Advanced Computer Security CS563/ECE524 develops the ability of students to contribute to ongoing research in privacy and security based on topics that vary between offerings of the course. In spring 2012 the course will focus on privacy and security concerns arising from the creation and use of health information.

About 17% of the US economy is devoted to healthcare and aging populations worldwide mean likely growth in healthcare needs. There is a major effort to reduce costs and improve care through the use of electronic health records and telemedicine. This effort has been embraced by academic researchers while government and industry have responded with significant levels of support. Moreover, health informatics is a leading area of new hiring by US academic departments.

Topics in the course will include basic background on current trends in health information technology and recent research advances in the following areas as they apply to it: access controls, analysis of audit logs, compliance to regulations, infrastructure architectures for exchange of health information, authentication and encryption for body area networks and implanted medical devices, mobile health using cell phones, cloud services for health records, and privacy protections that support medical research.

Students who complete the course will have broad knowledge of the current state-of-the-art and will have made significant progress toward an original contribution to it.

**When: Tuesdays and Thursdays from 2:00 to 3:15 starting on January 17**

**Where: Siebel Center 1131 and WIKI.ENGRL.ILLINOIS.EDU/DISPLAY/CS563SP12**

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