

'396' Undergraduate Research Project Application Form

Version: 200603

Office for Undergraduate Research in Science
Tel.: 514-398-5964 / Fax: 514-398-8102 / Dawson Hall, Room 211
Email: victor.chisholm@mcgill.ca Web: www.mcgill.ca/science/ours/

INSTRUCTIONS FOR SUPERVISORS

- All fields are required, unless indicated otherwise.
- Form available in Word and LaTeX formats.
- Complete Sections A & B electronically.
- Email to victor.chisholm@mcgill.ca who will post as PDF on www.mcgill.ca/science/ours/396/.

INSTRUCTIONS FOR STUDENTS

- All fields are required, unless indicated otherwise.
- Download and print this form. Complete Section C and sign.
- See "How students can apply" instructions in Section B.
- Your supervisor or department will tell you if you are selected for this project. If so, you will receive a code to register for a '396' course on MINERVA.

SECTION A: SUPERVISOR INFORMATION

Name: Bettina Kemme Email: kemme@cs.mcgill.ca
Phone: 514-398-8930 Website: _____
Supervisor's Department or Unit: Computer Science Course Number: COMP396

SECTION B: PROJECT INFORMATION

Term: Fall 2006 Project start & end dates: Sep 1 – Dec 30, 2006
Project title: Massively multiplayer game simulator
Project description: In massively multiplayer games thousands of users connect to a game server and play within the same game world. Thus the server system must be extremely scalable. Typically, a cluster of servers is used to process all player actions and forward them to all players. In this project, the student will extend an existing simulator for a massively multiplayer game cluster in various ways. Firstly, the system should be able to model an arbitrary number of servers. Secondly, the costs of processing player actions and multicasting information to players need to be modeled in an appropriate way. Thirdly, coordination of the different servers needs to be handled. Finally, a framework to integrate load-balancing should be developed.
Prerequisites: 1 term completed at McGill + CGPA ≥ 3.0; or permission of instructor.
Grading scheme: Milestones (3 milestones) and their demonstrations: 40%, Presentation 10%, Final Report: 50%
Other: _____
Status: Mark with an x. This project is...
[] Open to applicants
[] Already taken; no more positions available this term
[x] Taken, but contact me for other possible projects this term
Ethics, safety, and training: Which of the following, if any, is involved? Mark with an x.
[] Animal subjects
[] Human subjects
[] Biohazardous substances
[] Radioactive materials
[] Handling chemicals
[] Using lasers
For undergraduate students, ethics and safety compliance is the supervisor's responsibility.
How students can apply: Send an email

EMAIL TO [VICTOR.CHISHOLM@MCGILL.CA](mailto:victor.chisholm@mcgill.ca) WHO WILL POST AT [WWW.MCGILL.CA/SCIENCE/OURS/396/](http://www.mcgill.ca/science/ours/396/).

SECTION C: STUDENT INFORMATION. (1) PRINT LEGIBLY AND SIGN. (2) SEE "HOW STUDENTS CAN APPLY" IN SECTION B.

Name: _____ McGill ID: _____
Email: _____@mail.mcgill.ca Phone: _____
Program: _____ Level: _____
I have not applied for another 396 course in this term. (circle one) U0 / U1 / U2 / U3
Student signature: _____ Date: _____

SECTION D: APPROVALS. (1) PRINT NAMES & SIGN. (2) NOTIFY OFFICE FOR UNDERGRADUATE RESEARCH IN SCIENCE. (3) GIVE STUDENT CODE TO REGISTER FOR COURSE ON MINERVA.

Supervisor: _____ Date: _____
Unit Chair, Director, or designate - I certify that this project conforms to departmental requirements for 396 courses. _____ Date: _____