Instructor

Jake Weidman
College of Information Sciences and Technology
The Pennsylvania State University
309 IST Building
University Park, PA 16802

IST 210 Section 003: Organization of Data (Spring 2016)

Class time:

Tuesday and Thursday 3:05 p.m. – 4:20 p.m. in 110 IST Building

Jake Weidman, jyw5163@ist.psu.edu, Instructor

Hanqing Zhao, hanqingzhao@psu.edu, Teaching Assistant (TA)

Matthew Lampl, mql5406@psu.edu, Learning Assistant (LA)

Office Hours

Jake Weidman: Wednesday, 1:00 p.m. – 3:00 p.m. in IST 309. Also, by appointment (very flexible). Can also be contacted via Google Hangouts at jakeweidman@gmail.com. If there are any other forms of communication you would prefer, please let me know.

CANVAS

For this course, we will NOT be using ANGEL, which some of you are most likely familiar with. Rather, we will be using the new course management software, Canvas. To access Canvas directly, just go to psu.instructure.com, and sign in with your regular credentials.

Course Description

As the database management software becomes one of the critical components in modern IT applications and systems, a solid understanding of the fundamental knowledge on the design and management of "data" is required for virtually any IT professionals. In a business setting, such IT professionals should be able to talk to the clients to derive right requirements for database applications, ask the right questions about the nature of their entities and in-between relationships in their business scenarios, analyze and develop an effective and robust design to address business constraints, and react to the existing database designs as new needs arise. Solid understanding of the underlying data models and design issues in data applications is also critical for SRA students to ensure secure access to and intelligent analysis of data in complex business settings. Modern IT professionals should be able to guide a company in the best use of the diverse database-related technologies and applications toward the "Big Data" era.
As such, IST 210 aims to prepare IST and SRA students for obtaining fundamental understanding on the database concepts and practical skills to analyze and implement a well-defined database design. In particular, IST 210 provides an introduction to physical database design, data modeling, relational model, logical database design, SQL query language, and instructor’s choices on database applications and advanced concepts. Students will learn to use a real-world commercial or open-source database management system, too. Upon taking IST 210, students should be able to understand the implications and future directions of databases and database technologies.

Course Objectives

- Understand the importance of data, databases, and database management
- Understand the Relational Model
- Understand Data Modeling
- Understand logical Database design
- Understand SQL Query Language
- Design and implement a database

Course Material


Additionally materials will be posted using class website or Canvas.

Grading Policy

Project: 25%
Homework: 25%
Midterm: 25%
Final: 25%
Extra Credit

1) A student may earn up to 5% of extra credit added to the final grade. 4% of this extra credit can be earned by volunteering for a research study mentioned in class, etc.

2) Students may earn up to 1% of extra credit by participating in the pre-class activity. This will take place at the start of every class period and works as follows:
   • At the start of class, the instructor will post a question on the board based on the reading material.
   • Students will have ~5 minutes to attempt to solve this problem.
   • The first student to solve the question correctly, and explain their answer to the class will receive 1% of extra credit towards their final grade.
   • **This 1% can only be earned ONE time per student.

NOTE ON POINT/GRADE DISPUTES: Any grade or point disputes will be handled after the last day of classes. At that time if you wish to have an item regraded, you may request it. You will need to provide a valid reason for the request to be granted. Approved requests will result in the entire assignment/project/exam being regraded. This means it is possible to receive a higher, lower, or unchanged grade upon regrading.

Attendance Policy

Classes:

Class attendance is strongly recommended.

Penn State Academic Calendar: [http://registrar.psu.edu/academic_calendar/spring17.cfm](http://registrar.psu.edu/academic_calendar/spring17.cfm)

Homework Policy

Homework is due every Sunday at 11:59 p.m. unless otherwise specified. Turn all homework in via CANVAS.

Homework is graded between zero (0) and three (3) points.

Zero (0) points will be earned if a homework assignment is not turned in on time. One (1) point will be earned if homework is turned in on time and the student has made only a minimal effort to complete the assignment. Two (2) points will be earned if the homework is turned in on time and at least half of the assignment is completed correctly, or a reasonable amount of work has been shown. Three (3) points will be earned if the homework is turned in on time and the entire assignment has been completed correctly. For weeks in which no assignment is given, every student will receive three (3) points. The maximum possible points you may earn is 45. Homework is worth 25% of your final grade.
Please ensure your homework looks professional and communicates your ideas clearly. A rule of thumb is to ask yourself whether you'd be comfortable turning in a document of a similar caliber to your boss at work, or to a client who is paying you by the hour for your consulting services.

