



**Mechanical Engineering**  
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## ME 217 (JAN) 2:1

### Experimental Methods in Mechanical Engineering

**Instructor(s):** Susmita Dash, Debashish Das, Koushik Viswanathan

**Course description:**

This course is designed to introduce post-graduate students to basic experimental methods in mechanical engineering. The course is divided into 3 modules – the first module is comprised of elementary topics pertaining to design and execution of experiments, data analysis and signal processing, uncertainty quantification, and interfacing of measurement/actuation instruments. The second module consists of pre-set experiments and accompanying lectures, covering five different areas – basic manufacturing practice, control systems, fluid mechanics, solid mechanics and heat transfer. In the third module, students will work in groups on a project that combines concepts from the first two modules.

**Prerequisites:**

**References**

1. *Practical Electronics – Components and Techniques* by JM Hughes
2. *Practical Physics* by GL Squires

**Outcomes:**

**Additional information: Exam/ Grading**

1. First module (Basic topics): 30%
2. Second module (pre-set experiments): 40%
3. Third module (project): 30%

**Course website:**