Course Conclusion and Suggestions
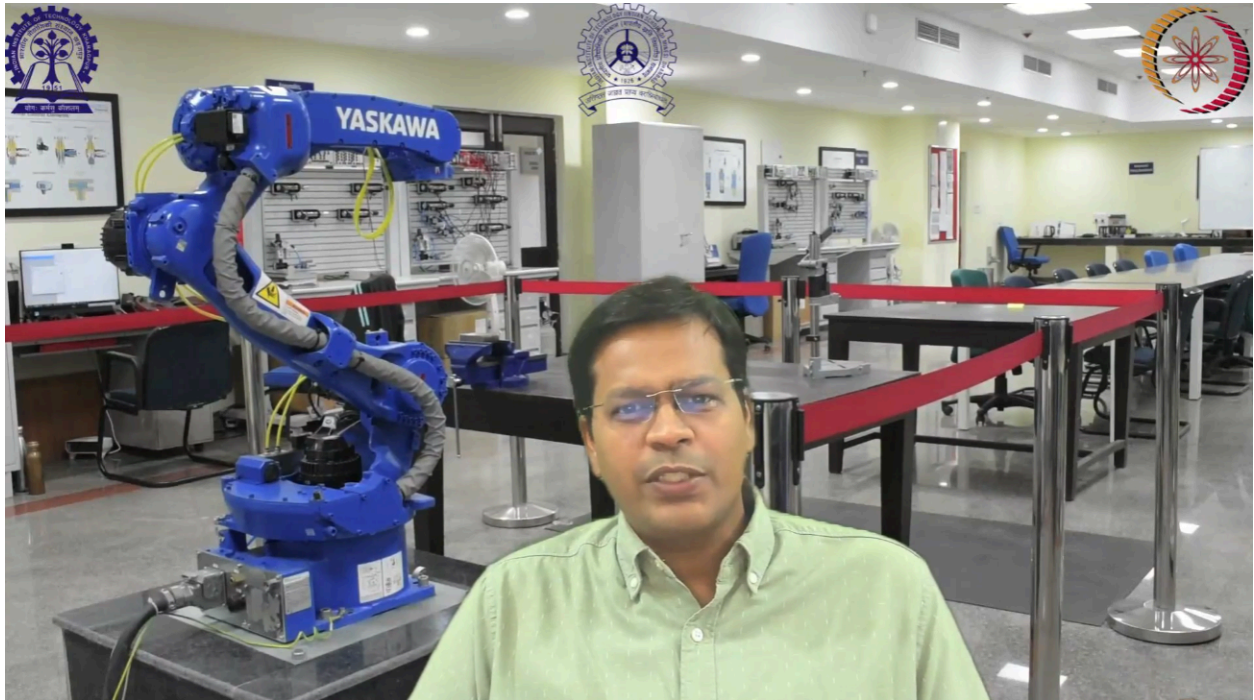
Congratulations. You have now completed the course Industrial Robotics: Theories for Implementation. I hope you have enjoyed your learning journey with me. You have learnt forward and inverse kinematics, statics, and dynamics control. That will help you to analyse any given application using a classical approach. Apart from this regular textbook curriculum of robotics, you also have learnt aspects of mechatronics through the module on actuators and sensors, which is necessary to design and understand any industrial robot. You learn to use an industrial robot right from installing it to putting the robot to use through programming. You learnt about robot safeties and norms that govern the way we put industrial robots to use. Mathematical aspects of calibrating an industrial robot turntable, linear rail tool, centre point calibration, work surface calibration, load data calibration, etc. These were covered in this course. It was a unique takeaway from this course, which is hardly covered in any textbook, and it is widely applied in industrial applications. I have shared the resources like data sheets, source codes, technical manuals, etc. These data sheets are of real industrial robots that are used in the industry.

Try to go through that to have a real feel of industrial robots. I would suggest all UG students focus on industrial robots if they want to pursue robotics further in their careers. Stay away from amateur robotics and use low-powered hobby electronics kits to feed your robotics passion. Try to use more professional tools, actuators, sensors and hardware to build your robot, and try to build it like a product, not just like a project. For researchers, PG, and PhD students, the message remains the same. I have discussed alternatives to industrial robot programming that can help you implement advanced robotics tasks using your PC-based algorithms. Feel free to communicate with me for any of your special needs. For learners from industry who are using industrial robots. I hope you have now learned the secrets of industrial robot controllers and the features any industrial robot offers through their teach pendant. Using the mathematical background of calibration that was covered in this course, you can now think of applying any robot to even more complex tasks Industrial robot manufacturers normally offer that through its standard programming interface. I would appreciate it if you could express your perspective in the feedback with your valuable suggestions and comments. Overall, I would like to thank you all for your patience and listening. My best wishes for the end examinations. Thanks a lot.