CSE/ISE300 Communications S13

- Location: Room 2205 Computer Science, 2nd floor, Multimedia Lab
- Time: Tue/Thur 5:30-6:50PM
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**Readings from Strunk & White. Midterm: the last week in April.**
CSE/ISE 300

Notes from First Classroom Writing - S13

1. I use the paragraph mark ¶ (pilcrow symbol) to say “Separate sentences here to start a new paragraph”.
2. Avoid vague words like “nice” and non-specific phrases like “a lot of” and “another university”.
3. Avoid abrupt transitions between paragraphs
4. Avoid repeated thoughts, words, and phrases.
5. Do not use any contractions, no don’t, no can’t, and no it’s.
6. Avoid sentences starting with “So”, “Thus”, and “Also”.
7. Avoid most uses of “due to” and all that mean “because of”.
8. Avoid lack of organization. Have sentences that fit together into paragraphs (and sections with section headers, in longer papers).
9. Read, edit, and re-read what you write, preferably after a night of sleep the last time.
CSE/ISE 300
Strunk and White: Commonly Misused Words

Aggravate/Irritate  Aggravate means “to add to” or “to make worse” a bad situation. Irritate means “to annoy” or “to chafe.”
Don’t aggravate me!   Don’t irritate me!

All right   Idiomatic in casual speech as a phrase meaning “O.K.”
“Do we have a deal?” “All right.”

Allude/elude/refer   You allude to a book; you elude a pursuer. An allusion is an indirect mention; a reference is a specific mention.

Allusion/illusion   An allusion means “an indirect mention”; an illusion means “a false impression” or “an unreal image.”

Alternate/Alternative  Alternate means “every other one in a series.” Alternative means “one of two possibilities” and always connotes a choice. Alternate can mean “a substitute” where there is no choice.
The flooded road left them no alternative; they took the alternate way.
Among/Between  

*Among* is normally used if more than two persons or things are involved. *Between* is used when each of two or more is considered individually.  

You and I will split the work between us.  
The money was split among the four players.  
There is an agreement between the six heirs.

And/or  

*And/or* is a confusing shortcut that should be avoided.  

Would an honor system cut down on the amount of stealing and/or cheating?  

Would an honor system reduce the incidence of stealing, cheating, or both?  

Anticipate/expect  

Use *expect* to mean “believe in advance.”  Use *anticipate* to connote actions other than simple belief.  

I anticipated that he would look older.  

I expected that he would look older.  

My aunt anticipated the upturn in the market by buying stock.
Anybody/Any body  *Anybody* means “any person.” *Any body* means “any corpse” or “any human form” or “any group.” Similarly write *everybody, nobody, and somebody* as single words in normal usage.

Anyone/Any one  *Anyone* means “anybody.” *Any one* means “any single person or thing.”

As good or better than  Avoid by rewriting the sentence.
My opinion is as good or better than his.  My opinion is as good as his, or better.

As to whether  *Whether* is sufficient.

As yet  *Yet* nearly always is as good, if not better.
No verdict has been reached as yet.  No verdict has yet been reached.
CSE/ISE 300
Strunk and White: Commonly Misused Words

Being  
*Being* is not proper after *regard.. as.*
He is regarded as being the best programmer.  
He is regarded as the best programmer.

But  
*But* is unneeded after *doubt* and *help.*
I have no doubt but that …  
I have no doubt that …
He could not help but see it.  
He could not help seeing it.

Can/May  
*Can* means “is able.”  
Can is not a substitute for *may,* meaning “has permission.”
Can I play now?  
May I play now?

Care less  
The dismissive “I couldn’t care less” is often erroneously shortened to “I could care less”, destroying the meaning.
Case  

Case is often not needed.
In many cases, the rooms lacked air conditioning.
It has rarely been the case that any mistake has been made.

Certainly  

Certainly is used indiscriminately by some speakers to intensify every statement. This mannerism is bad in speech and worse in writing.

Character  

Character is often used from a mere habit of wordiness.
acts of a hostile character  
hostile acts

Claim (verb)  

With an object, claim means “lay claim to.” Claim is not a substitute for declare, maintain, or charge.
He claimed that he knew how.  He declared that he knew how.
Clever

*Clever* has a special meaning when applied to horses. A *clever* person is ingenious; a *clever* horse is good-natured.

