



Course Syllabus

Course Code	Course Title	ECTS Credits
ENTR-435	Business Intelligence	6
Prerequisites	Department	Semester
Junior Standing	Management and MIS	Fall/Spring/Summer
Type of Course	Field	Language of Instruction
Required	MIS	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr. Dmitry Apraksin	3 rd or 4 th
Mode of Delivery	Work Placement	Corequisites
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce the concept of business intelligence.
- Discuss the various methods that business intelligence can aid in effective decision-making.
- Demonstrate ways to create business intelligence.
- Study the database structures to serve as the source of business intelligence.
- Introduce the fundamental concepts necessary for the design, implementation, and delivery of business intelligence.
- Explain the basics of business intelligence such as multi-dimensional modeling, data warehousing, data-mart structures, online analytical processing structures, ETL processes, cube concepts and definitions, multidimensional expression language queries and reporting.
- Explain the importance of delivering business intelligence to decision-makers in a timely manner.

Learning Outcomes:

After completion of the course students are expected to be able to:

- Explain the importance of business intelligence towards effective decision-making and identify various business intelligence methods.
- Identify and discuss business intelligence issues including multi-dimensional modeling, data warehousing, data-mart structures, online analytical processing structures, ETL processes, cube concepts and definitions, multidimensional expression language queries and reporting.

- Follow the methodology and apply techniques for the design, implementation, and delivery of business intelligence.

Course Content:

1. Basic Concepts and Architecture of Business Intelligence Systems.
2. The Fundamentals of Business Intelligence:
 - a) Database Systems
 - b) Basic Concepts and Architecture
 - c) OLTP Systems
 - d) Entity Relationship Model
 - e) Relational Data Model
 - f) SQL Query Language
3. OLTP Systems vs. Data Warehousing
4. Dimensional Modeling
5. Designing Data-Marts
6. Creating Data-Marts
7. Populating Data-Marts
8. Cube Building
9. Analysis of the Requirements of the Final Project
10. MDX Scripting and Querying
11. Reporting

Learning Activities and Teaching Methods:

Lectures, case studies, laboratories

Assessment Methods:

Attendance and Participation, Tests/Quizzes/Projects, Mid-Term, Final Exam

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Delivering Business Intelligence with Microsoft SQL Server 2016 6/E	B. Larson	McGraw Hill / Osborne	2017	978-1259641480

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Introducing Microsoft® SQL Server 2016	R.Mistry & S. Misner	Microsoft Press	2016	978-1-5043-0193-5
Fundamentals of Database Systems 6th edition	R. Elmasri & S.Navathe	Addison Wesley	2011	978-0-13608620-8