

Thapar Institute of Engineering and Technology, Patiala
Department of Electronics & Communication Engineering

Jan-June, 2021

Course: Engineering Design Project II (UTA014)

Submission guidelines of assignment-1

Assignment-1 must be submitted by each student individually as per the following guidelines:

- The last date of submission is **April 30, 2021**.
 - A maximum weightage of this assignment is **10** marks
 - Assignment must be in **typed form** with neat diagrams (**2-3 pages only**) and the student is required to submit a soft copy (**pdf, up to 1 MB**) of his assignment.
 - Marks will be reduced if **not submitted** within **due date** of submission **without prior permission**.
 - Assignment **copied** from other students will be **treated** as the case of **plagiarism** and marks will be **deducted** from the **entire copied version** (s) submitted by students.
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Assignment-1

Objective: Design a microcontroller based detection system for **any one** of the sensor applications from the following list with a neat **circuit diagram**:

- Radiation sensors
- Proximity sensor
- Position sensor
- Photo electric Sensor
- Level sensor
- Flow sensor
- Gas and chemical sensor
- Flame sensor
- Force sensor
- Particle sensor
- Soil humidity sensor
- Soil pH sensor

The project write-up **must include** the following points in detail:

- Circuit diagram and its working along with signal conditioning or Interfacing circuit
- Selection criterion of sensor
- Selection criterion of microcontroller
- Tentative cost of project-including sensor, microcontroller, interfacing circuit etc. (estimated from online shopping sites)