This is an undergraduate course on technical writing for Computer Science and Information Systems. The focus of this course is on writing technical documents for the computing field. Besides writing and correcting documents, this course will include lectures on topics of English style, proper word usage, and composition rules. In particular, we will spend a fair amount of time in class writing first drafts of documents, which will be corrected before they are submitted for grading.
CSE/ISE 300 Writing

- This is a 1 credit course for which you will receive a grade from among A, B, C, D, or F. The grade will be based upon scores from in-class exams and writing exercises in addition to the major submitted papers for the course. Three papers of sizes one page, two pages, and four to six pages are planned. The in-class exams and exercises will determine 15% of your course grade and the three papers together will count for 85% of your grade.
CSE/ISE 300 Writing

• Time: Tue 12:50-1:45PM
• Location: Room 154  Light Engineering
• Required Books: The Elements of Style, 4th edition (2000), Authors: Strunk and White $10 (or $4 2007 reprint by Coyote)
• Online Technical Writing, Author: David A. McMurrey  http://www.io.com/~hcexres/textbook/
• Instructor: Professor Larry Wittie
• Office: CS Building, Room 1308
• Phone: 631-632-8750 (not 2-8456)
• Email: lw@ic.sunysb.edu
• Office Hours: 2:00-3:30PM Tue & Thu or by appointment
• Course Homepage: http://www.cs.sunysb.edu/~cse300
Texts & Materials For CSE300

• Bring paper and writing pens to each class. There will be frequent writing in class as well as outside.
• Strunk and White is a 90+ year old classic reference on English style. It has a detailed index and glossary. Read it and keep it handy for times when a questionable word or phrase occurs in your writing.
• McMurrey is a free on-line technical writing text.
• Zobel is a highly recommended text on computer science writing and research. It has many examples.
CSE/ISE 300
Seven General Principles of Technical Writing

1. Know your purpose
2. Know your targeted audience
3. Organize content for your purpose and audience
4. Write clearly and precisely
5. Use uncluttered page design
6. {Think visually - that is what people remember}
7. Write ethically

Slides based on Pearsall: The Elements of Technical Writing
Whether an email, a resume or a long report, the basic purpose of any technical writing is:

1. To inform
   Cray has a new style of supercomputer for sale
   OR

2. To argue
   The new multithreading hardware developed for the Cray MTA-2 supercomputer will be copied by many other computer makers before 2015.
CSE/ISE 300

Know your targeted audience

Their concerns and characteristics

Laypersons - learn from background & simple graphics
Executives - skim summaries & graphics to decide fast
Technicians - want practical, how-to-do-it information
Experts - want theory of how & why and results in graphs
Mixed audiences - levels, departments or companies differ

Their education and experience

What vocabularies and knowledge of existing techniques

Their likely attitudes to your purpose and content

Pro - good reasons to do what they plan already
Con - write very convincingly with strong arguments
CSE/ISE 300
Organize content for your purpose and audience

List assumptions before you start to write a report

My purpose
Readers’ concerns, education & likely attitudes

Choose the level and amount of content needed to fulfill your purpose and readers’ needs - no more.

Common schemas for reports - an example topic

Answers to questions on a defined topic - backup power
Chronology of events - actions to fix the file system crash
Classification from whole to components - a chip fab lab
Mechanism - Overview, Component details, How it works
A paper - Abstract Background Details Results Conclusion

{Pfeiffer: Abstract Body Conclusions}

Make an outline as you organize report contents
CSE/ISE 300

Write clearly and precisely

1. Paragraph often to help readers - intro & details
2. Use right vocabulary for readers
3. Prefer active voice sentences - subject acts
4. Use active verbs not passive nouns from verbs
   the technicians must receive training in proper use of ...
   train the technicians to use ...
5. Keep it Simple (KISS) ("Eschew Obfuscation")
   • Subject verb sentences
   • Reasonably short sentences
   • Positive statements - is not ready until => is ready when
   • Short noun strings - not well head gas price controls
   • Parallelism - all nouns; not noun, infinitive, when clause
     chest pain, fainting, shortness of breath
     chest pain, to faint, when you feel short of breath
CSE/ISE 300

Use uncluttered page design

1. Provide headings
2. Use headers and footers
3. Choose proper type size and font
4. Use lists and tables
5. Use emphasis sparingly
6. Leave ample white space

Margins - 1.25 in. each for 8.5 in. US Letter
Medium line lengths (50-70 characters) - 60
Proper spacing - space & a half for your paper
Think visually - that is what people remember
{Not yet room in our short essays}

1. Photographs
2. Drawings
3. Process charts (flow charts)
4. Data in tables and graphs
   - Uncluttered
   - Suited to readers
   - Interpreted by notes, captions, legends, text
   - Placed near text discussion of data
   - Numbered in order with short titles
   - Pleasing to view
   - Legible
   - Truthful
CSE/ISE 300

Write ethically

Do not suppress unfavorable data
Do not exaggerate favorable data
Do not manufacture data
Do not create false implications: average out bad news
Do not plagiarize
Do not present misleading graphs: just show data tops
Do not lie