**Course Report for Spring Semester(Corona)-2020**

**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: 469 100%

No. of students completing the course: No: 469 100%

**Results: at Control and still unknown so far !**

Passed:No. ------% Failed: No---%

**B-2- Statistical Information**

|  |  |  |
| --- | --- | --- |
| **Grade** | **Number of Students** | **Percentage %** |
| **Distinction** |  |  |
| **Very Good** |  |  |
| **Good** |  |  |
| **Pass** |  |  |
| **Weak** |  |  |
| **Very Weak** |  |  |
|  |  |  |
| **Total Number** | **342** | **100** |
| **Failed students** |  |  |

**C- Professional Information**

|  |  |  |
| --- | --- | --- |
| **Topics actually taught** | **No. of hours (Total)** | **Lecturer** |
| PerformanceCharacteristicsof measuringinstruments:calibration,fixed andrandomerrors, error estimation, sensitivity,linearity,dynamic characteristics. .Experiment(1): Statistical analysisoferrors. experiment (1):ProbabilityAnalysisofScattereddata | 10 | Prof. Dr. Mohamed A El-Samanoudy |
| PressureMeasurements:mechanical pressuretransducers,manometers,  Elastic pressure measurements, electrical pressure transducers ,inductive transducers ,piezo-electric transducer, strain gauges. Experiments(2,3): Calibrationofpressuremeasuringdevice | 15 | Prof. Dr. Mohamed A El-Samanoudy |
| Flow Measurements: orifice nozzles, venture ,turbine flow meters , magnetic flow meters, rota-meters ,positive displacement flow meters ,ultrasonic meters. Experiments (4,5):Calibrating DifferentKindsofflow MetersFittedon anExperimentalflowbench. | 10 | Dr. Ahmed Nabil El-Shimy |
| Velocity measurements: Pitot tube, laser Doppler velocimetry, hotwire anemometer. Experiment (6):Pitot tube velocity survey on air flow pipe cross- section. | 10 | Dr. Ahmed Nabil El-Shimy |
| Temperature Measurements: Thermal expansion thermometers, bimetallic expansion, resistance thermometers, semi conductor thermometers, thermo couples, thermal radiation thermometers. Experiments(7,8): Performancecomparisonofvarious 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 Finalexamination 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 should be 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 2020– 2021 N/A**

**Actions required Completion date Person responsible**

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

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

**Date: June ,21, 2020**