4/4 B.Tech - SECOND SEMESTER

IT8T2C	BUSINESS INTELLIGENCE	Credits:3

Lecture: 3 Periods/week   **Internal assessment: 30 marks**
Practice/Interaction: 1Period/week   **Semester end examination: 70 marks**

Objectives:
- To introduce the basic concepts of Business Intelligence (BI).
- To impart Knowledge on decision making systems.
- To get familiarize with Data warehouses and model components.
- To introduce model of intelligence and user interface
- To demonstrate international Decision support systems

Outcomes:
Students will be able to
- Understand the concepts of Business Intelligence.
- Acquire knowledge about different types of decision making systems.
- Demonstrate Data warehouses and model components
- Employ intelligence models to business.
- Apply data mining techniques in decision support systems.

Prerequisites:
Database Systems, Data Mining and Data Warehousing

Syllabus:

UNIT-I
Introduction: What is a DSS? Uses of a Decision Support System.
Decision Making: Rational Decisions Bounded Rationality and Muddling Through :Nature of Managers; Appropriate Decision Support: Electronic Memory, Bias in Decision Making.

UNIT-II
Group Decision Making: Intuition, Qualitative Data, and Decision Making: How Do We Support Intuition?.Virtual Experience. Business Intelligence and Decision Making Analytics. Competitive Business Intelligence.
Data Component: Specific View toward Included Data; Characteristics of Information Timeliness: Sufficiency, Level of Detail, Understandability, Freedom from Bias, Decision Relevance, Comparability, Reliability, Redundancy, Cost Efficiency, Quantifiability, Appropriateness of Format, More Is Never Better!

UNIT-III
Databases, Database Management Systems. Data Warehouses: Data Scrubbing, Data Adjustment, Architecture. Car Example: Possible Criteria, Data Warehouse, Information Uses.
Model Component: Models and Analytics .Options for Models: Representation, Time Dimension, Linearity of the Relationship, Deterministic Versus Stochastic, Descriptive Versus Normative, Causality Versus Correlation, Methodology Dimension, Problems of Models. Data Mining: Intelligent Agents. Model-Based Management Systems: Easy Access to Models. Understand ability of Results, Integrating Models, Sensitivity of a Decision, Model Management Support Tools.

UNIT-IV

Intelligence And Decision Support Systems: Programming Reasoning : Backward-Chaining Reasoning, Forward-Chaining Reasoning, comparison of Reasoning Processes..

User Interface: Goals of the User Interface .Mechanisms of User Interfaces. User Interface Components: Action Language, Display or Presentation Language, Knowledge Base, Car Example.

UNIT-V

International Decision Support Systems: Information Availability Standards : Data Privacy, Data Availability, Data Flow, Cross-Cultural Modeling. Effects of Culture on Decision Support System.

Implementation And Evaluation: Implementation Strategy: Ensure System Does What It Is Supposed To Do the Way It Is Supposed, To Do It, Keep Solution Simple, Develop Satisfactory Support Base. Institutionalize System. Implementation and System Evaluation: Technical Appropriateness, Overall Usefulness. Implementation Success. Organizational Appropriateness.

Text Book:

1. "Decision Support Systems for Business Intelligence", Vicki L. Sauter, second edition, a   john Wiley & sons, inc. Publication.

Reference Books:

1. "Business Intelligence Practices, Technologies, and Management", Rajiv Sabherwal, Irma Becerra-Fernandez, John Wiley & Sons, Inc.
2. "Decision Support Systems and Intelligent Systems", Efraim Turban, Ramesh Sharda, Dursun Delen, 9th Edition, Pearson 2011.
3. "Data Mining for Business: Intelligence Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner", GalitShmueli, Nitin R. Patel and Peter C. Bruce, Wiley, 2007.

e-Learning resource:

1. http://cs.ulb.ac.be/public/teaching/infoh415
2. http://www.win.tue.nl/~mpechen/courses/TIES443/#