Course title: Practical session on manufacturing processes

Overview:

The knowledge of different manufacturing processes such as casting, forming and welding processes are imperative in several manufacturing industries. Also, the students are interested to learn different laboratory practices in academic institutes to enhance their skill for the growth of future manufacturing industries.

Objectives:

The present course is targeted to impart knowledge and training to the students of NIT Mizoram for their enhancement of fundamental knowledge in sand casting, metal forming and fusion welding techniques. Nine different practical sessions have been identified, and the students will be provided with both theoretical background and experimental practices for their holistic growth.

Course content:

1 Forging of circular disc
2 Indirect extrusion of tube
3 Deep drawing of cup
4 Preparation of sand moulding
5 Melting and casting of two components
6 Green compressive strength, hardness and permeability tests
7 Shielded metal arc welding
8 Resistance spot welding
9 Study of heat flow during welding

Schedule and venue:

18th November 2019- 21st November 2019 (9.00 am - 5.00 pm for 4 days)

Department of Mechanical Engineering, IIT Kharagpur

Participant:

Students of NIT Mizoram (approximately 18 students)

Fee:

Sponsored by NIT Mizoram
(Approximate budget: Rs 1,62,000 + Rs 29,160 (GST @18%)= Rs 1,91,160/-

Accommodation:

Accommodation for the students will be in the hostel of IIT Kharagpur under chargeable basis. Already, confirmed by the HMC Chairman. The payment will be made directly by NIT Mizoram.

Faculty:

Prof. Sushanta Kumar Panda: He is the coordinator of this course, and he is presently working as Associate Professor in the Department of Mechanical Engineering, IIT Kharagpur. He will be involved in taking classes on forging, extrusion, deep drawing, sand moulding, casting of components and testing of moulding sand.

Prof. Jinu Paul: He is the co-coordinator of this course, and he is presently working as Assistant Professor in the Department of Mechanical Engineering, IIT Kharagpur. He will be involved in taking classes on shielded metal arc welding, resistance spot welding and heat flow during welding. Also five well trained laboratory staff will help the students while carrying out practical sessions.