Compare with/to

*To compare to* is to point out resemblances in highly different objects; *to compare with* is to point out differences in highly similar objects. Life has been *compared to* a drama. Congress may be *compared with* the British Parliament.

Comprise/Constitute

*Comprise* literally means “embrace” or “hold.” *Constitute* literally means “stand together.” A zoo comprises mammals, reptiles, and birds. Animals constitute a zoo.

Consider/Consider as

*Consider*, meaning “believe to be,” is not followed by *as*. *Consider*, meaning “examine” or “discuss,” uses *as*. I consider him as competent. I consider him competent. The lecturer considered Eisenhower first as a soldier and second as a manager.
Contact  As a transitive verb, *contact* is vague. Do not *contact* people; get in touch with them, look them up, meet them, or phone them.

Cope with  *Cope* is an intransitive verb always used with *with*.  
I knew they’d cope.  
I knew they would cope with the problem.

Currently  Used to mean *now*, *currently* is usually redundant; emphasis is better achieved by a more precise reference to time.  
We are currently reviewing your application.  
At this moment, we are reviewing your application.

Data  Like *media*, *phenomena*, and *strata*, *data* is plural and is best used with a plural verb.  
The data is misleading.  
These data are misleading.
Different from/than Since one thing differs from another, the correct usage is different from. Avoid different than. Substitutes for different from include other than and unlike.

Her dog is different than mine.  Her dog is different from mine.  Her dog is unlike mine.

Disinterested/uninterested Disinterested means “impartial.” It is not a substitute for uninterested, which means “not interested in.”
Let a disinterested person judge our dispute.  This person is clearly uninterested in our dispute.

Divided into / Composed of A quartered apple is divided into sections, but it is composed of skin, flesh, and seeds. Composed literally means “placed together.” A play is divided into acts, but a poem is composed of stanzas.
**CSE/ISE 300**

**Strunk and White: Commonly Misused Words**

**Due to**  
*Due to* should not be used for *through*, *because of*, or *owing to* in adverbial phrases. *Due to* means “attributable to” and is used in adjectival phrases.

He lost the game due to carelessness.  
The accident was due to bad weather. Losses due to brush fires cost California more than $1 billion last year.

**Each and every one**  
Advertising jargon that should be avoided.

It should be a lesson to each and every one of us.

It should be a lesson to every one of us.

It should be a lesson to us all.

**Effect/Affect**  
As a noun, *effect* means “result”; as a verb, it means “to bring about” or “to accomplish.” The verb *affect* means “to influence.” The noun *effect* is overused in vague writing about the arts: “subtle effects”, “very delicate effects.”
CSE/ISE 300
Strunk and White: Commonly Misused Words

Enormity  Use *enormity* only to mean “monstrous wickedness.” It is misleading, if not wrong, when used to mean only “bigness.”

Enthuse  Avoid this verb created from the noun *enthusiasm*.

She was enthused about her new car.
She enthused about her new car.

She was enthusiastic about her new car.
She talked enthusiastically about her new car.

Etc.  *Et cetera* literally means “and other things,” but is used improperly to mean “and other persons.” It is equivalent to “and so forth” and should not be used if the reader would be left in doubt about any important items. In formal writing, avoid *etc*.

Facility  *Facility* is overused for hospitals, jails, and prisons.

He has been appointed warden of the new facility.
He has been appointed warden of the new prison.
Fact  Use *fact* only for matters that can be directly verified, but not for matters of opinion. The melting point of lead is a fact, but that California has a wonderful climate is only an opinion.

Factor  *Factor* is a hackneyed word; its expressions usually can be replaced by wording that is shorter and clearer. Her superior training was the great factor in her winning.  She won by being better trained.

Farther/Further  Although commonly interchanged, there is a subtle distinction between *farther* and *further*. *Farther* serves best for physical distances; *further* is best for quantities or time. You can chase a ball farther than another player; you pursue a subject further.
Finalize  Avoid *finalize*, which is a pompous and ambiguous business verb. Does it mean “terminate” or “put in final form”?  

