

Industrial Project



CENTRE ACTIVITIES



The perfect balance
between theory and practice ...



TRAINING



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**Industrial Training on
"NX CAM Robot Programming"**
(Plan, validate and optimize machining
processes driven by robots)

*CAN robots really replace CNC
machining centers?
Find out inside....!!!*

AKGEC SKILLS FOUNDATION

AKGEC-Skills is an initiative promoted by AKGEC & NSDC, Ministry of Skill Development & Entrepreneurship. The objective of this initiative is to encourage skill development for youth to increase productivity of the existing workforce and align the training and certification needs of the country's youth. AKGEC SKILLS works to promote training, education and upskilling activities in the fields of Industrial Automation, Robotics and Advance Manufacturing processes. Under this initiative nine state of art centres are operational. These centres have been set up in collaboration with several key Industry Partners including SIEMENS, BOSCH Rexroth, KUKA Robotics, Mitsubishi Electric, Fronius, Schmalz, CARL Zeiss and Pepperl+Fuchs.

About NX CAM Robot Programming

The use of robots is expanding rapidly in a variety of manufacturing industries. Two trends are driving this change: recent improvements in accuracy, repeatability and payload capacity make robots adequate for increasing the number of machining tasks. Siemens PLM Software has integrated its proven Tecnomatix® software for advanced robotic solutions with NX CAM software to provide the NX CAM Robotics Programming solution.

NX CAM Robotics software lets you design, simulate, validate, optimize and offline program your industrial robots for machining-type tasks. This solution greatly increases the efficiency and quality of these high-precision, multi-axis robotic operations. Featuring the intuitive and widely-accepted NX™ software 3D environment, the software combines the simplicity of CNC programming with the power to accurately create, control and simulate complex robotic machining processes.

About Course

During the program trainees will quickly create complex motion programs with advance robot setups by controlling external axis. With the integrated robotics programming in NX, you get the same benefits for assemblies and associativity as with other NX applications, such as CAM. Programming the motion of the milling tool can be accomplished using the same user-friendly techniques that CAM programmers enjoy.

- Introduction to Industrial Robot operation prospect
- Characteristic of Industrial Robot (KR-120)
- Articulated six-axis robot with support for external axes, such as positioned
- 3D kinematic assembly modelling to define heads, holders, positioner, rails and other robotic peripherals
- Static and dynamic analysis of collisions, reachability and singularities
- Robotic rules control tool orientation, robot configuration, start and end poses, robot motion and positioned behaviour and OLP commands
- A single intuitive look and feel for NX CAD, NX CAM and NX CAM Robotics programming
- Process automation templates help you create paths and apply robot rules quickly
- Post processing of OLP and its validation for PTP motion
- Usage of TCP calibration and Base calibration data in OLP Programs

Highlights

- Implementation : Theory & Practice
- Language : English
- Duration : 40 Hrs / 1 Week
- Prerequisite : Engineers, B.Tech pursuing Students
- Training Location : AKGEC-PLM
- Certification Partner : SIEMENS

Benefits

- Quickly create complex motion programs
- Validate programs graphically for faster startups
- Easily provide production-ready output
- React quickly to change orders with associative motion paths
- Eliminate translation steps and reduce IT costs with a single platform
- Set your own robotics rules to maintain flexibility
- Streamline programming with process automation at all levels

Key Takeaways

- Certification by AKGEC SIEMENS
- Hands-on Sessions with ROBO-MILLING setup using KR-120 robot
- Understanding of validation of program graphically for faster output
- Setting up your own robotic rule to maintain flexibility
- Streamlining of programs with process automation at all levels
- Project Based Learning