# NOC:Information Security - II - Video course

COURSE OUTLINE

Building Secure Systems involve secure hardware, secure micro architecture, secure operating systems, secure compilers and secure application development. Out of these, ensuring security at the hardware is most crucial as it is THE ROOT OF TRUST. In other words, however secure the Operating System, Compilers and Applications be, if the hardware on which these thrive is not secure, then the entire system can be compromised. The security of the system is a collective responsibility of Hardware and Software. In this second course in the Information Security series we shall deal with the hardware infrastructure available in contemporary architectures that are vital for building secure systems. We shall take the x86, ARM and PowerPC based architectures as case studies to explain the concepts.

COURSE DETAIL

WeekNo.	Topics
1.	Hardware Security in Modern Compute Systems
2.	Interaction of Compiler and OS with Hardware
3.	Hardware Privilege Levels
4.	Memory Segmentation
5.	Virtual memory and Paging
6.	Interrupt Service Routines
7.	Task Switching
8.	Establishing Hardware Root of Trust

NP-TEL

NPTEL

http://nptel.ac.in
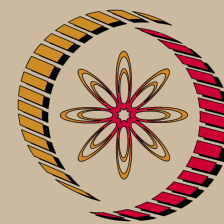
Computer Science and Engineering

Pre-requisites:

Basic Programming

Coordinators:

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