



## Course Syllabus

<b>Course Code</b>	<b>Course Title</b>	<b>ECTS Credits</b>
MIS-435	Business Intelligence	6
<b>Prerequisites</b>	<b>Department</b>	<b>Semester</b>
Junior Standing	Management and MIS	Fall/Spring/Summer
<b>Type of Course</b>	<b>Field</b>	<b>Language of Instruction</b>
Required	MIS	English
<b>Level of Course</b>	<b>Lecturer(s)</b>	<b>Year of Study</b>
1 <sup>st</sup> Cycle	Dr. Dmitry Apraksin	3 <sup>rd</sup> or 4 <sup>th</sup>
<b>Mode of Delivery</b>	<b>Work Placement</b>	<b>Corequisites</b>
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 modelling, 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:

1. Explain the importance of business intelligence towards effective decision-making and identify various business intelligence methods.

2. 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.
3. 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:**

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

**Recommended Textbooks / Readings:**

<b>Title</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
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