COMPUTER AIDED MANUFACTURING AND ROBOTICS LAB

Subject Code: 13ME2122

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Course Outcomes :

At the end of the course, the student will be able to

CO1: Create the part model using CAM software

CO2: Use CNC part program for CNC turning and milling operations

CO3: Generate the tool path and NC part program for drilling and milling operations using CAM software

CO4: Demonstrate the tool path for turning operation using CAM software

CO5: Write a program for performing pick and place operations

List of Experiments

1. Tool planning and selection of sequences of operations, tool setting on machine - Practice
2. Practice in G & M code based CNC programming for the use on a turning machine
3. Practice in G & M code based CNC programming for the use on a machining center / milling machine
4. Creating a 2D part and contour tool path using CAM software
5. Creating 3D geometry in CAM software
6. NC code generation and tool path simulation for drilling operations using CAM software
7. NC code generation and tool path simulation for facing operations using CAM software
8. NC code generation and tool path simulation for pocket milling operations using CAM software
9. NC code generation and tool path simulation for profile milling operations using CAM software
10. NC code generation and tool path simulation for plane and step turning operations using CAM software
11. NC code generation and tool path simulation for threading operations using CAM software
12. Practice in Robot programming and its languages
13. 3-D Robot simulation for operation of pick-place robot

Software: Master CAM, Pro-E