

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT101	Fundamentals of IT	3	0	0	3

Course Category:

~~Foundation (0) /~~ **Program Core (1)** / Program Elective (2) / ~~Allied Elective (3) / University Elective (4) / Value Education Elective (5) / Independent Learning (6) / Industry Higher Learning Institute Interaction (7).~~

a. Preamble

Any discipline of engineering, when learned through formal education programs, necessitates having a specially designed course which covers the fundamentals of various focus areas of that discipline. With this in mind, the course on IT fundamentals is designed to provide the students with fundamental know how's of different topics in Information Technology in addition to stressing the need for interpersonal skills development.

b. Prerequisite Courses:

Nil

c. Related Courses:

Software Engineering
Computer Networks

d. Course Educational Objectives :

Students undergoing this course are expected to

- Understand the computing flavors in the field of Information Technology.
- Understand the disciplines related to Information Technology.
- Describe the elements of an IT application and Business Process Integration.
- Develop and follow the professional skills that are expected out of an IT professional.
- Understand the application domain of IT.

e. Course Outcomes :

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Explain terms and concepts of information Technology (H/W, S/W, N/W, security, internet/web, and Applications)	K2
CO2	Describe the relation between IT and other computing	K2

	disciplines	
CO3	Explore the elements of an IT application and business process integration.	K2
CO4	Use internet / web services as a resource for learning and discovery	K2
CO5	Create useful end products in IT areas of internet to explore major, career, skills, interest and talents.	K3

f. Correlation of COs with POs :

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M						H					
CO2	M						H					
CO3	M						H					
CO4	M					H		H				
CO5	M						H					

- H- High; M-Medium; L-Low

g. Course Content :

UNIT I-COMPUTING FLAVOURS IN INFORMATION TECHNOLOGY (8 hours)

Introduction to IT Systems – Information Processing Logic and Management – ICT - Networking - Programming –HCI design principles - Web and Multimedia foundations – Information Assurance and Security.

UNIT II-COMPUTING DISCIPLINES IN IT (5 hours)

Problem Space of Computing - Computing Disciplines – Definition of IT - Relationship between IT and other computing disciplines - Relationship between IT and non computing disciplines

UNIT III- IT APPLICATION AND BUSINESS PROCESS INTEGRATION (7 hours)

Emergence of complexity in IT – Tools and Techniques to handle complexity – Elements of an IT application – Business Processes - Project Management – Cost Benefit Analysis - Integration of Processes.

UNIT IV- IT PROFESSIONAL CHARACTERISTICS (5 hours)

Professionalism–Responsibility - Interpersonal Skills - Life-long Learning- Computing Ethics - Crime, Law, Privacy and Security.

UNIT V- IT SECTORS AND SERVICES (5 hours)

Medical Applications- Business Applications- Law Enforcement and Political Processes- E-commerce- Manufacturing- Education- Entertainment – Agriculture– BioInformatics

Total: 45

h. Learning Resources

i. TEXT BOOKS

1. Brian.K.Williams, Stacey.C.Sawyer,Using Information Technology – A Practical Introduction to Computers and Communication, Tata McGraw Hill Publishing Company Ltd., New Delhi, 6th Edition, 2005.
2. Shelley.G, Vermaat.M, Cashman.T, Discovering Computers 2005: A Gateway to Information, Thompson Course Technologies, 2005

ii. REFERENCE BOOKS

1. Jedlicka.L, Computers in Our World, Thompson Course Technologies, 2003 .