Fix  *Fix* is well established in America as colloquial for *arrange*, *prepare*, and *mend*. Its preferred meanings are derived from its Latin root *figere*, “to make firm” or “to place definitely.”  

Flammable  The common word *inflammable* means “combustable.” Lest some people think it means “not combustable,” safety signs on the backs of trucks say “Flammable Liquid.” Write *inflammable*.  

A mixture of oil and gasoline is highly flammable.  

Folk  The collective noun *folk* is equivalent to *people* and always properly used only in the singular form. The colloquial *folks* meaning “parents,” “family,” or “those present” should be avoided.  

Your folks are here!  

Your parents are here!
Fortuitous  *Fortuitous* means “happened by chance.” It does not mean *fortunate* or *lucky.*
He was fortuitous to fill a royal flush.  He was lucky to fill a royal flush.

Get  The colloquial *have got* for *have* should be avoided in writing. The preferrable form of the participle is *got,* not *gotten.*
He has not got any sense.  He has no sense.
They returned without having gotten any fish.  They returned without having got any fish.

Gratuitous  *Gratuitous* means “unearned” or “undeserved.”
The insult was gratuitous.
He is a man who  Avoid redundant phrases of this common type.
He is a man who is very ambitious.  He is very ambitious.
Vermont is a state that attracts  Vermont attracts winter
winter visitors for skiing.  visitors for skiing.

Hopefully  Hopefully was formerly a useful adverb meaning
“with hope” or “full of hope”. It is now widely used to mean “I
hope” or “it is to be hoped.” Avoid hopefully in your writing. It
offends the ear of educated readers and sounds silly to them.
Hopefully I will leave on the  I hope to leave on the noon
noon plane.  plane.

However  Used first in a sentence, however means “in whatever
way” or “to whatever extent.” Not first, it can mean “nevertheless.”
The road was bearly passible.  The road was bearly passible.
However, at last we got home.  At last, however, we got home.
However discouraging the prospect, they never lost heart.
The words *imply* and *infer* are not the same. Something implied is suggested or indicated, but not expressed directly. Something inferred is deduced from evidence at hand.

**Farming implies early rising.** Since she was a farmer, we inferred that she got up early.

**Importantly** Avoid *importantly.*

More importantly, he paid for the damages.

More important, he paid for the damages.

What is more, he paid for the damages.

**In regard to** *In regard to* is wrongly written *in regards to.* On the other hand, *as regards to* is correct and the same as *in regard to.*

**In the last analysis** Avoid this overused, bankrupt expression.
Inside of/Inside  \*Inside of\* is correct to mean “in less than.” For other meanings, avoid \*of\* after \*inside\*; \*inside\* is correct alone.

Inside of five minutes, I shall be inside the bank.

Insightful  \*Insightful\* should be used only for instances of remarkably penetrating vision. \*Perceptive\* is almost always better.

Your remark was insightful.  \*Your remark was perceptive.\*

In terms of  \*In terms of\* is padding that is usually best omitted.

The job was unattractive in terms of salary.  \*The salary made the job unattractive.\*

Interesting/Funny  These unconvincing words should be avoided in introductions. Say something funny, not that it will be funny.

In connection with the forthcoming visit of Mr. B. to America, it is interesting to recall that he …  \*Mr. B., who will soon visit America, …\*
Irregardless  *Irregardless* is not a word. *Regardless* is the correct spelling. The negative *ir*- is suggested by the words *irregular*, *irresponsible*, and *irrespective*, which lack the negative *-less*.

-ize  Never tack *-ize* onto a noun to form a new verb. Be wary of existing *-ize* verbs. *Fertilize, harmonize*, and *summarize* are useful; *containerize, prioritize*, and *finalize* are not. Prefer *use* over *utilize*.

Kind of/Sort of  These phrases should not be used to mean “rather” or “something like”. Restrict them to their literal senses: “Amber is a kind of fossil resin”; “I dislike that sort of publicity.”

