Course Syllabus

Professor: Christine "Tine" Walczyk

Email: tine133@gmail.com

Office Hours: (As requested. Generally, I work off-campus during the day but I will meet with students at any time that's convenient with 24 hours notice. Most weeks, I will be in my shared office on the 5th floor on Tuesday afternoons before class.)

Course Meeting Times

Spring 2018: Tuesdays 6:00 to 9:00

Course Description

The primary goal of this class is to learn principles and practices of database management and database design. Over the course of the semester we will discuss the database relational database design, normalization, SQL queries, reports and other interfaces to database data, and documentation. Lectures will also cover writing ethical and privacy issues associated with database systems. In-class instruction and exercises will focus on the fundamentals for creating sophisticated, interactive, and secure database applications. For the first few weeks of class we will study PHP in order to better understand how data structures are stored and retrieved on computer systems, as well as providing a robust interface for accessing databases via the Web. We will then learn the fundamentals of database design using a variant of MySQL called MariaDB. MySQL and MariaDB are powerful relational database management systems used at companies such as Google and Facebook. We use PHP and MySQL as tools because they are commonly (and freely) available and provide substantially the same set of tools as commercial databases such as Microsoft SQL Server and Oracle. Although there will be a substantial programming (PHP) component to this course, previous programming experience is not required.

At the conclusion of this course students should:

- Understand the fundamentals of how data is stored in computer systems.
- Know the fundamentals of Structured Query Language (SQL) and how it can be used to store and retrieve data from a relational database.
- Be able to apply the principles used in class to build a web-based database application from the ground up.