

APC 410: Database Management II – Course Syllabus

IMPORTANT: This course syllabus document contains basic information about the course. A final syllabus with detailed guidelines, instructor information, project information, rubrics, course/university policies, and other course-related information will be provided to students upon course enrollment

Course Description and Objectives

This course covers architecture and use-cases of non-relational (NoSQL) based on four types of databases including document, Graph, Key-value, and wide column store. Topics include: data types, create/update/delete data, query, cursors, indexing, dynamic schema design, scalability (scale-out) over scale-up of RDBMS, analysis of massive unstructured and semi-structured data and data security.

By the end of this course, you will be able to:

- Develop knowledge of key features of each of four types of NoSQL databases (key-value, document, column-family, and graph databases).
- Leverage basic and advanced query features in MongoDB database for creating and querying document databases.
- Leverage basic and advanced query features in Apache Cassandra database for creating and querying column-family databases.
- Develop knowledge of basic and essential concepts in relational database administration and security.

Prerequisites

- APC 360: Database Management II

Grading

Evaluation Methods

Your final grade will be based on your performance on the following:

Item(s)	Number of Items	Total Points
Lesson Discussions	14 @ 0.2 points	2.8
Assignments	6 @ 4 points	24
Labs	6 @ 5 points	30
Quizzes	14 @ 1 point	14
Final Exam	1 @ 29.2 points	29.2
Total Points		100

Grading Scale

The following grading scale is used to evaluate all course requirements and determine your final grade:

90–100%	A
80–89%	B
70–79%	C
60–69%	D
0–59%	F

Workload

Students should expect to spend 144 credit hours per semester to complete the activities and assignments in this course. In a fall or spring semester, the time to dedicate per credit will range between 7-10 hours per week and in summer semester between 10-13 hours.