

## **Information Systems** Course Outline

Coordinator/Lecturer: Dr.Sudhendar (sudhi) Rao  
Office : B204  
Email : [sudhi9000@gmail.com](mailto:sudhi9000@gmail.com)  
Phone : TBA  
Consultation hours : (Appointment via email)

### **CourseDescription**

This course intends to provide a comprehensive understanding of concepts, architecture, and applications related to different Information Technology components in Business. Application of IT has changed its significance over the years. From being a competitive advantage, IT has turned into the blood in body of business, carrying information, the most vital component of business today to wherever needed, whenever needed. The course focuses on application of the basic components of Information Technology:

- Hardware and Software components,
- Database Technology and its evolution in application to Business
- System Architecture, Development and Implementation
- E- commerce and e- business,
- Enterprise Systems,
- Information Security and Assurance
- Emerging Trends - Cloud, BI/Big Data, Opensource/Freeware, Outsourcing, etc.
- Business aspects of IT – Financial, leveraging IT for competitiveness, etc
- 

The load of the course is distributed between the class room sessions, real world project work and the skill building lab sessions. The course undertakes a participative workshop approach, and learning is facilitated through participative discussions.

### **Learningoutcomes**

Upon completing the course, the participants will be able to:

- i. Gain a comprehensive understanding of: information systems (types, architecture, and investment process); application of internet for business, decision models; concepts of data, investment in IT. Develop skills related to building real time information systems for various business needs.
- ii. Gain an understanding by use of case studies of how corporation use information technology as part of integrative strategy to solve complex business problems.
- iii. Gain an understanding on how innovative use of information systems can help developing competitive advantage.
- iv. Develop an understanding on how internet can help business grow

- v. Gain an understanding on the importance of security, privacy, and ethical issues as they relate to information systems.

## CourseMaterials

Most of the course material will be provided in the form of presentations, papers, reports & case studies. In addition students are encouraged to refer to the following books available in the library as required:

Sl. No	Books	Author
1	Management Information Systems 10e	James A O'Brein, George M
2	Strategic Management of Information Technology	VishvajeetSisodia
3	Cyber Security	Edward Amoroso
4	An introduction to Database Systems 8th Edition	C J Date
5	Information Technology for Management (7th Edition)	Henry C. Lucas, Jr.
6	Service Management Operations, Strategy, Information Technology	James A Fitzsimmons
7	Information Technology: Law & Practice 3rd Edition	Vakul Sharma
8	Financial Intelligence for IT Professionals	Karen Berman, Joe Knight
9	IT and the East	James M Popkin
10	Harvard Business Review on the Business value of IT	HBR Press
11	The Adventures of an IT Leader	Robert D Austin
12	The Real Business of IT	Richard Hunter and George Westerman
13	8 things we hate about I T	Susan Cramm
14	IT Savvy: What top executives must know to go from pain to gain	Peter Weill

### Additional Course Material:

- **An Introduction to Database Systems (8th Edition) Paperback by C.J. Date.** – Online version available at:  
[http://mathcomp.uokufa.edu.iq/staff/kbs/file/2/An%20Introduction%20to%20Database%20Systems,%208th%20Edition,%20C%20J%20Date\\_4.pdf](http://mathcomp.uokufa.edu.iq/staff/kbs/file/2/An%20Introduction%20to%20Database%20Systems,%208th%20Edition,%20C%20J%20Date_4.pdf)

## CourseContent–TentativeLectureSchedule

Week	Topics Covered	Topic
1	Introduction to Information System	<ul style="list-style-type: none"> <li>• Introduction to Information Systems , brief history of IT, technical and organizational foundations of information systems</li> <li>• Basic concepts &amp; building blocks of IT. Hardware,software, etc.</li> </ul>
READINGS and ACTIVITIES  ACTIVITY: Exploring the Hardware components of your organization		

Week	Topics Covered	Topic
2	Overview of IT infrastructure –key concepts	<ul style="list-style-type: none"> <li>• networks, storage, security</li> <li>• Components of system development- development platforms</li> </ul>
READINGS and ACTIVITIES  ACTIVITY: Identify the development platform		

Week	Topics Covered	Topic
3	Components of system development	<ul style="list-style-type: none"> <li>• Databases – Relational DB, Entities &amp; Relations, Data Modeling, Data Schema and SQL</li> </ul>
READINGS and ACTIVITIES  ACTIVITY: Identify all the databases in your organization and their type		

Week	Topics Covered	Topic
4	Components of system development	<ul style="list-style-type: none"> <li>• Components of system development- data analytics, Big Data, directories</li> <li>• System architecture of modern</li> </ul>

		Information Systems – web system architecture
<p>READINGS and ACTIVITIES</p> <p>ACTIVITY: Enumerate the current web infrastructure in your organization; Draw a simple network architecture diagram of your company's infrastructure</p>		

