



UGC & Govt. Approved

Sonargaon University (SU)

Course Outline

Course Title (Code –ME 161): Introduction to Mechanical Engineering

Program: B.Sc. in Mechanical Engineering

Credit Hours: 03 (Three)

Semester: Spring 2015

Prerequisite(s): None

Location(s): Dhaka

Instructor: Dr. Mohammad Mamun (Professor), Bangladesh University of Engineering and Technology (BUET), Dhaka-1000

Department of Mechanical Engineering

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Course Content

Study of sources of energy: conventional and renewable, environmental pollution; study of steam generation units with their accessories and mountings; Introduction to: steam turbine with their accessories, internal combustion engines and gas turbines with their accessories, automobiles; Introduction to pumps, blowers and compressors, refrigeration and air conditioning systems.

Reference Books**:

1. Yunus A. Cengel, J. M. Cimbala and R. H. Turner, "*Fundamentals of Thermal-Fluid Sciences*"
2. V. P. Vasandani and D. S. Kumar, "*Heat Engineering*"
3. Engr. Mahbubur Rahman and Dr. M. Ashiqur Rahman, "*Elements of Mechanical Engineering*"
4. R. S. Khurmi, "*A Textbook of Thermal Engineering*"

**Course reading materials will be available online at: "<http://teacher.buet.ac.bd/mdmamun>"

Teaching Methodology:

- ⊗ Lectures will be the main method of teaching. Use of visual aids, like OHP and Multimedia, will aid the lecture presentations.
 - ⊗ The techniques of experiential learning like classroom exercises, role play and group discussions will be used to increase participation.
 - ⊗ **Participants are requested to turn off their cell phones prior to entering the classroom.**
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Course outline:

Lecture No.	Topics	Readings
1st Class	Introduction to internal combustion engines with their accessories	
2nd Class	Introduction to internal combustion engines with their accessories	
3rd Class	Introduction to gas turbines	
4th Class	Introduction to automobiles	
5th Class	Refrigeration Systems Class Test (Lectures 1-4)	
6th Class	Air conditioning systems	
Mid term		
7th Class	Study of steam generation units (Boilers) with their accessories and mountings	
8th Class	Study of steam generation units (Boilers) with their accessories and mountings	
9th Class	Introduction to steam turbine with their accessories	
10th Class	Study of sources of energy: conventional and renewable, environmental pollution Class Test (Lectures 7-9)	
11th Class	Introduction to pumps, blowers and compressors,	
12th Class	Review of all of the above topics and Discussions	
Final Exam		

CLASS MAKEUP: In case of unavoidable circumstances should a course meeting, lecture or exam, needs to be cancelled; students will be offered a make up. All makeup classes will be held as per the rescheduling suggested by the course teacher.

EXAM MAKEUP: There will be no makeup of any exam.
