

LONG SIGNATURE SHEET



Proposal Number: ITLS10-16-09

Proposal Title ITIS 6220/8220 Data Privacy

Originating Department Department of Software and Information Systems

TYPE OF PROPOSAL: UNDERGRADUATE _____ GRADUATE UNDERGRADUATE & GRADUATE _____
 (Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
Oct 16, 2009	Dec 3, 2009	Dec 4, 2009	Approved	<u>DEPARTMENT CHAIR</u>
Dec 4, 2009	Feb 1, 2010	Feb 1, 2010	Approved	<u>COLLEGE CURRICULUM COMMITTEE CHAIR</u>
Feb 1, 2010	Feb 16, 2010	Feb 16, 2010	Approved	<u>COLLEGE FACULTY CHAIR</u>
Feb 16, 2010	16 Feb 10	16 Feb 10	Approved	<u>COLLEGE DEAN</u>
			Approved	<u>UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR</u> (for undergraduate courses)
2/18/10	3/2/10	3/10/10	Approved	<u>GRADUATE COUNCIL CHAIR</u> (for graduate courses)
			Approved	<u>FACULTY GOVERNANCE SECRETARY</u> (noting Faculty Council approval on Consent Calendar)
				<u>FACULTY EXECUTIVE COMMITTEE</u> (if decision is appealed)

**COPY
MADE**

Grad School Cop
3-10-10

Revised 12/10/09
OAA/jdp

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

NEW GRADUATE COURSE PROPOSAL

ITIS 10-16-09

FROM: DEPARTMENT OF SOFTWARE AND INFORMATION SYSTEMS

TITLE: DATA PRIVACY

A. PROPOSAL SUMMARY AND CATALOG COPY:

1. SUMMARY:

The Department of Software and Information Systems proposes to create new courses, ITIS 6220 Data Privacy and ITIS 8220 Data Privacy. The courses focus on both the technical challenges of handling sensitive data and the policy and legal issues facing data subjects, data owners, and data users.

2. PROPOSED CATALOG COPY:

ITIS 6220. Data Privacy. (3) Prerequisites or Corequisites: ITIS 6200, full graduate standing, or permission of department; Topics include privacy concepts, policies, and mechanisms; identity, anonymity, and confidentiality; private data analysis and database sanitization; privacy-preserving data mining techniques including k-anonymity, randomization, and secure function evaluation; privacy issues in social networks, RFID, and healthcare applications. (Fall, Evenings)

ITIS 8220. Data Privacy. (3) Prerequisites or Corequisites: ITIS 6200, full graduate standing, or permission of department; Topics include privacy concepts, policies, and mechanisms; identity, anonymity, and confidentiality; private data analysis and database sanitization; privacy-preserving data mining techniques including k-anonymity, randomization, and secure function evaluation; privacy issues in social networks, RFID, and healthcare applications. (Fall, Evenings)

B. JUSTIFICATION

1. Need

Many databases from government, commercial and non-profit organizations maintain a huge amount of data on sensitive or confidential information such as income and medical records. Concern about the ownership, control, privacy, accuracy, and utility of these data has become a high priority. This course focuses on privacy enhancing techniques as well as the policy and legal issues facing data owners and users.

2. Prerequisites/Corequisites:

1. ITIS 6200.

2. Students should have some prior background in security and databases.

3. Course numbering:

ITIS 6220 is intended to be a graduate level course. IT IS 8220 is intended to be a graduate level course for doctoral students in Information Technology.

4. Effect on scope, quality, and efficiency:

The proposed courses will broaden the scope of the software and information systems curriculum to include the study of data privacy issues. These crucial topics are destined to be even more important for our graduates to understand. Future IT professionals must understand data privacy policies, threats, and prevention techniques in various applications.

C. IMPACT

1. Students served:

This courses provide graduate majors in information technology with an option for an elective course that would enhance their value to potential employers.

2. Effect on existing courses and curricula:

- a. ITIS 6220/8220 will be offered each fall.
- b. The content/frequency of other courses will not be affected.
- c. The anticipated enrollment is 20/5 students for ITIS 6220/8220.
- d. Enrollment in other elective courses will not be affected
- e. ITIS6220/8220 has been offer once as a special topics course (ITIS 6010/8010) in Fall 2008. The enrollment was 5 doctoral students in ITIS 8010.
- f. Other areas of catalog copy affected: The proposed courses should be listed as elective options.

D. RESOURCES REQUIRED TO SUPPORT PROPOSAL

1. Personnel

- a. Specify requirements for new faculty, part-time teaching, student assistant and/or increased load on present faculty.

No new faculty members are needed in order to teach these courses.

- b. List by name qualified faculty members interested in teaching the course(s).

In general, research faculty in data privacy and security areas are qualified to offer these courses. In particular, Xintao Wu, Mohamed Shehab, Heather Lipford, Yongge Wang, and Yuliang Zheng are interested in offering these courses.

2. Physical Facility

No new physical facilities are needed.

3. Equipment and Supplies

No new equipment and supplies are needed to teach the courses.

