Temperature Measurements: Thermal expansion thermometers, bimetallic expansion, resistance thermometers, semi conductor thermometers, thermocouples, thermal radiation thermometers. Experiments(7,8): Performance comparison of various temperature measuring | 30 | Dr. Ahmed Nabil El-Shimy |

**1 – Course teaching**

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

**>90 % x 70-90 % <70%**

If any topics were taught which are not specified, give reasons in detail

N/A………………………. ……………………..

**2- Teaching and learning methods:**

 Lectures: x

Practical training/ laboratory: x

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

**3- Student assessment:**

Method of assessment Percentage of total

Written Final examination 75 Marks

Written Midterm examination 15 Marks

Practical/laboratory work 10 Marks

Oral Examination 25 Marks

Assignments

Quizzes,

 Attendance &Class Work

Total 125 Marks

 **Members of examination committee**

 Prof. Dr. Mohamed A El-Samanoudy

 **Role of external evaluator**

N/A………………………………………

**4- Facilities and teaching materials:**

Totally adequate x

**5- Administrative constraints**

List any difficulties encountered

None…………………………..

**6- Student evaluation of the course: Response of Course Team**

The evaluation is satisfactory and good.

**7- Comments from external evaluator(s): Response of course team**

N/A……………………………. …………………………….

**8- Course enhancement:**

**Progress on actions identified in the previous year’s action plan:**

**Action State whether or not completed and give reasons for any non-completion**

N/A……………………………. …………………………….

**9- Action plan for academic year 2018– 2019 N/A**

**Actions required Completion date Person responsible**

**Course coordinator:** Prof. Dr. Mohamed A El-Samanoudy

**Signature:** Mohamed A El-Samanoudy**,**

 **Date: May,31, 2018**