Why require writing in your classes?

• The prevalence of “teaching-to-the-test” in high schools means that students have often not developed strong writing skills.

• Nearly all careers require solid writing skills.

• Students recognize the value of writing skills and want to be better writers.
• Writing assignments can be designed to promote student learning of course objectives.

• Writing requires active thinking and leads to more permanent and deeper understanding.

• In other words, writing can enhance active learning inside and outside of the classroom.
Writing *in* the classroom

• Short in-class (and even un-graded) writing exercises can promote active learning.

• Examples:
  – Ask all students to bring a written summary of the main idea of the reading to class. Ask 1 or 2 students to read their summaries.
– In the middle or at the end of class, give students 2-3 minutes to write a paragraph summarizing a key concept, idea, mathematical operation, or steps to solving a problem. Ask students to read their responses.

– Pause during lecture and ask students to re-write what you just said in their own words in their notes.
– Written summaries can be collected for attendance or participation. They need not be graded.
– In large lecture classes, have 1 or 2 students read their summaries aloud.
– Whether read aloud or collected, the summaries give you immediate feedback on how well students understand course material.
Writing on exams

• Exams that require writing use different thinking than multiple choice exams.
• Even identification or short answer questions can test deep learning more effectively than multiple choice questions.
• Short answer and essay questions must be designed with care to ensure they test the intended material.

• Exams should be graded anonymously to prevent the “halo effect.”

• Grading rubric should be clear before grading begins.
• If TAs grade exams, it is best to have TAs grade one part of the exam for **all** students (rather than just **their** students). Ideally, TAs would grade together in the same room at the same time.

• If TAs grade exams, a clear grading rubric is even more important.
• When handing back exams, show students “model” answers in class.
  – Students can see difference between their answer and one that received full credit.
  – This helps students understand expectations for future exams.
  – It reduces the number of students that “lobby” for better grades.
Assigning Papers

• Paper assignments need not be long (>10 pages) “term” papers.

• For undergraduates, term papers should be divided into manageable parts.
  – Research question; thesis; outline.
Multiple short (3-4 page) papers can be more effective (especially in lower division or core classes).

- These give students opportunities to improve writing (unlike one long paper).
- Early assignments can be weighted less than later assignments.
- Students also get “practice” writing.
• Paper assignments are better when they ask focused/precise questions.
  – This helps students formulate a thesis statement.
  – A well-written question will suggest a “natural” organization for student answers.

• “Why” or “How” questions are best.
• Avoid paper assignments with mere “topics.”
  – Students may have trouble developing clear arguments.

• Asking focused questions can avoid potential problems with [internet] plagiarism.
• Questions should be changed regularly to avoid plagiarism.
• Describe differences between “A,” “B,” “C,” “D,” and failing papers when making assignment.
• When designed with care, paper assignments can enhance student learning and understanding of course material.

• Paper assignments can be “puzzles” that lead to critical-thinking and deeper learning.

• Writing assignments can be used not to teach students how to write but to teach course content.
Grading Papers

• Papers should be graded anonymously to avoid the “halo effect.”
  – Students appreciate fairness.
  – Reduces requests for re-grades.
• Skim a handful of papers first to get sense of range of quality (and to make sure assignment was clear).

• Use a paper evaluation form to reduce comments on papers.
  – Hand out a copy of the form with the assignment.
  – Example:
• Write comment “sandwiches.”
  – Put critiques between positive notes (if possible).
  – Reduces student despair.

• Put short comments throughout paper, rather than just at end.
• Comments can be phrased as questions.
  – “Could you revise this ¶ to be clearer?”
  – “How does this relate to your thesis?”
  – “Could you elaborate this point?”
  – “How so?”

• Questions get students thinking about their writing.
• Do not copy edit papers.
  – Mark mistakes first time only.
  – Reduces student despair.
  – Saves time.
  – Tell students to look for repeated errors.

• Weight assignments early in the semester less than later assignments.
• To avoid grade inflation, grade first assignments more stringently.
  – Student writing will improve during semester, and you want to allow room to reward improvement.
  – Shoot for lower average on first assignments. Reward improvements with better grades.
  – Final class average can still be your ideal.
• Show students an ideal “A” paper when you hand back the paper.
  – Remove student’s identity.
  – Discuss why that paper is an “A” paper.
  – Reduces requests for re-grades.
  – Improves future student papers because students understand expectations and can imitate style of “A” papers.
Attitudinal obstacles to encouraging writing

• Don’t see relevance of writing skills for science disciplines.
• Don’t understand how writing can improve learning.
• Think someone else should teaching writing.
Institutional obstacles to writing at GA Tech

• No Institute Writing Center.
• Peer institutions have writing centers
  CalTech: http://writing.caltech.edu/
  MIT: http://web.mit.edu/writing/
  VATech: http://www.english.vt.edu/writing/center.htm
  Stanford: http://swc.stanford.edu/
  Berkeley: http://slc.berkeley.edu/writing/tutoring.html
  UofIL: http://www.english.uiuc.edu/cws/wworkshop/
  UofTexas: http://uwc.fac.utexas.edu/
  UNC: http://www.unc.edu/depts/wcweb/
• Lack of writing center discourages faculty from assigning writing.
  – No campus resource to send students for guidance.
  – Increases faculty advising; reduces incentives to use writing assignments.

• Large class sizes and time for teaching at a research university.

• Lack of graduate students with ability to help grade writing assignments in our disciplines.
References and resources

- GT Center for the Enhancement of Teaching and Learning
  http://www.cetl.gatech.edu/
- UNC Center for Teaching and Learning http://ctl.unc.edu/index.html
- Teaching @ Berkeley http://teaching.berkeley.edu/
  - On writing: http://teaching.berkeley.edu/encouraging.pdf