**Astroessay Advice**

As the syllabus states, the Astroessay will give you a chance to express your opinion on the principal topic of discussion this semester:

"*Do Extraterrestrial Technical Civilizations Currently Exist in Our Galaxy?*"

The basic ground rules are simple. This essay should be a relatively concise, logical statement of your opinion, including scientific arguments, facts, and references to support your view. Length should be two to four pages, typed (or word-processed) and double-spaced, using a 10- or 12-point font. Typographical errors, misspellings, grammatical errors, and general illegibility or incoherence will reduce your score, of course. Essays written without regard for the scientific principles discussed in class and those that fail to display a sufficient degree of critical thinking will also receive lower scores.

Occasionally these simple rules have been misunderstood or misinterpreted; in order to minimize this problem – and maximize your score on this project – let me spell things out even more explicitly:

- The topic is specified above; stick to it. You are not to write a report on Mars or *Star Trek* or cosmology or your favorite constellations. Pay special attention to the meanings of the words in the topic. If you are not sure about this, please ask me.

- This is a *science* class, and your essay should reflect that. This is not to be a paper expounding your own particular *philosophy* of the universe, aliens, and the like unless you can support it with scientific facts and reasoning. And if, by the end of the term, you find that you do not buy *any* of the scientific facts and reasoning that have been presented in class, and you write your essay expressing this view, you will not receive much credit. Again, this is a *science* class for which you are receiving *natural science* *general education credit*, and I expect you to learn some *science* and demonstrate your knowledge of *science* in this paper.

- Yes, this is an essay in which you give your opinion, but there is more to it than that. In order to attain a good score you must back up your opinion with *scientific facts* and *reasoning*; simply stating your opinion is not enough. Nor is it sufficient to list scientific facts without showing *how* they support your opinion; the same fact can often be used to support *opposite* views.

- Chances are good that your essay – at least the first draft – will contain some errors: typos, misspellings, bad grammar, faulty punctuation, etc. Turning in a paper with lots of errors will lower your score. Now that you are in college, you are expected to be able to write well, not only in your English classes but in *all* of your subjects. When you graduate and look for a job, you will need to demonstrate your command of the written language in your applications; failure to do so may keep you from getting the job you want. Employers prefer applicants with good writing skills. Whether you like it or not, you will be judged by the way you write.

There are ways to deal with these problems and you should utilize them. Most word processors have spell checkers and/or can look for mistakes in grammar and suggest rewordings; learn to use these aids. Another solution is to give your paper (and a red pen) to a friend who is fluent in English and is not afraid to mark your errors. (If you wait for *me* to mark them, it will count against you.) And there are writing classes you can take and handbooks you can buy to help you learn the rules and practice them.

- You may not know which side to take; it may not be easy to figure out which side has the better arguments. There is a solution to this problem as well. We spend much of the term discussing the Drake equation, which provides a method for determining your personal answer to this question, even though it may not be obvious to you. Don’t be afraid to use it. And if you do incorporate the Drake equation into your essay, please use the version that is explained in your text, rather than something you find on the web.