**CSI 5389: Electronic Commerce Technologies**

**Winter 2013**

**Professor: Nour El Kadri**

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Office Hours: By appointment

**Lectures:**

Thursdays    19:00 - 22:00    CBY   Room B012

**Course Website:** www.site.uottawa.ca/~nelkadri

Once the class starts, you are responsible for knowing all the information posted on this course website. Since the website will be updated often with new information during the term, you should visit it on a regular basis.

**Course Description:**

Introduction to business models and technologies. Search engines. Cryptography. Web services and agents. Secure electronic transactions. Value added e-commerce technologies. Advanced research questions. *Prerequisites: CSI 4128 and CSI 3140, or equivalent, or acceptance into one of the master's programs in e-business technologies or the certificate in e-commerce.*

**References:**

* Main Reference: In this course, we will spend a lot of time studying and discussing research papers on e-commerce technologies. A list of papers will be provided to help you choose from.
* Additional Reference: Designing Systems for Internet Commerce (Second Edition) by G. Winfield Treese and Lawrence C. Stewart , Addison Wesley.

**Course Topics (tentative list):**

* Basic E-Commerce Concepts
* Internet Business Strategies and Business Models
* Functional Architecture of E-Commerce Systems
* Extensible Markup Language (XML) and Web Services
* Cryptography in E-Commerce
* Auctions and Negotiations
* Intelligent Agents in E-Commerce
* Modeling Trust and Reputation in E-Commerce
* Data Mining in E-Commerce
* Recommender Systems
* Architecture for Mobile E-Commerce

**Course Organization**

This is a research-oriented course that consists of three parts:

* The first part of the course will be an introduction by the instructor, to provide some general background on business models and e-commerce technologies, including some specific research topics such as intelligent agents, trust & reputation modeling, and auctions & negotiations in e-commerce.
* The second part of the course will have teams of two students presenting relevant research papers chosen from the provided list of papers.
* The final part of the course will be teams of two students presenting their teams' research projects on topics of their choice (but must be related to the theme of e-commerce technologies). It is the instructor's hope that via this course the students will not only receive useful knowledge in the areas of e-commerce technologies, but also gain experience and improve their graduate skills in doing research and presentation.

**Workload and Assessment:**

* Presentation of a research paper (with one or two-page handout/summary): 20%
* Class participation: 20%
* Term-long research project which is considered as the take-home final exam for the course and consists of **two components**: (a) project presentation: 20% and (b) written project report: 40%

**Note that paper presentations and research projects must be done by teams of two students**. Please carefully read the following information regarding the detailed workload of the course.

**Paper Presentation:**

* Your must find a partner (who is also a student in this course) to form a **team of two students** and your team must presentone research paper selected from the assigned list. This is the same list of papers as mentioned in the References and Course Organization sections above. **Each team should take a good look at the list and send me an email by 12:00 noon on Jan 18th, stating the names of the two team members as well as your team's choice of at least three papers in preference order**. After receiving every team's choices, I will construct the **Schedule of Paper Presentations** and post it on the course website by Jan. 25th. I will also broadcast an email to the class notifying you of the availability of that schedule so that you know which paper and when your team will be responsible for presenting. Normally, I will approve your team's first choice; however, if there are interest conflicts, my decision will be made based on a first-come first-served basis. Due to the large class size and scheduling complication, **changing presentation date is not allowed** unless you find another team who is willing to switch their presentation date with yours. Also, if you do not have a partner by Jan 17, I will assign one to you. Since I will just randomly pair together those students who do not have a partner, it is better that you find yourself a partner who can work well with you.
* Paper presentations will be in 25-minute time slots: 20 minutes for presentation followed by 5 minutes for questions and answers. **Both team members must participate in the presentation**. You will be cut off at the time limit, so practicing the talk at least once is strongly recommended. (Note that the proposed presentation time here is just tentative for now and may need to be adjusted later on, once the actual size of the class is known.)
* Your team must also prepare **handouts** for your presentation. A handout is a one- or two-page summary of the paper to be presented, which is handed out to the audience right before your presentation. You should use point form and sub-headings to format your handout. A good handout should effectively convey the main contents of the paper to the reader, and serve as a brief but sufficiently-detailed reference of the presented paper.
* Since members of the same team will receive the same mark for the presentation, it is your responsibility to distribute the work equally among the team members.
* Check the **Schedule of Paper Presentations** to know when and what paper your team will be presenting. Since you know your presentation date well in advance, **no excuses will be accepted for missing your presentation**. If a team does not do its presentation on the scheduled date, both team members will receive a grade of zero, unless you have legitimate reasons (e.g., being ill with valid doctor's certificate), in which case you must contact me as soon as possible (no later than the week following your team's scheduled presentation).

