

# CS5014: Research Methods in Computer Science

## Fall, 2006

**Class:** TuTh 12:30–1:45pm in McBryde 329  
**Instructor:** Dr. C.A. Shaffer, Torgersen 2000A, x4354  
Office Hours: TuTh 10:00-11:00  
E-Mail: shaffer@cs.vt.edu  
**Textbooks:** *Handbook of Writing for the Mathematical Sciences*  
by Nicholas J. Higham (<http://www.siam.org/books/ot63>)  
*Statistics for Engineers and Scientists*  
by William Navidi (McGraw Hill, ISBN 0073107670)  
**Class Homepage:** <http://courses.cs.vt.edu/~cs5014>

**Special Note:** CS5014 may not be used to satisfy the course requirements for a coursework-only MS degree.

**Course Description:** This course interweaves three distinct themes. (i) Acculturation into the research process in Computer Science. This includes an understanding of what CS researchers do, and the philosophy and ethics related to how they do it. (ii) Proficiency at communications, especially technical writing. (iii) Proficiency at designing experiments for the purpose of testing research hypotheses, and evaluating the results of those experiments (using basic statistics).

**Assignments:** The course is graded out of a total of 1000 points. There will be an assignment of some sort roughly once per week. There will be writing/communications assignments, assignments targetted toward developing a research proposal or paper, and problem sets related to statistics and experimental design. In general, each assignment is worth 5-10% of the course grade. The exception is the main semester writing project, which will be due near the end of the semester and will be worth about 20% of your grade.

Assignments are typically due in class, via hard-copy. Late assignments are either penalized for being late, or not accepted at all, depending on the circumstance. Don't push deadlines. My general policy is to give everyone one extension during the semester, without worrying too much about the reason. To get an extension, you must come to me to ask for it at least 24 hours before the assignment is due. Getting a second extension is **very hard** so don't waste your opportunity.

If any student needs special accommodations because of a disability, please contact the instructor during the first week of classes.

**Honor Code:** The Graduate Honor Code, applies to this course and will be strictly enforced. Homework and exams **must** be done strictly on an individual basis.