PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY

(PROPOSED COURSE STRUCTURE FOR AUTONOMOUS SCHEME)

I Year M. Tech. (Machine Design) M.E.

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MEMD2T6C - CONCURRENT ENGINEERING

(Elective IV)

UNIT - I

Integrated Product Development: Idealized model for Integrated Product Development, Integration between project and management, Integration with other development activities, understanding the IPD model, Validity of the IPD model.

UNIT - II

Introduction: Extensive definition of CE - CE design methodologies - Organizing for CE – CE tool box collaborative product development

UNIT - III

Design Stage: Life-cycle design of products - opportunity for manufacturing enterprises - modality of Concurrent Engineering Design

UNIT - IV

Automated analysis idealization control - Concurrent engineering in optimal structural design - Real time constraints

UNIT – V

Manufacturing Concepts and Analysis: Manufacturing competitiveness - Checking the design process - conceptual design mechanism – Qualitative physical approach

UNIT - VI

An intelligent design for manufacturing system modular - Modeling and reasoning for computer based assembly planning.

UNIT -VII

Project Management: design for economics - evaluation of design for manufacturing cost

Unit-VIII

Concurrent mechanical design - decomposition in concurrent design -negotiation in concurrent engineering design studies

Text Books:

1. Anderson MM and Hein, L. Berlin, "Integrated Product Development", Springer Verlog, 1987

2. Cleetus, J, "Design for Concurrent Engineering", Concurrent Engg. Research Centre, Morgantown, WV, 1992

References:

1. Andrew Kusaik, "Concurrent Engineering: Automation Tools and Technology", John Wiley and Sons Inc., 1992

2. Prasad, "Concurrent Engineering Fundamentals: Integrated Product Development", Prentice Hall, 1996

3. Sammy G Sinha, "Successful Implementation of Concurrent Product and Process", John Wiley and Sons Inc., 1999