**GBA 6220 Data Management in Business Analytics**  
Syllabus

# Instructor Information

**Name:** Weijun Zheng, Ph.D.

**Classroom Location:** Bldg 163 Rm 1004,  <https://cpp.zoom.us/j/81303947078>

Monday 7:00 - 9:45PM, Jan.29, 2024-May.10, 2024

**Instruction Mode:** Hybrid Synchronous Component

**Office Location:** Business College Bldg. 164 RM 3014 or online <https://cpp.zoom.us/j/84140618104>

**Office Hours:** Mon, Tues, 3pm to 4pm Zoom meet, or F2F by Appointment.

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Course Information

## **Catalog Description**

Explore the various facets of how business data are organized, delving into relational database management systems, data warehouses and data marts, and distributed data environments such as NOSQL databases. Students survey the means of creating business data sources through data modeling techniques and review retrieving data working with standard data management languages such as SQL for the purpose of addressing issues such as data quality, data integration, and data management. Software used - MS Access, MS SQL etc.

## **Course Learning Objectives**

1. Be able to differentiate the types and sources of business data in modern world.
2. Acquire an enterprise-wide view that integrates multiple types and sources of business data.
3. Understand how business data is modeled using relational data model.
4. Understand how business data is organized, stored, maintained and retrieved using an appropriate relational database management system.
5. Understand how business data is managed, analyzed and derived for business intelligence.
6. Acquire basic skills in installing, configuring and managing components in a relational database management system to develop business analytic solutions.

# Course Materials

1. Textbook: MindTap for Coronel/Morris's Database Systems: Design, Implementation & Management, Cengage Learning (14th Edition)(instructions at the end of this syllabus).
2. Instructor’s PowerPoint slides and other supplemental materials.

# Technical Requirements

## **Software (free download)**

1. [Microsoft SQL Server Management Studio](https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16) (SSMS) with SQL Express 2019

* 1.8 GHz or faster x86 (Intel, AMD) processor. Dual-core or better recommended
* 2 GB of RAM; 4 GB of RAM recommended (2.5 GB minimum if running on a virtual machine)
* Hard disk space: Minimum of 2 GB up to 10 GB of available space

1. [Microsoft SQL Server Data Tools](https://docs.microsoft.com/en-us/sql/ssdt/download-sql-server-data-tools-ssdt?view=sql-server-ver15) (SSDT): installed through the Extension with VS2019
2. [Erwin Data Modeler Academic Edition](https://erwin.com/services/erwin-academic-program/)

* Microsoft-based workstation, Intel Dual Core processor or equivalent
* 5 GB available hard drive space
* 4 GB RAM minimum

1. [Microsoft SQL Server 2019 (SQL Server) , Developer version](https://www.microsoft.com/en-us/sql-server/sql-server-downloads)

## **Zoom Communications**

During the virtual instruction setting, you need to download and use Zoom with speakerphone and camera ready to participate in each class session. The class Zoom link is

<https://cpp.zoom.us/j/81303947078>

## **Getting Help**

If you are having trouble understanding concepts, it is your responsibility to seek help by contacting the instructor

# MindTap Apply Tests, Assignments, and Group Project

## **MindTap Apply Tests**

In MindTap, each chapter has four sections: *Read, Visualize, Study, and Apply*. You are required to complete the *Read* section of each chapter, before or after each chapter lecture. After the chapter lecture, you will proceed to take selected tests in the *Apply* section: *Quiz*zes, *Use It and Code*. (The review of the *Visualize* and *Study* sections are optional.)

## **Hands-on Assignments**

There are five hands-on assignments (see the Schedule). The assignment descriptions and requirements will be handed to one week before the due date.

## **Group Project Assignment**

There is a group project about Data Management. The descriptions and requirements will be handed to you after the Spring break. In the last week or the semester, the group will present the project results to the class.

# Grading

|  |  |
| --- | --- |
| * MindTap Apply tests: 48% * Hands-on assignments: 32% * Group project assignment: 20% | * A: 95-100% * A-: 91-94% * B+: 88-90% * B: 83-87% * B-: 80-82% * C+: 77-79% * C: 73-76% * C-: 70-72% * D+: 67-69% * D: 63-66% * D-: 60-62% * F: 59% and Below |

# Course Policies

## **Academic Integrity**

All of the work completed in this course is expected to be your own. Plagiarism or cheating will not be tolerated in this course. For more information, visit [Academic Integrity Policies](https://www.cpp.edu/studentconduct/academic-integrity/academic-integrity.shtml) (https://www.cpp.edu/studentconduct/academic-integrity/academic-integrity.shtml).

