

Title (Units): MATH 7620 BUSINESS INTELLIGENCE AND DECISION SUPPORT
(2,2,0)

Syllabus Reviewed by: Michael Ng

Prerequisite and Co-requisite: None

Objectives: To introduce the concepts of business intelligence and the various related techniques including data warehousing, data mining and online transaction processing (OLTP); To explore the process, contents and context of managerial decision making; To look at how business intelligence can help in improving management decision-support effectiveness.

Calendar Description: The aims of this subject are to study the concepts and tools of business intelligence, and to explore the process, contents and context of managerial decision making and to look at how business intelligence can enhance a company's competitive advantage and improve its top management decision-support effectiveness.

References:

- 1) Alex Berson and Stephen J. Smith, Data Warehousing, Data Mining, & OLAP, McGraw Hill, 2001.
- 2) Mike Biere, Business Intelligence for the Enterprise, Prentice Hall, 2003.
- 3) Michael L. Gonzales, IBM Data Warehousing: with IBM Business Intelligence Tools, Wiley, 2003.
- 4) George Marakas, Decision Support Systems, Prentice-Hall, 2001.
- 5) Larissa T. Moss and Shaku Atre, Business Intelligence Roadmap: The Complete Project Lifecycle for Decision-Support Applications, Addison-Wesley 2003.
- 6) Ephraim Turban and Jay Aronson, Decision Support Systems and Intelligent Systems, Prentice-Hall, 2001.
- 7) Elizabeth Vitt, Michael Luckevich and Stacia Misner, Business Intelligence: Making Better Decisions Faster, Microsoft Press, 2002.

Assessment: Continuous Assessment (40%): It may include written assignments (25%) and project (15%) and Examination (60%)

Subject Contents in Outline:

	<u>Topics</u>	<u>Hours</u>
I.	Business Intelligence Foundation	3
	A. Background Introduction	
	B. Concepts	
II.	Business Intelligence Techniques	20
	A. Data Warehousing	
	B. Data Mining and Techniques	
	C. OLAP	

	D. Business Intelligence System & Software	
III.	Decision Support System (DSS)	9
	A. Concepts	
	B. Basic Tools of DSS	
	C. Process of Building DSS	
IV	Software Tools and Techniques (Optional to MSC Operational Research and Business Statistics Students)	8

These will consist of laboratory sessions on industrial strength software tools and systems