Her brother is kind of handsome. **Her brother is rather handsome.**

Lay/Lie  *Lay* is a transitive verb and must have an object. *Lie* must not. The forms are *lay, laid, laid, laying; lie, lay, lain, lying.*

*A hen lays an egg; a llama lies down.*  **After his new play laid an egg, the playwright went home and lay down.**
Leave/Let  \textit{Leave} is misused as a substitute for \textit{let}.

\begin{itemize}
  \item Leave go of that rope! \quad \textbf{Let go of that rope!}
\end{itemize}

Less/Fewer  \textit{Less} should not be misused for \textit{fewer}. \textit{Less} refers to quantity; \textit{fewer} refers to number. Occasionally, either word may be used, but with different meanings. “His troubles are less than mine” means “His troubles are not so great as mine.” “His troubles are fewer than mine” says “His troubles are not so numerous as mine.”

\begin{itemize}
  \item They had less workers than in the previous campaign. \quad \textbf{They had fewer workers than in the previous campaign.}
\end{itemize}

Like/As  \textit{Like} should not be used for the conjunction \textit{as}. \textit{Like} precedes a noun or pronoun; \textit{as} comes before phrases or clauses.

\begin{itemize}
  \item We spent the evening like in the old days. \quad \textbf{We spent the evening as in the old days.}
  
  \item June smells good, like a baby should. \quad \textbf{June smells good, as a baby should.}
\end{itemize}
Line/Along these lines

Along these lines is allowable but overworked in phrases like “along these lines”. Writers should avoid continued use of line in this sense.

Mr. Jones also spoke along the same lines.
She is studying along the line of French literature.

Literal/Literally

Literally is often incorrectly used in exaggeration.

A flood of abuse
almost dead with fatigue

Loan/Lend

Loan is a noun. The corresponding verb is lend.

Please give me a five dollar loan.
Please lend me five dollars.
Meaningful  
Avoid the bankrupt adjective *meaningful*.

His was a meaningful contribution.  
We are instituting many meaningful changes in the curriculum.  

Memento  
*Memento* is incorrectly spelled as *momento*.

Most/April  
*Most* is not to be used to replace *almost*.

Most everybody  
Almost everybody  
Most all the time  
Almost all the time

Nature  
If used like *character*, *nature* is almost always redundant.  
Also avoid vague phrases like “a student of nature.”

Acts of a hostile nature  
Hostile acts
Nauseous/Nauseated  *Nauseous* means “sickening to contemplate”; *nauseated* means “sick at the stomach”.
I feel nauseous.  I feel nauseated.

Nice  *Nice* is an all-purpose word, normally of indistinct meaning. Avoid it in writing, except to mean “precise” or “fine.”
I had a nice time in the nice weather.  Hers was a nice distinction.

Nor  *Nor* is often used incorrectly for *or* after negatives.
He cannot eat nor sleep.  He cannot eat or sleep.
He can neither eat nor sleep.  He cannot eat nor can he sleep.

Nouns used as verbs  All nouns used as verbs are suspect.
She headquarters in Dallas.  She has headquarters in Dallas.
He chaired the meeting.  He was chair of the meeting.
Offputting/Ongoing Avoid the newfound adjectives ongoing and offputting because they are clumsy and inexact. As a simple test, transform the participles to verbs. Can one offput or ongo?

One/One’s One in the sense of “a person” must not be followed by his or her. One’s is the correct possessive form. One must watch his step. One must watch one’s step.

One of the most Avoid this feeble formula in your writing.

-orienteled Avoid this clumsy, pretentious device.
It is a manufacturing-oriented company. It is chiefly a manufacturing company.
Partially/Partly  

*Partially* is not always interchangeable with *partly*. *Partially* is best used in the sense of “to a certain degree” when speaking of a condition. *Partly* carries the idea of a part of a physical object as distinct from the whole object. The log was partially submerged. **The log was partly submerged.** I am partially resigned to it.

People/Public/Person  

*The people* is not the same as *the public*. *The people* give political support or opposition; *the public* give artistic recognition or commercial success. *People* should not be used with numbers, as a substitute for *persons*. One can say “five persons” or “one person,” but “one people” is not “one person.”