4. Computer

Specify requirements for computer usage by students and/or faculty, and include an assessment of the adequacy of computing resources by Computing Services.

Students will use the computing facilities in the Woodward 335 lab to complete their course projects and assignments. These facilities are adequate for the course.

5. Audio-Visual

Specify requirements for audio and/or visual equipment and media production services from Media Services.

This course requires only the use of existing presentation equipment in classrooms. No additional audio/visual equipment or services are needed.

6. Other Resources

Specify and estimate cost of other new/added resources required, e.g., travel, communication, printing and binding.

This course does not require any additional resources.

7. Funding Sources

Indicate source(s) of funding for new/additional resources required to support this proposal.

This course does not require any additional resources.

E. CONSULTATION WITH THE LIBRARY AND OTHER DEPARTMENTS OR UNITS

1. Library Consultation

Library consultation was initiated on 2-10-2010 and completed on 2-11-2010.

2. Consultation with other departments or units

Computer Science.

F. INITIATION AND CONSIDERATION OF THE PROPOSAL

1. Originating Unit

Approved by the Software and Information Systems Faculty on ____Dec 3, 2009__.

2. Other Considering Units

Approved by the CCI Faculty on ____Feb 16,2010____.

G. ATTACHMENTS

- 1. ITIS 6220/8220 syllabus**
- 2. ITIS 6220/8220 schedule (includes list of topics covered)**
- 3. Library Consultation**

Attachment A. IT IS 6220/8220 Course Outline

Course Catalog Description

ITIS 6220. Data Privacy. (3) Prerequisites or Corequisites: ITIS 6200, full graduate standing, or permission of department; Topics include privacy concepts, policies, and mechanisms; identity, anonymity, and confidentiality; private data analysis and database sanitization; privacy-preserving data mining techniques including k-anonymity, randomization, and secure function evaluation; privacy issues in social networks, RFID, and healthcare applications. (Fall, Evenings)

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Prerequisites

ITIS 6200, full graduate standing, or permission of department.

Instructional Method

This course incorporates lectures and discussions of assigned readings.

Grading

All students will be evaluated by a research oriented course project, a midterm exam, and a final exam. Attendance and class participation may be factored into the final grade.

Term project and presentation	40%
Midterm exam	25%
Final exam	35%

Grading Policy: A = 90-100 B = 80-89 C = 70-79 F = below 70

Academic Integrity

Unless otherwise specified, the UNC Charlotte guidelines on Academic Integrity specified under <http://www.legal.uncc.edu/policies/ps-105.html> fully apply to all work in this course. This includes term project and exams.

Textbook and resources

Privacy-Preserving Data Mining: Models and Algorithms, edited by Charu C. Aggarwal, Philip S. Yu, 2008, Springer. ISBN: 978-0-387-70991-8

Database Nation: The Death of Privacy in the 21st Century, by Simson Garfinkel, 2000, O'Reilly Media, ISBN: 978-1-56592-653-0

Topics Outline

Week	Topics Covered
1	Introduction: privacy, policy and legal issues
2	Definition and value of privacy, regulatory approach to protecting privacy
3	Privacy in statistical databases
4	Privacy preserving data mining: k-anonymity based generalization
5	Privacy preserving data mining: randomization
6	Privacy preserving data mining: secure multi-party computation
7	Midterm
8	Privacy preserving publishing social network data
9	Privacy issues in social networks
10	Privacy issues in healthcare
11	Privacy and RFID
12	Student project presentations
13	Privacy issues in other application domains
14	Final



J. Murrey Atkins Library

Consultation on Library Holdings

To: Xintao Wu
College of Computing and Informatics

From: Reese Manceaux

Date: February 11, 2010

Subject: **ITIS 6220 – Data Privacy**
ITIS 8220 – Data Privacy

Summary of Librarian’s Evaluation of Holdings:

Evaluator: Reese A. Manceaux **Date:** 2/11/10

Check One:

1. Holdings are superior
2. **Holdings are adequate (Please see comments) YES**
3. Holdings are adequate only if Dept. purchases additional items.
4. Holdings are inadequate

Comments:

This topic pertains to computer privacy concepts. A small sampling of subject searching in the Atkins Library online catalog reveals the following holdings in support of these courses. (See the table that follows). A search of a few related subjects retrieved over 1,860 pertinent items. The Library has electronic access to periodicals and other electronic resources (e-books, Skillport) that support these courses. In addition, the library has electronic databases such as ACM, ScienceDirect, IEEE Explore and Compendex (many with links to full text articles) supporting the overall Computing and Informatics programs. The collection, especially if supported by ongoing purchases, is quite adequate to support this program.

Atkins Library Sample Holdings in Areas Related to Course

2/10/2010

Subject	Books/EBooks	After Year 2000	Journals
Data Protection (including all subdivisions)	300	169	3
Computer Security	813	201	23
Computers – Access Control	226	48	5
Computer Networks – Security Measures	322	277	7
Data Encryption	144	48	2
Database security	33	22	3
Radio frequency identification systems	22	21	0
Totals	1860	786	43

*Reese A. Manceaux*_____

Evaluator's Signature

February 10, 2010