



Course Description

CTS3452 | Business Intelligence | 4.00 credits

This course is for students majoring in Data Analytics. Students will learn how to organize, manage and analyze massive amounts of data on servers. Students will learn how to create reports and present information to optimize business decisions and performance.

Course Competencies:

Competency 1: The student will demonstrate an understanding of how to design and implement a data warehouse by:

1. Designing and implementing dimensions
2. Determining attributes
3. Designing hierarchies
4. Differentiating between a star or snowflake schema and applying the appropriate model
5. Designing and implementing fact tables

Competency 2: The student will demonstrate an understanding of how to extract and transform data by:

1. Defining connection managers
2. Implementing data flow
3. Managing SSIS package execution

Competency 3: The student will demonstrate an understanding of how to load data by:

1. Designing control flow
2. Implementing package logic using SQL Server Integration Services (SSIS) variables and parameters
3. Troubleshooting data integration issues

Competency 4: The student will demonstrate an understanding of how to deploy SQL Server Integration Services (SSIS) solutions by:

1. Creating and configuring an SSIS catalog
2. Deploying SSIS packages by using the deployment utility
3. Deploying SSIS packages to SQL or file system locations
4. Validating deployed packages
5. Deploying packages on multiple server
6. Installing custom components and tasks

Competency 5: The student will demonstrate an understanding of how to build analysis services multidimensional databases by:

1. Designing dimensions and measures
2. Implementing and configuring dimensions in a cube
3. Creating and configuring measures
4. Implementing a cube.
5. Creating multidimensional expressions queries (MDX)
6. Implementing custom logic in a data model.
7. Implementing storage design in a multidimensional model
8. Selecting an appropriate model for data analysis

Competency 6: The student will demonstrate an understanding of how to manage, maintain, and troubleshoot a SQL Server Analysis Services database by:

1. Analyzing data model performance
2. Processing data models

3. Deploying SSAS databases
4. Installing and maintaining an SSAS instance

Competency 7: The student will demonstrate an understanding of tabular data modeling by:

1. Building a tabular data model
2. Configuring permissions and roles in a tabular model
3. Implementing a tabular data model
4. Implementing business logic in a tabular data model

Competency 8: The student will demonstrate an understanding of how to build reports by:

1. Designing a report
2. Implementing a report layout
3. Configuring authentication and authorization for a reporting solution
4. Implementing interactivity in a report
5. Managing a report environment
6. Configuring report data sources and datasets

Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data.
- Formulate strategies to locate, evaluate, and apply information.
- Use computer and emerging technologies effectively.