Personalize  

Avoid this pretentious -ize word in your writing.  

a highly personalized affair  

personalize your stationery  

design a letterhead
Personally  

Personally is often unnecessary.

Personally, I thought it was a good book.

Possess  

Avoid using possess simply because it sounds more impressive than have or own.

She possessed great courage.

He was the fortunate possessor of

Presently  

Presently has two meanings: “soon” and “currently.” To avoid ambiguity, use it only when it means “soon.”

She will be here presently.

We are presently reviewing your resume.

We are reviewing your resume now.
Prestigious

*Prestigious* is another vague adjective to avoid.

Regretful

*Regretful* means “full of regret”, but is carelessly used as a substitute for *regrettable*, meaning “must be regretted.”

The mixup was due to a regretful failure in planning. The mixup was due to a regrettable failure in planning.

Relate

*Relate* should not be used intransitively to suggest rapport.

I relate well to Janet. Janet and I agree a lot.

Respective/Respectively

These words usually should be omitted.

Works of fiction are listed under the names of their respective authors. Works of fiction are listed under the names of their authors.
The mile run and the two-mile run were won by Jones and Cummings respectively. The mile run was won by Jones, the two-mile run by Cummings.
Secondly/Thirdly … Do not prettify numbers with -ly. Use first, second, third, and so on.

Shall/Will The future tense normally is expressed by I shall, you will, she will. To express determination or emphatic consent, the uses of shall and will are reversed - I will, you shall, he shall.

So Avoid the use of so as an intensifier: “so good”; “so warm.”

Split infinitive Avoid placing an adverb between a to and its verb infinitive, unless you want to place unusual stress on the adverb.

to diligently inquire to inquire diligently

We hope to soundly defeat our opponents in tonight’s game.

State State should not be used as a mere substitute for say or remark. Restrict state to mean “express fully and completely.”

What did he state at the party? What did he say at the party?

She refused to state her objections.
Stationary/Stationery  

Stationary means “motionless”; stationery means “paper and envelopes to write letters.” Think e for envelope.

Student body  

Almost always replace student body by students.

- a member of the student body: a student
- popular with the student body: liked by students

Than  

To avoid ambiguity, examine any sentence using than (to express comparison) to see if any essential words are missing.

- I am probably closer to my mother than my father.
- I am probably closer to my mother than to my father.
- I am probably closer to my mother than my father is.

Thanking you in advance  

Avoid this phrase. It just says that you will not bother to write again, even if common courtesy suggests that you send an acknowledgement.
That/Which  
*That* is the defining, or restrictive pronoun; *which* is the non-defining pronoun. Avoid reversing the two words.  
The lawn mower *that is broken* is in the garage. (which one)  
The lawn mower, *which is broken*, is in the garage. (extra fact)

The foreseeable future  
Avoid this fuzzy cliché.

The truth is …/The fact is …  
Avoid these bad starts to a sentence. If you have the truth, just state it without advance billing.

They/He or she  
Do not use the plural pronoun *they* when the antecedent is a singular noun, *anybody, somebody, someone*, or a distributive expression such as *each, each one, everybody, every one*, or *many a man*. Use the singular pronoun *he, she, or he or she*.  
Every one of us knows *they* are fallible.  
Every one of us knows *he* is fallible.
They/He or she (continued) Consider these strategies to avoid awkward overuse of *he or she* or unintentional emphasis on the masculine.

Use the plural rather than the singular forms of words throughout. The writer must address his readers’ concerns. Writers must address their readers’ concerns.

Eliminate the singular pronoun altogether. The writer must address his readers’ concerns. The writer must address readers’ concerns.

Substitute the second person for the third person. The writer must address his readers’ concerns. As a writer, you must address your readers’ concerns.
CSE/ISE 300
Strunk and White: Commonly Misused Words

This The pronoun *this*, when used to refer to the sense of the complete preceding sentence or clause, may seem to refer to just the last part, making the meaning ambiguous. Reword to correct.

Visiting dignitaries watched yesterday as ground was broken for the new high-energy physics laboratory with a blowout safety wall. This is the first visible evidence of the university’s plans for modernization and expansion.

