

## **CC5001 COMPUTER CONTROL IN PROCESS PLANNING**

### DETAILED SYLLABUS

#### **OBJECTIVE**

To provide the student with an understanding of the importance of process planning role in manufacturing and the application of Computer Aided Process Planning tool in the present manufacturing scenario

#### **UNIT I INTRODUCTION**

The Place of Process Planning in the Manufacturing cycle - Process Planning and Production Planning – Process Planning and Concurrent Engineering, CAPP, Group Technology.

#### **UNIT II PART DESIGN REPRESENTATION**

Design Drafting - Dimensioning - Conventional tolerance - Geometric tolerance - CAD - input/output devices - topology - Geometric transformation - Perspective transformation – Data structure- Geometric modelling for process planning - GT coding - The optiz system - The MICLASS system.

#### **UNIT III PROCESS ENGINEERING AND PROCESS PLANNING**

Experienced, based planning - Decision table and decision trees - Process capability analysis- Process Planning - Variant process planning - Generative approach - Forward and Backward planning, Input format, AI.

#### **UNIT IV COMPUTER AIDED PROCESS PLANNING SYSTEMS**

Logical Design of a Process Planning - Implementation considerations -manufacturing system components, production Volume, No. of production families - CAM-I, CAPP, MIPLAN, APPAS, AUTOPLAN and PRO, CPPP.

#### **UNIT V AN INTERGRADED PROCESS PLANNING SYSTEMS**

Totally integrated process planning systems - An Overview - Modulus structure - Data Structure, operation - Report Generation, Expert process planning.

#### **REFERENCES**

1. Chang, T.C., " An Expert Process Planning System ", Prentice Hall, 1985.
2. Gideon Halevi and Roland D. Weill, " Principles of Process Planning ", A logical approach, Chapman & Hall, 1995.

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*Notes*  
*Syllabus*  
*Question Papers*  
*Results and Many more...*

Available @

[www.AllAbtEngg.com](http://www.AllAbtEngg.com)

3. Nanua Singh, " Systems Approach to Computer Integrated Design and Manufacturing ", John Wiley & Sons, 1996.
4. Rao, "Computer Aided Manufacturing ", Tata McGraw Hill Publishing Co., 2000.
5. Tien-Chien Chang, Richard A.Wysk, "An Introduction to automated process planning systems ", Prentice Hall, 1985.