UNIT CODE: BCT 2404
UNIT TITLE: DECISION SUPPORT SYSTEMS (DSS)
LECTURER: DR. M. W. KIMWELE

COURSE OBJECTIVES:
The primary objective of the course is to overview DSS theories and related technologies. Specific goals will be to study:

- Fundamental concepts of decision making process
- Basic components of a decision support system
- Technologies that have been used to support decision making
- Types of application systems designed to support decision making
- System design and implementation issues

COURSE DESCRIPTION:
Design and programming concepts for automation of management information systems. Organization of files. Techniques for processing information based upon organizational requirements and available hardware and software. Case studies. Advanced design strategies for information systems. Specifications for an information systems project that includes its functional specifications and preliminary design.

The course aims to provide a broad review of decision making concepts, technologies, and systems that are developed to support the process. It covers the fundamental concepts for decision making process, decision models, a variety of decision support technologies and applications, including expert systems, information retrieval, data warehouse and data mining, group decision support systems, as well as issues in system design and integration in support of decision making.

COURSE OUTLINE

WEEK (S)	TOPICS TO BE COVERED
1	Introduction: DSS characteristics, benefits, limitations, DSS components
2	Decisions and Decision Makers: Classes of Decision Makers, Decision Styles
3	Decisions in the Organization: Understanding the Organization, Dimensions of Decisions, Organizational Decision Levels
4	Modeling decision processes: structuring tools, decision structures, decision models
5	The systems perspective of a DSS: DSS in the context of information systems, quality issues in DSS design
6	Designing and building DSS: DSS analysis and design process, DSS developer, Tools for DSS development
7	Implementing and integrating DSS: Introducing change into the organization, patterns of implementation, measuring DSS success
8	Group decision support and groupware technologies: Group decision making, communication networks, groupware classification
9	Expert systems and artificial intelligence: The concept of expertise, expert system architecture, designing and building expert systems
10	The data warehouse: The data warehouse environment, characteristics of a data warehouse, data warehouse architecture
11	Creative decision making and problem solving: Creativity, occurrence of creativity, creative problem solving techniques- brainstorming, analytic hierarchy process, creativity and the role of technology
12	Decision support in the 21st century: Where we are and where we have been, the future of DSS, challenges yet to be addressed
13-16	**REVISION AND EXAMINATIONS**

Books

1. George M. Marakas, Decision Support Systems in the 21st Century, 2nd Edition. Upper Saddle River, NJ ISBN 0-13-092206-4
2. Efraim Turban, Jay E. Aronson, and Ting-peng Liang, Decision Support Systems and Intelligent Systems, 7th Edition. Prentice-Hall, Inc., 2005.
3. Any other relevant textbook