I reserve the right to deduct points for inattention to grammar, spelling, or the assignment instructions.

**Email Policy**

All email communication for this course should use CANVAS Course Mail unless CANVAS is down for an extended period. Email sent to the instructor's Penn State Access account may not be read. The instructor will make every attempt to respond to CANVAS Course Mail messages within 24 hours of receipt.

**Academic Integrity**

As Penn State students, I know you are smart and capable people. However, did you ever stop to think that cheating in classes hurts more people than just the cheater? When other people cheat at Penn State, it dilutes the value of your degree. Let's all do our part to make sure that a Penn State degree holds the highest reputation today and in the future.

In particular, make sure you understand the Penn State Principles and University Code of Conduct:

"Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others."

Any violation of academic integrity will be investigated, reported to the college, and where warranted, punitive action will be taken. For every incident, a report will be filed. I encourage you to discuss assignments with others (this is actually a well-known technique for effective learning), but your write-ups need to be done by you alone. If you have questions or concerns about academic integrity issues or are having difficulties with the class for ANY reason, please talk to me or the TA, even if you're unsure or are embarrassed about your situation. Everyone (yours truly included) makes mistakes. We won't judge you. Instead, we'll try to help you figure out how to maximize your chances of success given your current situation. So bottom line: if you're struggling, come and talk to us. It's a much better option than cheating.

**Affirmative Action and Sexual Harassment:**

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the
policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, gender identity or veteran status. Discrimination or harassment against faculty, staff or students will not be tolerated at The Pennsylvania State University. You may direct inquiries to the Office of Multicultural Affairs, 332 Information Sciences and Technology Building, University Park, PA 16802; Tel 814-865-0077 or to the Office of Affirmative Action, 328 Boucke Building, University Park, PA 16802-5901; Tel 814-865-4700/V, 814-863-1150/TTY.

For reference to the full policy: http://guru.psu.edu/policies/AD42.html

**Americans with Disabilities Act**

It is Penn State’s policy to not discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for modifications in your testing or learning situation, your instructor should be notified during the first week of classes so that your needs can be accommodated. You will be asked to present documentation from the Office of Disability Services (located in 116 Boucke Building, 863-1807) that describes the nature of your disability and the recommended remedy. You may refer to the Nondiscrimination Policy in the *Student Guide to University Policies and Rules*.

IST welcomes persons with disabilities to all of its classes, programs, and events. If you need accommodations, or have questions about access to buildings where IST activities are held, please contact us in advance of your participation or visit. If you need assistance during a class, program, or event, please contact the member of our staff or faculty in charge. Access to IST courses should be arranged by contacting the Office of Human Resources, 332 Information Sciences and Technology Building, (814) 865-8949.

**An Invitation to Students with Learning Disabilities**

It is Penn State’s policy to not discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for modifications in your testing or learning situation, you should notify Mr. Aileo during the first week of classes so that your needs can be accommodated. You will be asked to present documentation from the Office of Disability Services (located in 116 Boucke Building, 863-1807) that describes the nature of your disability and the recommended remedy. You may refer to the Nondiscrimination Policy in the *Student Guide to University Policies and Rules*.

**Campus Emergencies**

In the event of a University-wide emergency course requirements, classes, deadlines and grading schemes are subject to changes that may include alternative delivery methods, alternative methods of interaction with the instructor, class materials, and/or classmates, a revised attendance policy, and a revised semester calendar and/or grading scheme. In the case of a University-wide emergency, please refer to the course CANVAS page at http://cms.psu.edu or contact the instructor via email. For more general information, please call (814) 867-5309 or subscribe to PSUTXT (http://live.psu.edu/psutxt). PSUTEXT is a service designed to alert the Penn
State community via text messages to cell phones when situations that affect the ability of the campus to function normally arise

**Disclaimer**

Please note that the specifics of this course syllabus and schedule are subject to change, and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes.