

5th Semester	RME5D002	CAD/CAM	L-T-P 3-0-0	3 Credits
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MODULE – I**(14 HOURS)**

Fundamentals of CAD: Design process, Applications of computer for design, Creating the Manufacturing Database, The Design workstation, Graphical Terminal, Operator input Devices, Plotters and other devices, Central Processing Unit, Memory types.

MODULE – II**(14 HOURS)**

Computer graphics Software and Database: Configuration, Graphics Packages, Constructing the Geometry, Transformations of geometry, Database structure and content, Wire frame versus solid modeling, Constraint– Based modeling, Geometric commands, Display control commands, Editing.

MODULE III**(14 HOUR)**

CAM - Numerical Control and NC Part Programming: Numerical Control, Numerical Control elements, NC Coordinate system, NC motion control system, Manual and Computer Aided programming, the APT language, Miscellaneous Functions, M, Advanced part-programming methods. Problems with conventional NC, NC technology: CNC, DNC, Combined DNC/ CNC system, Adaptive control manufacturing systems, Computer Integrated Manufacturing system, Machine Tools and related equipment, Materials Handling system: AGV, Robots, Lean manufacturing.

Books :

- [1] CAD/CAM Computer Aided Design and Manufacturing, M.P.Goover and E.W.Zimmers, Jr., Pearson.
- [2] CAD & CAM, J Srinivas, Oxford University Press.
- [2] CAD/CAM Theory and Practice, Zeid and Subramanian, TMH
- [3] CAD/CAM Principles, Practice and Manufacturing Management, McMahan and Browne, Pearson Education
- [4] CAD/CAM Concepts and Applications, C.R.Alavala, PHI
- [5] Computer Aided Design and Manufacturing, Lalit Narayan, Mallkarjuna Rao and Sarcar, PHI
- [6] CAD/CAM Theory and Concepts, K.Sareen and C.Grewal, S.Chand Publication
- [7] CAD/CAM/CAE, N.K.Chougule, Scitech