World Academy of Science, Engineering and Technology
International Journal of Mechanical and Industrial Engineering
Vol:10, No:04, 2016

Industrial Practical Training for Mechanical Engineering Students: A Multidisciplinary Approach

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Abstract : The integrated knowledge in the application of mechanical engineering, microprocessor and electronic sensor technologies is becoming the basic skill of a modern engineer in machinery based processes. To meet this objective, we have developed a cross-disciplinary industrial training to teach essential hard technical and soft project skills to the mechanical engineering students in mid-curriculum. Ten groups of students were selected to participate in a 150 hour program. The students were required to design and build a robot with ability to follow tracks and pick/place target blocks in specific locations. The students were trained to integrate the knowledge of computer aid design, electronics, sensor theories and motor technology to fabricate a workable robot as a major outcome of this course. On completion of the project, students competed for top robot honors by demonstrating their robots' movements and performance in pick/place to a panel of judges.

Keywords : electronics, sensor theories and motor, robot, technology
Conference Title : ICME 2016 : International Conference on Mechanical Engineering
Conference Location : Boston, United States
Conference Dates : April 25-26, 2016