Visiting dignitaries watched yesterday as ground was broken for the new high-energy physics laboratory with a blowout safety wall. The ceremony afforded the first visible evidence of the university’s plans for modernization and expansion.
Thrust

This showy noun, with its suggestion of power and hint of sex, is much abused by executives and politicians. Use it sparingly and in its specific technical meanings.
The thrust of his letter was that he was working more hours than he had bargained for.
The point he made in his letter was that he was working for more hours than he had bargained.
The piston has a five-inch thrust.

Tortuous/Torturous

A winding road is tortuous; a painful ordeal is torturous. Both words derive from Latin for “twist.”
With its many turns, the mountain road was torturous.
With its many turns, the mountain road was tortuous.

Transpire

Use transpire only to mean “become known” or “leak out.” Do not use it to mean simply “happen” or “come to pass.”
What transpired yesterday?
What happened yesterday?
Eventually, the account of his villainy transpired.
CSE/ISE 300
Strunk and White: Commonly Misused Words

Try and/Try to  
*Try* takes *to*, the infinitive form of a verb, not *and*.

Try and mend it, please.  
**Try to mend it, please.**

Type  
*Type* is not a synonym for *kind of*.

that type employee  
that kind of employee
I dislike that type publicity.  
I dislike that kind of publicity.
small, home-type hotels  
small, homelike hotels
a new type plane  
a plane of a new design

Unique  
*Unique* means “without like or equal.” There are no degrees of uniqueness.

It is the most unique coffee maker on the market.  
**It is a unique coffee maker.**
The balancing act was very unique.  
**The balancing act was unique.**
The most unique spider lives under water in a bubble.  
**A unique spider lives under water in a bubble.**
Utilize/Use
Prefer simple *use* to the -ize word *utilize*.

I utilized the facilities.        I used the toilet.
He utilized the dishwasher.     He used the dishwasher.

Verbal/Oral
*Verbal* means “of words” and may refer to expressions in writing or in speech. *Oral* means “of mouth” and limits words to those that are spoken. *Oral agreement* and *written agreement* are very precise phrases; *verbal agreement* is less clear.

We reached verbal agreement.    We reached oral agreement.
                                We reached written agreement.

Very
Use the word *very* only sparingly. Where emphasis is needed, use words strong in themselves.
CSE/ISE 300
Strunk and White: Commonly Misused Words

While  Avoid using *while* as a substitute for *although*, *and*, or *but*. Prefer *while* in its literal sense: “during the time that.” Where *while* is used for *and* or *but*, it often can be replaced by a semicolon.

The offices and salesrooms are on the ground floor, while the rest of the building is used for manufacturing. While temperatures reach 90 or 95 degrees in the daytime, nights in the high desert are often cold.

- *wise* The pseudosuffix -*wise* can wrongly be added to any noun, usually with distasteful results: *taxwise*, *pricewise*, *poemwise*, *taffywise*. It is chiefly useful to mean: “in the manner of”: *clockwise*. Avoid the temptation to coin new words by adding -*wise*. 
Worth while/Worthwhile

Not worth while is overworked as a phrase for vague disapproval. Avoid using it. Worth while is correctly applied only to actions. The one-word adjective worthwhile is weak and should be avoided. (oe: while = the while that)

His books are not worth while.

His books are not worth reading.

His books are not worth one’s while to read.

a worthwhile project

a promising project

an exciting project

Would

Would is commonly used to express habitual or repeated action. When repetition is indicated by such phrases as once a year, every day, each Sunday, the past tense without would is better.

He would get up early and prepare his own breakfast before he went to work.

Once a year he would visit the old mansion.

Once a year he visited the old mansion.
CSE/ISE 300
Notes from First Classroom Writing - S13

1. I use the paragraph mark ¶ (pilcrow symbol) to say “Separate sentences here to start a new paragraph”.
2. Avoid vague words like “nice” and non-specific phrases like “a lot of” and “another university”.
3. Avoid abrupt transitions between paragraphs
4. Avoid repeated thoughts, words, and phrases.
5. Do not use any contractions, no don’t, no can’t, and no it’s.
6. Avoid sentences starting with “So”, “Thus”, and “Also”.
7. Avoid most uses of “due to” and all that mean “because of”.
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9. Read, edit, and re-read what you write, preferably after a night of sleep the last time.
CSE/ISE 300

Paper 3 Code Documentation

The final and major paper for this course will be due Tues 7 May, both a printed version submitted at start of class and a single source file (doc or docx) email to lw@ic… with the Subject: line containing 300 paper 3 code. Paper 3 counts for 30% of your cumulative score, which will determine your final course grade of A, B, C, or F. A passing grade is mandatory for graduation.

