<table>
<thead>
<tr>
<th>Course No 1</th>
<th>Item</th>
<th>Details</th>
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<tr>
<td>(a)</td>
<td><em>Title of the Course</em></td>
<td>Robotics</td>
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| (b) | *Course Coordinator* | Professor Ashish Dutta  
Department of Mechanical Engineering  
INDIAN INSTITUTE OF TECHNOLOGY KANPUR |
| (c) | *Duration (1-3 weeks)* | Two weeks |
| (d) | *Eligibility Criteria (basic expected background)* | Bachelor’s degree (Masters Preferred) in  
Mechanical/Electrical/Electronics/Computer  
Science/Mechatronics/Instrumentation with some exposure to  
robotics or automation. |
| (e) | *Tentative dates for the proposed event* | September 24 – October 05, 2018 |
| (f) | *Objectives* | The course will comprise of the essential theoretical aspects of  
robotics from the basics to advanced applications. Each  
module will be integrated with hands on experiments and  
applications. There would also be invited speakers from  
industries and research laboratories to expose the participants  
to real world robotics applications and research. The course  
would be designed for teachers, researchers and industry  
personnel who would like to upgrade their skills in the areas of  
robotics and automation. Final assessment will be in terms of  
Quiz, written exams and practical project. |
| (g) | *Tentative list of topics to be covered* | • Introduction to Robotics  
• Fundamentals issues in Robot Kinematics,  
• Dynamics,  
• Mobile Robots,  
• Motion Planning,  
• Control Techniques,  
• Sensors and Actuators,  
• Computer Vision  
• Multi Robot Co-ordination and formation control  
• Industrial Applications  
• Laboratory Sessions and  
• Project |