**Class Participation:**

Your (individual) class participation is assessed based on your **regular attendance** in the course as well as your **active discussion** in the paper and project presentation parts of the course. Thus, before each class that has paper or project presentations scheduled, you should read the papers to be presented and think of comments and/or questions to contribute. Things to think about include:

* What is the main idea or contribution of the paper (or project)?
* Is it useful or valuable? Why?
* What assumptions were made?
* Are these assumptions reasonable or practical?
* Are the reported results correct or convincing?
* How can the results be extended or improved?
* What applications may arise from the main idea of the paper (or project)?
* Are there any unclear points in the paper (or project)?
* Etc.

**Research Project:**

**Your research project must also be done by a team of two students**. Therefore, you must find a partner to form your project team as early in the course as possible. Your partner can be the same colleague you teamed up with for your paper presentation or a different person. The goal of the project is for you (and your partner) to develop a deep understanding of a topic relevant to the course and, if possible, to work on an open research problem. You are therefore expected to read relevant research papers, to summarize and analyze existing work, and to develop some original ideas for extending the work you have uncovered in your research. **Your team must select a topic for the project, which must be related to the theme of e-commerce technologies**. The selected topic can be either theoretical or experimental or a combination of both. **Note that your work done somewhere else (e.g., in another course, or in your thesis research, etc.) is not allowed in the project of this course. In other words, you cannot repeat the work you have done somewhere else to get credit for the project of this course.**

Your team's project report will be evaluated on the basis of its **contents quality** and **presentation quality**, and in comparison with the reports of the other teams in the class. Factors that contribute to contents quality include clarity of problem statement and background information, depth and comprehensiveness of related work, originality of proposed approach, quality of validation or evaluation and analysis of results, insight into collected data set (if any), level of system building thoroughness (for implementation-based projects), potential research contributions, etc. Presentation quality elements consist of correctness of spelling and grammar, clarity of writing style, flow of text, logical structure of sections and subsections, use of figures, diagrams and/or tables, proper presentation of math equations (if any), appropriate citation and consistent format of references, etc. Note that the same project mark will be given to members of the same team, so you should ensure that you allocate the work equally among the two team members for both the presentation and report components of the project. Also, if you do not have a partner for your project, I will randomly choose one (among those who do not have a partner) for you. Thus, it is your own benefit to find a suitable partner for yourself.

The project involves the following steps:

* **One-page project proposal,** in which you should provide your name and your partner's name, and clearly state the topic or problem that your team proposes to address. You should also justify why your team's proposed topic is related to the theme of e-commerce technologies, and give a good outline of what your team plans to do in the project (i.e., a summary of the contents to be covered in your team's project report in a bullet or numbering form). Remember that the proposal cannot be longer than one page. The project proposal is not graded but it is required to make sure that things are on track. Prepare your team's project proposal in PDF or Word format and**email the proposal to me by 12:00 noon on Feb. 15th**. I will inform you by email of whether or not your team's proposed topic is approved. Due to the limited time frame of the course, changing the proposed topic may result in incomplete project and therefore may not be allowed. Thus, you and your partner should start thinking of your project topic as early in the course as possible, in order to come up with a good proposal that both of you can follow through to complete your team's project.
* **Project presentation,**which is scheduled during the last few weeks of the course. Similar to a paper presentation, a project presentation is tentatively composed of 20-minute presentation, followed by up to 10-minute discussion (if time permits), with one- or two-page handouts prepared to give to the audience; and it must be performed by both team members. Since you and your partner will still be working on your team's project by the time of your project presentation, you will essentially present the work completed until then and a detailed plan of what you will carry out to complete your project. Note that possible longer discussion time is provided (compared to paper presentations) so that you and your partner can solicit as much feedback as possible from the class before you complete your written project report. Please check the **Schedule of Project Presentations** for your team's presentation date. Again, due to difficulties in scheduling, changing presentation date is not allowed unless you find another team who agrees to swap their presentation date with yours.
* **Written project report** (in PDF or Word format, and **in the form of a research paper**), which should include an introduction of your team's proposed topic, description of related work, analysis and critique of related work, and a detailed presentation of your team's main work that should contain some modest amount of original ideas (e.g., suggestions for extending existing work or for developing some new directions), with possible validation or evaluation. **You must email me your team's project report by 12:00 noon on April 17th**. **This is an absolutely strict deadline** as I must meet the time constraint for final mark submission to the Graduate Office.
* **Important notes:**
  + After receiving your team's project report on the project due date (April 17), I will email you an acknowledgement (it will take a while for me to send acknowledgements to all teams in the class). In case of possible email problems, the following rule must be followed: If you do not receive my acknowledgement by the end of April 17, that indicates that I have not yet received your team's project report. In this case, you must contact me by phone by April 18th, meet with me and show a proof of your unsuccessful email submission on the project due date (i.e., printout of your email submission sent to me on April 17); otherwise, your team will receive a penalty for the project report.

**Term Marks:**

To protect your privacy, No term marks will be published. You will get your grades through infoweb.

**Important Dates:**

* **Jan. 18**: Choice of at least **three** papers for presentation, due by 12:00 noon.
* **Feb. 15**: One-page project proposal due by 12:00 noon.
* **April 17**: Written project report due by 12:00 noon.