Your paper 3 must be four to six prose text pages of effective final documentation for a significantly large program that you have written. The code should be 100 to 600 lines that you personally have written and must be included as an appendix to your paper. All the rules for what counts as text in the first two papers apply for paper 3. The code in the appendix and any code quoted in the body of your paper do not count in the minimum of four pages.

Your prose must be interesting to read but must explain your code carefully enough that another professional can take responsibility for it and easily make changes to maintain and improve it.
CSE/ISE 300
Size Requirements for Paper 3

Paper 3 must be at least 4 pages long, excluding lines that do not contain English prose text written by you and excluding the appendices. To be safe on length, aim for 5 pages with about 150 counted lines in 12 font and 1,800 to 2,200 words that count.

Remember that only prose lines written by you count - not tables of contents, tables of figures, section headers, figures, tables, captions for figures or tables, numbered or bulleted lists, blank lines, quoted text, reference to sources, the title for your paper, or your name. Maximum length of text part of paper is 10 pages, including uncounted items. Appendix must not exceed 8 pages: code in appendix may be in a tiny font and 2 or 3 columns. Number code lines; single-space your code. Combine the text and appendix parts of paper 3 into a single .docx file.

However, most of the non-counted items can make your paper more interesting to read and improve your grade. Full text lines must be at least 6 inches wide and contain an average 12 to 15 words. Each full page must have 30 or more lines (whether or not counted) spaced by 1.5, not single-spaced and not double-spaced. Number all pages.
CSE/ISE 300
Suggestions for Paper 3 Contents

In grading paper3, I expect to see a number of factual details that will help a programmer if she has to modify your code:

What are the code’s major function, its inputs and its results?

Who wrote the code, for what initial purpose, and when?

Tersely, what are the major algorithms and data structures? (Do not enumerate every module, like every tree in a forest.)

What are the major limitations of the code, of its internal data structures, and of any structures assumed for its input data?

How thoroughly was the code tested and with what input data (an appendix should list one or more complete test sets)?

What code parts do not yet work? What is needed to fix them?

What portions of the code are particularly tricky and may cause undesired side effects if changed hastily?

What changes would you have made to the code if you had more time to work on it? Why would the changes have improved it?

What special advice do you give anyone changing the code?

Remember to end your paper with a Conclusions paragraph, followed by an Appendix with all the Code and precise References to all your sources.
CSE/ISE 300
Main Parts of Paper 3: 4/2 In-Class Outline
Working Title for Your Paper
Your Name    Today’s date

What was your code’s main function?
What were its inputs and its results?
What programming language did you use?

Who wrote the code (you or you as part of a team?), for what initial purpose or course, and when?

Short outline: what major algorithms and data structures?

Plus short paragraphs on these topics.

What code parts do not yet work? What is needed to fix them?
What portions of the code are particularly tricky and may cause undesired side effects if changed hastily?
What changes would you have made to the code if you had more time to work on it? Why would they have improved it?
What special advice do you have for anyone changing the code?
CSE/ISE 300
Font Samples for Paper 3 Code in Text.

Helvetica
The quick brown fox jumps over the lazy dog.

Times
The quick brown fox jumps over the lazy dog.

Andale Mono 1 i l 0 o 0
The quick brown fox jumps over the lazy dog.

Courier 1 i l 0 o 0
The quick brown fox jumps over the lazy dog.

Courier New 1 i l 0 o 0
The quick brown fox jumps over the lazy dog.

Monaco 1 i l 0 o 0
The quick brown fox jumps over the lazy dog.

Today a sample grade-A coding paper from 2012.
I will merge its pdf with today’s slides on web.