Week	Topics Covered	Topic
5	Introduction to enterprise systems	<ul style="list-style-type: none"> <li>• ERP</li> <li>• Transaction Systems</li> <li>• CRM</li> <li>• Identity Management</li> <li>• Guest Lecture*</li> </ul>
<p>READINGS and ACTIVITIES</p> <p>ACTIVITY: Does your organization have an IAM?</p>		

Week	Topics Covered	Topic
6	eCommerce and eBusiness	<ul style="list-style-type: none"> <li>• Leveraging online systems</li> <li>• IT Security – Security Architecture</li> </ul>
<p>READINGS and ACTIVITIES</p> <p>ACTIVITY: Use an existing eCommerce system – identify its strengths and weaknesses</p>		

Week	Topics Covered	Topic
7	Systems Analysis and Design	<ul style="list-style-type: none"> <li>• Analysis phase of systems development. Development life cycle</li> <li>• feasibility studies, analysis of user requirements, development of logical system models.</li> </ul>

READINGS and ACTIVITIES

ACTIVITY: Does your organization have an IAM?

Week	Topics Covered	Topic
8	Project Management and development	<ul style="list-style-type: none"> <li>software project management, integrating web and business environments</li> <li>Software testing</li> </ul>

READINGS and ACTIVITIES

ACTIVITY: Use an existing eCommerce system – identify its strengths and weaknesses

Week	Topics Covered	Topic
9	Related Concepts and Technologies	<ul style="list-style-type: none"> <li>Implementation Challenges</li> <li>IT and International Business</li> <li>Emerging Trends – Cloud, Opensource/Freeware, etc</li> </ul>

READINGS and ACTIVITIES

ACTIVITY: Identify the top 10 IT outsourcing companies  
Identify any freeware products used by your organization

Week	Topics Covered	Topic
10	Leveraging IS for competitiveness	<ul style="list-style-type: none"> <li>Case Studies to be provide later</li> </ul>

READINGS and ACTIVITIES

READING: Case studies as suggested

Week	Topics Covered	Topic
11	Project	<ul style="list-style-type: none"> <li>Submit Report</li> <li>Project presentation</li> </ul>

## Teaching Method

The course will be taught using a combination of learning methods namely class discussions, case studies and presentations/guest lectures. Students are required to read and analyze the case studies thoroughly before coming to class. It is also expected that the students will revise course material that is covered in the previous lecture before coming to class. Students are strongly advised to attend all classes and lab sessions.

## Software Tools

Please use tools such as PowerPoint for presentations.

For technical drawings such as IT Architecture, use of tools such as Visio or Pencil is encouraged.

## Assignments and evaluation

Performance of students will be assessed throughout the course. The final grade will be arrived at according to the following contributions of elements of assessment:

Elements of Performance Assessment	Basis of Assessment	Contribution to Final Grade
1. 2 In-class quizzes	Individual	30%
2. Project Report+Presentation	Group	20%
3. Final Examination	Individual	40%
4. Class Diary	Individual	10%

### 1. In-class quizzes (15% each)

There will be two in-class quizzes of 30 minute duration Each quiz will include 30 multi-choice questions (0.5 points each).

### 2. Project Report and Presentation (20%)

Students will be expected to work in groups on developing an IT plan applying learning from the course. Details of the project will be discussed during the course.

### 3. Final Examination (40%)

The final examination will be conducted at the end of the course The date for the final exam will be announced in the class.

Bonus: A bonus of up to 10% may be assigned based on productive class participation.

The Quizzes are aimed at evaluating the student's understanding of the basic concepts.

The class project and the final exam are aimed at evaluating how well the student/s can put together the concepts and aspects of Information Systems into a comprehensive solution.

Class Diary:

The class diary is intended to help the students crystallize the learning of each session into key mnemonic concepts and also help as a ready refresher before preparing for placement interviews and so on.

Each student, at the end of the day, is expected to write in a table the three most important concepts, ideas, components etc, learned in that day's sessions. The final diary will need to be submitted on the day of the exam. The diary will be evaluated for completeness and comprehensiveness.

NOTE:

The diary is NOT a copy of your class notes and jottings. It is a summary of what you understand in the class captured as three key points. Straight submissions of class notes will be graded at 0 (zero).

### Grading system

Grade	A+	A	A-	B+	B	C+	C	D	F
%	90+	89-86	85-81	80-76	75-71	70-66	65-61	60-50	<50

### Course Etiquette:

Details will be discussed in first session.

1. Academic Integrity: A no-tolerance policy will be implemented:
  1. All material taken from the internet and other sources must be referenced diligently in your reports, etc. A failure to do so may result in a downgrade of up to one letter grade.
  2. Any cheating or collaboration during the exams may result in a downgrade of up to two letter grades.
2. Common courtesies expected maintaining silence except for class participation, avoiding cross talk, and avoiding usage of mobiles and laptops.
3. A penalty of -1 mark will be applied if submissions whether on paper or an electronic file do not include the submitter's name as part of the file name or on the first page.
4. Grace period to enter the class – 10 minutes – however you can walk out after marking attendance
5. Dress code – same as MYRA dress code