

DSIT 7005	IT Applications in Power Sector	L	T	P	C
Version 1.0		3	0	0	3
Pre-requisites/Exposure	Basic understanding of computers				
Co-requisites	--				

Course Objectives

1. Understand the role of IT and IS in operational, tactical and strategic decision making.
2. Understand the business functions and integration of IT and IS in business processes in various functions and sector
3. Understand the various IT applications in various functions and sector

Course Outcomes

On completion of this course, the students will be able to

CO1. The student would be able understand the domestic and global impact of IT and IS on individuals, organisations and society.

CO2. The student would be able to analyse the various IT infrastructure and applications required for an organisation.

CO3. The student would be able to integrate the various latest IT applications available for various sectors

Catalog Description

This course helps students see the connection between information systems (IS) and business performance. The use of information and communication technologies (ICT) by individuals and organizations dominates the business world. There is a fundamental change going on in the way that organizations run businesses and interact with each other. New types of infrastructure and applications are developed and utilized.

The aim of the course is to enable students to assess the opportunities and problems that managers in a wide range of organizations face as they attempt to use these IT applications to add value to their businesses. It also aims to help students understand transformational changes within and across industries. These changes have strategic implications for many businesses.

Course Content

Module 1: Organizations, Management, and the Networked

9 HOURS

1.1 The Role of Information Systems in Business Today

Perspectives on Information Systems

1.3 Contemporary Approaches to Information Systems

1.4 Understanding Ethical and Social Issues Related to Information Systems

2.1 Business Processes and Information Systems

- 2.2 Types of Information Systems
- 2.3 Systems That Span the Enterprise
- 2.4 Case Study

- 3.1 Organizations and Information Systems
- 3.2 How Information Systems Impact Organizations and Business Firms
- 3.3 Using Information Systems to Achieve Competitive Advantage

Module 2: Information Technology Infrastructure 9 Hours

- 4.1 IT Infrastructure
- 4.2 Infrastructure Components
- 4.3 Latest Trends, Salesforce.com: Cloud Services Go Mainstream

- 5.1 Foundations of Business Intelligence: Databases and Information Management
- 5.2 The Database Approach to Data Management
- 5.3 Using Databases to Improve Business Performance and Decision Making

- 6.1 Securing Information Systems
- 6.2 Technologies and Tools for Protecting Information Resources

Module 3: Key System Applications for the Digital Age 9 Hours

- 7.1 Enterprise Systems
- 7.2 SCM, CRM
- 7.3 ERP
- 7.4 Enterprise Applications: New Opportunities and Challenges

- 8.1 E-Commerce: Digital Markets, Digital Goods
- 8.2 E-Commerce: Business And Technology

Module 4: Applications in Power Sector and Urban Infrastructure Development 9 Hrs

- 9.2 Smart Cities
- 9.1 Applications in Power Sector and UID
- 9.3 Smart Grids
- 9.4 IoT, IIOT, Big Data

Text Books

1. Management Information Systems: 3rd Edition, Waman S Jawadekar.
2. Management Information Systems: Managing the Digital Firm, 13th Edition, Kenneth C. Laudon , Jane P. Laudon.
3. Business Driven Information Systems 4th Edition by Paige Baltzan , Amy Phillips
4. Introduction to Information Systems: Enabling and Transforming Business 2nd Edition, R. Kelly , Efraim Turban

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	IA / CE	ESE
Weightage (%)	50	50

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	The student would be able analyse the domestic and global impact of IT and IS on individuals, organisations and society.	PO1, PO2, PO3, PO4, PO5, PO6, PO12,
CO2	The student would be able to analyse the various IT infrastructure and applications required for an organisation	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO12,PO13
CO3	The student would be able to integrate the various latest IT applications available for various sectors	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO12,PO13

Program Outcome / Course Outcome mapping

Course Outcomes	CO 1	CO2	CO 3
PO 1	3	3	3
PO 2	3	3	3
PO 3	3	3	3
PO 4	3	3	3
PO 5	3	3	3
PO 6	3	3	3
PO 7	1	2	2
PO 8	1	1	1
PO 9	1	1	1
PO 10	1	1	1
PO 11	1	1	1
PO 12	1	2	2
PO 13	1	2	2

