Instructor: Dr. Chiu C. Tan  
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Office hours: Friday 3:00pm to 5:00pm or by appointment

Course Information:  
Name of course: Topics in Computer Science: System Security with Application in Database and Cloud Applications  
Course number: CIS 5590  
Credit hours: 3  
Prerequisite: CIS 3207 and CIS 3223 or equivalent. We do no assume any prior security-related course work.

Lecture schedule:  
When: Tuesday 5:30pm to 8:00pm  
Where: Tuttleman 401B  
Class website: Blackboard and www.cis.temple.edu/~cctan/teaching.html

Goals and Objectives:  
The rise of Big Data has generated renewed interest in databases and cloud computing capable of storing and processing large amounts of data. This course seeks to introduce students to the security research related to databases and cloud computing used in Big Data computing. The course seeks to attract students who are interested learning more about security, but not necessary in the area of network security. The course will does not assume prior knowledge of cyber-security. The key objectives are:  
  • To introduce students to fundamentals of systems security, in particular, systems used in Big Data computing.  
  • To present recent research results in database and cloud security for students interested in the security of Big Data.  
  • To provide an opportunity to explore possible future research in this field.

Course Materials:  
Textbook: There is no required textbook for the class. We will draw reading materials from leading conferences and journal publications.  

On-line resources: On-line resources and instructor supplied slides and documentation will be found in Blackboard.
Course Evaluations:

- **10%** Attendance and participation. This is a graduate level class, and everyone is expected to contribute to the discussion.
- **20%** Quizzes. There will be, on average, one in-class quiz per week. The in-class quiz will cover materials from previous lectures.
- **20%** Midterm exam.
- **30%** Final exam. The final exam is comprehensive.
- **20%** Research project. Students will complete a report for their project. This can be accomplished either as an individual project, or as group project of 2 students (subject to approval). See the project description document on Blackboard for list of possible project topics. We will provided limited support for cloud computing accounts. The breakdown for the grading of the research project is as follows.
  - **30%** Intermediate checkpoints (this include 1 project progress report, and 1 project progress presentation, and 1 project final presentation. See schedule on blackboard for deadlines.)
  - **60%** Research contributions of final report.
  - **10%** Quality of writeup. The writeup must adhere to IEEE or ACM conference format.

Course policy:

- You are expected to attend all lectures on time. If you cannot come to lecture, please email me in advance.
- You must pass the midterm exam, final exam, and complete the project, in order to pass the class.
- You are responsible for checking Blackboard regularly for any class updates. All paper readings and slides will be placed on Blackboard.
- You can refer to any resource (textbook, website, papers, etc.) and discuss with your classmates, but you must document your sources, and write up your own solution.
- All submissions will be done via email, and must be in pdf format.
- Late work (specified by submission after the stated deadline) will not be accepted without prior approval. If you believe you have a legitimate reason for late submission (medical, conference presentations, etc.), please inform me in advance in writing via email. I will respond to your request by email.
- There will be no makeup quizzes, presentations, or exams, without prior approval. If you believe you have a legitimate reason for missing a quiz, presentation, or final exam (medical, conference presentations, etc.), please inform me in advance in writing via email. I will respond to your request by email.
- If you are doing a project with a group, all members in the group will receive the same grade. Groups, once formed, cannot add or remove members without prior approval.
- Appeals regarding grades should be directed to me by email no later than one week after the grades are returned. After that, all grades are assumed to be final.

Disability Disclosure Statement: Any student who has a need for accommodation based on the impact of a documented disability, including special accommodations for access to technology resources and electronic instructional materials required for the course, should contact me privately to discuss the specific situation by the end of the second week of classes.

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1IEEE latex template can be found in [http://www.ieee.org/conferences_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html). The ACM latex template can be found in [http://www.acm.org/sigs/publications/proceedings-templates](http://www.acm.org/sigs/publications/proceedings-templates).
or as soon as practical. If you have not done so already, please contact Disability Resources and Services (DRS) at 215-204-1280 in 100 Ritter Annex to learn more about the resources available to you. We will work with DRS to coordinate reasonable accommodations for all students with documented disabilities.

**Statement on Student and Faculty Academic Rights and Responsibilities Policy:**
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has a policy on Student and Faculty and Academic Rights and Responsibilities (Policy #03.70.02) which can be accessed through the following link: [http://policies.temple.edu/getdoc.asp?policy numero=03.70.02](http://policies.temple.edu/getdoc.asp?policy numero=03.70.02).