**Teaching Team**

* Instructor: Jian Wu  
* Office: 316F, IST Bldg.  
* Office hours: 2-5 pm Tuesday or by appointment  
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* TA: Tao Zhang  
* Office: 328/ TA Office  
* Office hours: 2-5 pm Thursday  
* Email: taozhang6@gmail.com (For TA questions, prefer Canvas message)

**Course Information**

* Credit: 3

* Prerequisites: IST110

* Lecture time: 9:05 am. - 10:20 am. Tuesday (T) and Thursday (R)  
  First class: 01/10/2017 (T)  
  Last class: 04/27/2017 (R)

* Classroom: 110 IST Bldg.

* Textbook: Database Concepts 7th ed./ Kroenke & Auer / 978-0133544626/ Pearson  
  (Textbook is NOT required for this course if you can follow up the lectures.)

* 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 (Security and Risk Analysis) 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 instructors’ 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.
* Objectives:
- Understand the concepts of data, information, and databases
- Learn how to design databases, including the tool and models
- Learn how to implement and deploy a database
- Learn how to query databases using SQL
- Learn how to deploy a search website powered by a relational database

* Grading policy:
- Assignment: 30% (6 assignments)
- Lab (a.k.a. coding): 8% (8 labs)
- Project: 34% (20% report 1-4, 7% final presentation and 7% final report)
- Exam: 20% (2 Midterms. No Final)
- Pop Quizzes: 4% (5 quizzes, the lowest score is NOT counted towards final score)
- Class participation: 4%

* Grading chart:
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<th>95-100</th>
<th>90-94</th>
<th>85-89</th>
<th>80-84</th>
<th>75-79</th>
<th>70-74</th>
<th>65-69</th>
<th>60-64</th>
<th>&lt;60</th>
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(Under certain circumstances, e.g., an unreasonably hard exam, the chart may be revised.)

* Attendance policy
Attending class is not required, but strongly encouraged. In case of absence due to legitimate reasons, including but not limited to sickness, University-approved curricular and extracurricular activities (such as athletic contests), career interviews, death of family members, students should be prepared to provide documentation, when required by the instructor. Opportunities of makeup classes are optional during office hours.

* Late submission policy
Homework assignments and reports are due at midnight (11:59 pm). Lab assignments are due in the lab. Submissions after deadlines are in general not accepted. Each student has two chances to submit overdue assignments within 48 hours of deadlines without penalty. Each group has one chance to submit overdue report within 24 hours of deadlines without penalty. In these cases, please send me a message (email or Canvas message) and explain the delay.

* Academic integrity
Individual assignments must be completed independently. Students are strongly encouraged to form study groups and to learn from peer students. However, discussion on homework questions in study group should be limited to "general" approaches to solutions. Specific answers should *never* be discussed. Penn State's policy regarding Academic Integrity must be followed.

According to the Penn State Principles and University Code of Conduct: Academic integrity is a basic guiding principle for all academic activity at Penn State University, allowing the pursuit of scholarly activity in an open, honest, and responsible manner. In accordance with the University’s Code of Conduct, you must not engage in or tolerate academic dishonesty. This includes, but is not limited to cheating, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of examinations, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students. Any violation of academic integrity will be investigated, and where warranted, punitive action will be taken. For every incident when a penalty of any kind is assessed, a report must be filed.

* Plagiarism (Cheating): Talking over your ideas and getting comments on your writing from friends are NOT examples of plagiarism. Taking someone else's words (published or
not) and calling them your own IS plagiarism. Plagiarism has dire consequences, including flunking the paper in question, flunking the course, and university disciplinary action, depending on the circumstances of the offense. The simplest way to avoid plagiarism is to document the sources of your information carefully.

* Drop/Withdraw information: *
Standard drop and withdrawal policies are followed.
http://registrar.psu.edu/academic_calendar/spring17.cfm
http://www.registrar.psu.edu/registration/dropping_courses.cfm
https://handbook.psu.edu/content/withdrawal
https://teaching.ist.psu.edu/courseadmin