INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

INFORMATION TECHNOLOGY

COURSE DESCRIPTION FORM

Course Title	**E-COMMERCE**			
Course Code	A80544			
Regulation	**R13 - JNTUH**			
Course Structure	Lectures	Tutorials	Practical's	Credits
	4	-	-	4
Course Coordinator	Dr. P L Srinivasa Murthy, Professor			
Team of Instructors	Dr. P L Srinivasa Murthy, Professor			

I. COURSE OVERVIEW:

This course. Provides an introduction to the technology and history of the Internet and its uses as an electronic commerce medium from informational websites to full online retail systems. Included in this introductory survey will be analysis and evaluation of retail and business-to-business Internet based systems. Typical topics include e-commerce business and revenue models, ecommerce strategies and marketing concepts, specific applications such as web 2.0,E-learning and E-government; as well as technology security and payments. Entire supply chains are being re-engineered .

PREREQUISITE(S):

Level	Credits	Periods/ Week	Prerequisites
UG	4	4	

II. MARKS DISTRIBUTION:

Sessional Marks	University End Exam marks	Total marks
Midterm Test There shall be two midterm examinations. Each midterm examination consists of subjective type and objective type tests. The subjective test is for 10 marks of 60 minutes duration. Subjective test of shall contain 4 questions; the student has to answer 2 questions, each carrying 5 marks. The objective type test is for 10 marks of 20 minutes duration. It consists of 10 Multiple choice and 10 objective type questions, the student has to answer all the questions and each carries half mark.	75	100

Sessional Marks	University End Exam marks	Total marks
First midterm examination shall be conducted for the first two and half units of syllabus and second midterm examination shall be conducted for the remaining portion. **Assignment** Five marks are earmarked for assignments. There shall be two assignments in every theory course. Marks shall be awarded considering the average of two assignments in each course		

III. EVALUATION SCHEME:

S. No	Component	Duration	Marks
1.	I Mid Examination	80 minutes	20
2.	I Assignment	-	5
3.	II Mid Examination	80 minutes	20
4.	II Assignment	-	5
5.	External Examination	3 hours	75

IV. COURSE OBJECTIVIES:

1. **Understand** the interest and opportunity of E-commerce
2. **Discuss** the trends in E-commerce and use in the internet.
3. **Evaluate** key aspects of B2B e-commerce
4. **Apply** the concepts of internet security and multimedia in e-business applications
5. **Define** supply chain management
6. **Discuss** electronic data interchange

V. COURSE OUTCOMES:

At the end of the course the students are able to:

1. **Demonstrate** an understanding of the foundations and importance of E-commerce
2. **Demonstrate** an understanding of retailing in E-commerce by using and determining the effectiveness of market research
3. **Analyze** the impact of E-commerce on business models and strategy
4. **Describe** Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational
5. **Describe** the infrastructure for E-commerce
6. **Describe** the key features of Internet, Intranets and Extranets and explain how they relate to each other.

VI. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
PO1	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	S	Assignments, Tutorials
PO2	**Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	S	Assignments
PO3	**Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	S	Mini Projects
PO4	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	S	Projects
PO5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	S	Mini Projects
PO6	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	N	--
PO7	**Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	N	--
PO8	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	N	--
PO9	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	N	--
PO10	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	N	--

Program Outcomes		Level	Proficiency assessed by
PO11	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	N	--
PO12	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	S	Projects

N - None S - Supportive H - Highly Related

VII. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes		Level	Proficiency assessed by
PSO1	**Professional Skills:** The ability to research, understand and implement computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient analysis and design of computer-based systems of varying complexity.	H	Lectures, Assignments
PSO2	**Problem-solving Skills:** The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.	H	Projects
PSO3	**Successful Career and Entrepreneurship:** The ability to employ modern computer languages, environments, and platforms in creating innovative career paths, to be an entrepreneur, and a zest for higher studies.	S	Guest Lectures

N - None S - Supportive H - Highly Related

VIII. SYLLABUS:

UNIT-I

Electronic Commerce-frame work, anatomy of E-commerce applications e-commerce consumer applications,
E-commerce consumer applications, e-ecommerce organization applications.
Consumer Oriented Electronic commerce-Mercantile process models.

UNIT – III

Electronic payment systems –digital token-based, smart cards, credit cards, risks in electronic payment systems
Inter Organizational Commerce – EDI, EDI implementation, value added networks

UNIT – III
Intra Organizational Commerce-work flow, automation customization and internal commerce. Supply chain management

UNIT – IV

Corporate Digital Library- Document Library, digital document types, corporate data warehouses, Advertising and marketing- Information based marketing, advertising on internet, on-line marketing process, market research

UNIT- V

Consumer Search and resource discovery – Information search and retrieval, commerce catalogues, information filtering
Multimedia- key multimedia concepts, digital video and electronic commerce, desktop video processing, desktop video conferencing

Text books:

1. Frontiers of electronic commerce-kalakata,whinston, Pearson

References:

1. E-commerce fundamentals and applications Hendry Chan, Raymond lee, Tharam Dillon, john Wiley
2. E-commerce,S.jaiswal-Galgotia
3. E-commerce,EfrianTurbon,JaeLee,DavidKing,H.Micheal chang
4. Electronic commerce-Gary P.Schneider-Thomson

IX. COURSE PLAN:

At the end of the course, the students are able to achieve the following course learning outcomes.

Lecture No.	Course Learning Outcomes	Topics to be covered	Reference
1-3	**Understand** the basic concept of mobile computing	Introduction to E-Commerce, E-commerce frame work, Anatomy of E-Commerce applications, E-Commerce Consumer applications, E-Commerce Organization applications, Benefits of E-commerce, Limitations of E-commerce, E-commerce in India	T1:1.1-1.8, T2:1.2
4-7	**Describe** the GSM and GPRS architecture	Consumer Oriented Electronic Commerce Consumer-Oriented Services Consumer-Oriented Applications Mercantile Process Models Prepurchase preparation Purchase Consummation Mercantile Models - Merchant's Perspective Mercantile Process Using Digital Cash Mercantile Transaction Using Credit Cards	T1:3.3,T2:2.3,T1:35-3.7
8-9	**Discuss** about the GSM Services	Electronic Payment Systems, Electronic File Transfer, Digital token-based electronic payment systems, Electronic Cash, Business Issues and Electronic Cash, Operational Risk and Electronic Cash, Legal Issues and Electronic Cash, Electronic Checks, Smart card payment Systems, Credit card payment systems, Risk in Electronic Payment system	T1:3.3,T2:2.3
	Explain About MAC layer	Wireless Medium Access Control (MAC), Motivation for a specialized MAC(Hidden	T1:4.1

10		and exposed terminals. Near and far terminals).	
11-12	**Discuss** about MAC protocols	MAC protocols for GSM and Wireless LAN (IEEE802.11)	T1:4.1
13-14	**Generalize** the Collision Avoidance protocols	Collision Avoidance :MACA, MACAW Protocols	T1:3.8,T2:2.5 T1:4.1, T2:3.1
15-17	**Demonstrate** about the mobile IP network Layer	**Mobile IP Network Layer :**IP and mobile IP Network Layers, Packet Delivery and handover Management	T1:4.4

18-21	**Describe** about the Location Management and registration	Location Management and registration, Tunneling and Encapsulation, Route Optimization, DHCP	T1:4.5,4.6,4.7
22-24	**Explain** about the mobile transport layer protocols	Mobile Transport Layer,Conventional TCP/IP Protocols, Indirect TCP, Snooping TCP	T1:4.9, T1:6.1
25-28	**Summarize** about the Mobile TCP	Mobile TCP and other transport protocols	T1:5.2
29-32	**Discuss** about the Database Issues	Database Hoarding & Caching Techniques, C-S Computing & Adaptation.	T1:5.1.5.4
33-37	**Explain** about the Transactional Models .	Transactional Models, Query Processing, Data Recovery Process & QoS Issues.	T1:8.1-8.6
38-41	**Describe** about the Data Dissemination and Synchronization	Data Dissemination and Synchronization, Communications Asymmetry, Classification of Data Delivery Mechanisms, Data Dissemination Broadcast Model.	T1:6.1-6.7
42-46	**Illustrate** about the Selective Tuning and Indexing Methods	Selective Tuning and Indexing Methods, Digital Audio and Video Broadcasting(DAB & DVB). Data Synchronization-Introduction, Software, and Protocols.	T1:7.6,7.7
47-51	**Interpret** the MANETs and their applications	Mobile Adhoc networks(MANETs) Introduction, Applications & Challenges of a MANET,	T1:10.1-10.5
52-55	**Discuss** about the Routing Algorithms	Classification of Routing Algorithms such as DSR, AODV ,DSDV , etc	T1:11.3
56-60	**Explain** about the MANET Services	Mobile Agents, Service Discovery and protocols.	T1:11.3
60-65	**Analyze** about the Protocols and Platforms	Protocols and Platforms for Mobile Computing WAP, Bluetooth, XML, J2ME, JavaCard, PalmOS, Windows CE, SymbianOS, Linux for Mobile Devices.	T1:10.6-10.13 T2:9.1

VI. MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Objectives	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
I												S		S	
II	S		H											S	
III			S	S									S	H	
IV		S												S	
V					S										S
VI					S									S	S

S - Supportive **H - Highly Related**

VII. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1		S	S											S	
2				S									S		
3					S									S	
4	S												S	H	
5		S											S		
6				S								S		S	

S - Supportive **H - Highly Related**

Prepared by: Dr.P L Srinivasa Murthy, Professor. **HOD, IT**