

## I. Introduction

Types of Software  
Information Systems  
Information Systems Technologies  
and Methodologies



## Software Everywhere!

- Generations of Software
  - ✓ Software for the techies (...-1990)
  - ✓ Software for the professionals (1990 - 2005)
  - ✓ Software for the masses... (2005 - ...)
- Types of Software
  - ✓ System software (OS, network software,...)
  - ✓ Middleware (compilers, DBMSs,...)
  - ✓ Application software (embedded software, **information systems**,...)

## Information Systems

- Used heavily in large organizations
- Give feedback on on-going projects (e.g., production)
- Used for decision support (DSS)
- Used for on-line analytical processing (OLAP)
- Used for data mining
- Used for customer service (web-based systems)

## Information System Technologies

- Database Management Systems (DBMS)
- Data Warehouses
- Data Mining
- Web technologies (Java, HTML/XML, RDF/S, Web services,...)

## Information System Methodologies

- Where do we start? --> Feasibility study (or, early requirements analysis)
- Define the problem --> Requirements analysis
- Design a solution --> Design

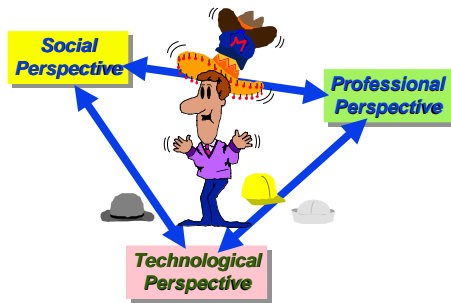
**This course is about methodologies for building information systems!**

## Why is this Course Important?

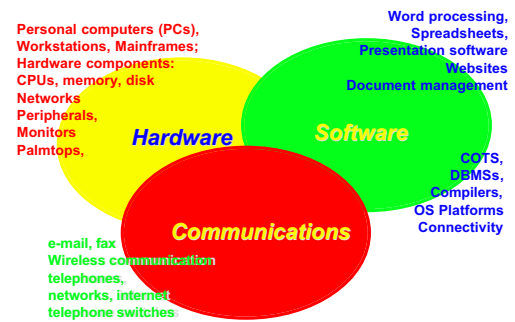
- Most errors (54%) are detected after coding and testing.
- Almost half of all errors (45%) are introduced during requirements and design.
- Most errors made during requirements analysis are non-clerical (77%).
- Requirements errors can cost up to 100 times more to fix than implementation errors -- if they are not caught early on.

**Need to do requirements and design right!**

## Background of a Systems Analyst



## Technologies for System Analysis



## Readings

1. Lecture units 1.1 - 1.4 (available at the course website.)