1=weakly mapped

Course Code	Program Outcomes	Students will be able to develop and evaluate alternate managerial choices and identify optimal solutions
DSIT 7005	IT Applications in Power Sector	Students will demonstrate effective application capabilities of their conceptual understanding of power generation, transmission and distribution
3	PO 1	Students will be able to exhibit effective decision-making skills, employing analytical and critical thinking ability.
3	PO 2	Students will demonstrate effective oral and written communication skills in the professional context.
3	PO 3	Students will be able to work effectively in teams and demonstrate team-working capabilities.
3	PO 4	Students will exhibit leadership and networking skills.
3	PO 5	Students will demonstrate sensitivity towards ethical and moral issues and have ability to address them in the context of power management.
3	PO 6	Students will demonstrate employability traits in line with the needs of changing dynamics of the power industry.
2	PO 7	Students will demonstrate strong conceptual knowledge in fuel management, power generation, transmission, distribution, trading, energy management.
1	PO 8	Students will demonstrate effective understanding of functioning of power sector.
1	PSO 9	Students will demonstrate analytical skills in identification and resolution of issues pertaining to fuel management, power generation, transmission.
1	PSO 10	Students will exhibit the ability to integrate technical, economic, social and regulatory frameworks for power sector planning and resource management.
2	PSO 12	Students will exhibit deployable skills pertinent to the power sector.
2	PSO 13	

2= moderately mapped

3=strongly mapped

SECTION B (Attempt any all Questions)			
1.	Mention the classification of Information Systems	[5]	CO2
2.	Lower down the pyramid, the more structured the decision, justify.	[5]	CO3
3.	Mention the various types of cloud.	[5]	CO3
4.	Mention the different kinds of CRM.	[5]	CO2
SECTION C			
1.	Deere & Company (brand name John Deere) is well known for the manufacture and supply of machinery used in agriculture, construction, and forestry, as well as diesel engines and lawn care equipment. In 2014, Deere & Company was listed 80th in the Fortune 500 America's ranking and in 2013 was 307th in the Fortune Global 500 ranking. Deere and company has a complex product range, which includes a mix of heavy machinery for the consumer market and industrial equipment which is made to order. Retail activity is extremely seasonal, with the majority of sales made between March and July. The company was replenishing dealers inventory on a weekly basis, by direct shipment and cross-docking operations, from source warehouses located near Deere & Company's manufacturing facilities. This operation was proving too costly and too slow, so the company embarked on an initiative to achieve a 10% supply chain cost reduction over a four-year period. Suggest appropriate application and justify.	[15]	CO1,C O2,CO 3
2.	The Challenge :Consumer demand for electricity has never been greater. We rely on it to power our computers, as well as the energy-hungry data centres and cooling systems that support our digital economy. We want it to be clean, for the health of our citizens and for our environment. We expect it to be reliable, so that when we plug in our electric cars, light up our office towers, or recharge our cell phones, it's readily available. We want it all, and yet North American electricity grids were never designed to satisfy so many demands all at once. Suggest the solution and mention the important aspects to resolve the challenge.	[15]	CO1,C O2,CO 3
SECTION D Attempt any one			
	Answer the following question of the case study. Answer in points. (10+10+5+5=30 Marks)	[30]	CO1,C O2,CO 3
	<ol style="list-style-type: none"> 1. What is BI and how can it help Canadian Tire? In the case there are 10 common challenges of BI implementations, which of these would you rate as most important for Eubanks and Wnek at CTC, and why? How would you address them? 2. To what degree do you think CTC/CTR's organizational structure influences the business intelligence initiative? Specifically, what challenges will the shadow IT groups raise for the implementation of the BI strategy? Is this important? Why or why not? 3. Compare the exhibits that depict the current versus the future desired BI infrastructure. What challenges exist for the implementation of the BI initiative? 4. Given your analysis, develop an implementation plan to project completion. This plan must lay out the priorities and address the major challenges you have identified. 		