## **Netiquette**

Netiquette refers to the behavior that you are expected to follow when communicating online. It covers both common courtesy in an online environment and the informal ground “rules” for navigating in cyberspace. For this course, you are asked to follow these basic guidelines:

* When writing an email to your instructor, include the class name and section, along with a description, in the subject line. For example: COM 206.01 RE: Design Project.
* Use a signature with your full name at the end of your emails.
* Remember that slang can be misunderstood or misinterpreted – use your “academic” voice. pls dnt use txt lang when sending messages 2 me.
* Be aware of your tone and avoid sentences typed in all caps – it implies online “screaming” or “shouting.”
* Do not send angry messages known as “flaming.”
* Do not use offensive language.
* Be sensitive to those with cultural and/or linguistic backgrounds, as well as different political and religious beliefs.
* Respect different views and opinions.
* Provide constructive feedback and use good judgment when composing responses to your classmates.
* Be professional and use good grammar and spelling. Consider writing your discussion posts, assignments, and online correspondence in a text editor to check for spelling and grammar before pasting it into an online submission.

# Accessibility

Students with disabilities are encouraged to meet with me during office hours early in the semester to discuss your DRC authorized accommodation needs for this course. For additional information or assistance, contact the [Disability Resource Center](https://www.cpp.edu/drc/) (https://www.cpp.edu/drc/) ((909) 869-3333, Bldg. 9-103).

# Modules

1. **Database & Data Modeling**

* Module 1 - Database Systems
* Module 2 - Data Models
* Module 3 - Relational Database Model
* Module 4 - Entity Relationship Modeling
* Module 5 - Advanced Data Modeling
* Module 6 - Normalization of Database Tables

1. **Structured Query Language (SQL)**

* Module 7 - Introduction to SQL
* Module 8 - Advanced SQL

1. **Advanced Database**

* Module 9 – Database Design

1. **Database for Business Intelligence**

* Module 13 - Business Intelligence and Data Warehouses
* Module 13E- SQL Server BI Framework-SSIS
* Module 14 – NOSQL Database( MongoDB )

# Schedule

| **WK** | **Module** | **MindTap Apply/ Assignments** |
| --- | --- | --- |
| 1 | Course Overview  1 - Database Systems  2 - Data Models | Chapter 1 |
| 2 | 3 - Relational Database Model | Chapter 2 MindTap Due: Feb. 12  Chapter 3 MindTap Due: Feb. 12 |
| 3 | 4 - Entity Relationship Modeling | Chapter 4 MindTap Due: Feb. 19 |
| 4 | 5 - Advanced Data Modeling | Chapter 5 MindTap Due: Feb. 26  Erwin Assignment (Hands on#1) |
| 5 | 6 - Normalization of Database Tables | Chapter 6 MindTap Due: Mar. 4 |
| 6 | 7 - Introduction to SQL | Chapter 7 MindTap Due: Mar. 11  SQL Assignment (Hands on#2) |
| 7 | 8 - Advanced SQL | Chapter 8 MindTap Due: Mar. 25 |
| 8 | 8 - Advanced SQL |  |
|  | Spring Break (3/30-4/5) |  |
| 9 | 9 - Database Design | Chapter 9 MindTap Due: Apr. 8 (Hands on #3) |
| 10 | 13E - SQL Server BI Framework-  SQL Server Integrated Services(SSIS) | Chapter 13E Final Group Project |
| 11 | 13E - SQL Server BI Framework-  SQL Server Integrated Services(SSIS) | Chapter 13E |
| 12 | 13 - Business Intelligence and Data Warehouses | Chapter 13 MindTap Due: Apr. 29 |
| 13 | 14 - NOSQL MongoDB | Chapter 14 MindTap Due |
| 14 | 14 - NOSQL MongoDB | Hands on#4: Due May. 10 |
| 15 | Group Project Presentation | Final Group Project due May.15 |

# How to access your MindTap course

## **What is MindTap**

MindTap empowers you to produce your best work – consistently. MindTap is designed to help you master the material. Interactive videos, animations, and activities create a learning path designed by your instructor to guide you through the course and focus on what's important. Get started today!

## **System Check**

To check whether your computer meets the requirements for using MindTap, go to <http://ng.cengage.com/static/browsercheck/index.html>

Please Note: the System Check is also accessible in the drop down box next to your name located in the upper right corner of your MindTap page.

## **Instant Access Program**

This course participates in CPP’s “Instant Access” Program, which automatically gives all enrolled students access to their course materials, in digital format, by the first day of classes at highly discounted prices. The instant access digital materials fee will be billed to your CPP student account, and you are responsible for paying it by the add/drop deadline along with your other tuition/fees for the term. You can choose to opt-out of the instant access before the add/drop deadline, and the fee amount will be refunded to your student account. (IMPORTANT: If you do not opt-out of this program by the add/drop deadline the charges on your account that fee will be final). If you opt-out, you will no longer have access to the materials. Opt-out instructions will be emailed to you or posted to Blackboard, but for most courses, the easiest way is to log into the bookstore’s Instant Access Portal [https://portal.verba.io/pomona/login](https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fportal.verba.io%2Fpomona%2Flogin&data=02%7C01%7Chuishi%40cpp.edu%7C2884885bb36f4c42061908d8399b0168%7C164ba61e39ec4f5d89ffaa1f00a521b4%7C0%7C0%7C63732268521https://portal.verba.io/pomona/login)and follow the prompts.