

ELECTIVE COURSE -I-1- INTRODUCTION TO EMBEDDED SYSTEMS

Objective: *To teach students about the basics of embedded systems.*

UNIT-I

Basics embedded systems – Hardware fundamentals – Advanced Hardware fundamentals.

UNIT-II

Interrupts - Embedded software and various architectures for it – Basics of RTOS.

UNIT-III

RTOS services - Basic design using RTOS – Micro C/OS-II RTOS API calls and its design

UNIT-IV

Embedded development tools - Debugging techniques – Sample RTOS applications.

UNIT-V

RTOS Program modeling concepts for single and multiprocessor system software development.

TEXT BOOK:

1. **David E. Simon**, An embedded software primer, Pearson education, 2006 (ISBN 81-7808-045-1) [**Unit-1** :(Chapters 1,2,3); **Unit-2** : (Chapters 4,5,6); **Unit-3** (Chapters 7,8); **Unit-4** (Chapters 9,10,11)]

REFERENCE BOOK:

1. **Rajkamal**, Embedded systems, Tata McGrawHill, 2005 (ISBN 0-07-049470-3) (**Unit-5** Chapter 6)