CSci 8980: Advanced Storage Systems

Time: Monday & Wednesday 9:45 to 11:00 am
Location: Amundson Hall 104
Spring 2015, 3 Credits
Instructor

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Office Hours: Monday and Wednesday 1:00 to 2:00 pm
Teaching Assistants

There will be no TA for this class.
What is CSci 8980 about?

• Introductory to storage systems
• Fundamental principles and general concept
• What are the new developments in storage technologies and devices?
• Focus on both software and hardware aspects
• Familiar with techniques to support big data
Course Materials

• No text book
• A set of papers will be provided
• One or two (?) papers will be assigned for each lecture
• Each student is expected reading the paper before coming to the class
• Interactive discussion will be the format for each lecture
Class Information

http://www-users.cselabs.umn.edu/classes/Fall-2015/csci8980-AS/

Grades will be based on class attendance (40%) and final report (60%)

Class attendance include showing up in each lecture, reading the paper assigned, presenting papers and actively involved with discussion
Covered Subjects

• Introduction
• Emerging storage devices: HDD, flash memory based SSD, NVRAM, SWD, OSD, and Kinetic Drives
• Storage System Architectures: tiered storage, storage hierarchies, cloud storage
• File Systems
Subjects (Cont.)

• Applications: data deduplication, big graphs, checkpointing, key-value store and long-term data preservation

• New Storage Trends: software defined storage