Assignments: General Information

Approach: You'll generally be asked to do persuasive writing (writing to convince) as opposed to simple expository writing (writing to inform) or strictly analytical writing (writing to explain). You'll use both exposition and analysis as you argue and persuade, but papers that merely report information or other people's ideas will not fully satisfy the assignment requirements.

Audience: The assignments require that you write to an intelligent, well-informed but non-specialist audience, people who generally understand the issues yet have perspectives that differ from yours: for example, scientists in a related field of specialization or engineers in a different branch of engineering. Because your readers are not necessarily specialists in your particular field, you'll need to consider how to explain important concepts efficiently. However, since the audience is generally knowledgeable, information alone is unlikely to be convincing; you'll need to offer coherent, original interpretation to fulfill the assignments' requirements. The idea of an oppositional or skeptical audience that is also knowledgeable is intended to keep your writing argumentative; writing to J.Q. Public tends to create simple exposition.

Citation: Whenever you use ideas or information from sources, you are required to cite appropriately in the text and to list sources in correct format on a Literature Cited page at the end. You should familiarize yourself with an appropriate source, either on-line or in print: e.g. The CBE Style Manual, The APA Style Manual, or The Chicago Manual of Style.

Note that all ideas, as well as direct quotations and information, taken from sources require citation unless the ideas are considered common knowledge; when in doubt, cite. Failing to acknowledge an idea, wording, or information taken from a source may constitute plagiarism; respect for intellectual property and honesty—as well as the desire to avoid heavy penalties—should insure your careful attention to attribution.

Duplication of assignments: You may select different topics for your papers in this course, or you may write papers on the same topic. However, papers should not repeat more than a page of text or a few figures from previous papers, so if you stay with one topic, you'll need to think about different aspects of the topic in order to differentiate the papers. For example, a position paper might argue against the use of a particular metal for building certain types of structures, the proposal might suggest a new way to test metals for that structural use, and the research paper might review the literature that supports the use of an alternative metal for that structural purpose. Ideally, any overlapping background information that appeared in all three papers would be revised to fit the particular context of each paper.

Likewise, if you have a similar assignment due in another class, you may want to use the same paper in both classes. (The suggested page limits noted on the syllabus are very flexible: they are meant to be general guidelines, so feel free to exceed them.) You will need to check with me and also to obtain permission from the other teacher. Using your work in both classes without such permission constitutes plagiarism under university guidelines. Also, consider this option carefully: if the assignments aren't very similar, you may limit your success in both classes by turning in a paper that fails to fully satisfy either class's requirements. I'd like a written request to use this option, telling me the details of the other assignment: what it is, whom it's for, if the other teacher has approved, when it's due, and any other pertinent information. A copy of the other teacher's assignment handout is much appreciated.

Formats: Using the appropriate conventions is an important part of technical writing, so you should familiarize yourself with appropriate formats. Using a good handbook is a very efficient way (The Mayfield Handbook of Technical and Scientific Writing is an especially good resource because it describes forms widely used at MIT as well as elsewhere). Alternatively, you can learn about formats by comparing and contrasting examples of successful papers. You should follow standard writing conventions regarding spacing, paragraph indentation, etc.; your grammar text may be a good resource for these. Because I want to see if you know standard spacing rules, I'd prefer that you avoid right-justifying your text.

Research: Most technical writing requires the use of sources. Research may also help you to have confidence in your views as well as support for them, and it may also enable you to understand the views of those who may disagree with you. Because you'll have to develop an informed opinion for these assignments, you should select potential subjects early in the semester so you have sufficient time to do adequate research. Consider the probability that key sources will be unavailable, nonexistent, incomprehensible, or inconsistent with your thesis if you wait until the last minute to find them. Also, read the research paper assignment carefully so you use the appropriate types of sources for each sort of research paper: for example, the review paper requires that you use only scientific papers and review papers from journals while the argumentative papers can use any type of source that you think might be convincing or useful.

Subject: All the papers must focus on scientific or technical material. Note that seemingly unscientific subjects can become appropriate because of the slant the writer takes. The value of computers in education, for example, may be technically slanted, or it may be a sociological debate. Likewise a discussion of euthanasia can be ethical, legal, or scientific depending on the angle of discussion. Ask the class to help you decide if you're in doubt about how scientific or technical your topic is.