1. GENERAL INFORMATION

INSTRUCTOR: Dr. Patricia A. DeLeon, Trustees Distinguished Professor
OFFICE: 219 McKinly Lab
OFFICE HRS.: Best time is immediately after class in the classroom. Other times by appointment.
TELEPHONE: Office: 831-2249
Home: 834-7790 (Please do not call after 9:30 p.m.)
E-MAIL: pdeleon@udel.edu
Fax: 302-831-2281
URL: http://www.udel.edu/bio/people/faculty/pdeleon.html

2. OBJECTIVES OF THE COURSE:

This course will examine the strategies and tools used in studying human variation. The student will be introduced to the different levels of organization of human genetics as s/he appreciates that our understanding of human genetics is sometimes best served by thinking in a deterministic way (e.g. mRNA transcription) and at other times in a probabilistic way (e.g. independent assortment), and still in other times in a humanistic way (e.g. ethical issues in screening and counseling). Yes, we will give some attention to the “human” in Human genetics. As a 600 level course, a major goal is to acquaint the student with the primary literature and the current state of knowledge in the field. Because of the extensive material in the field and the limited time at our disposal, arbitrary decisions have been made in the choice of topics for discussion. (Alas, some of you might not have your pet topic discussed!). Finally, a secondary objective is to help the student improve in communicating effectively, orally as well in writing.

The prerequisites for BISC 693 are 300/400 level courses in Genetics and in Molecular Biology. However, since the enrolled students have a range of backgrounds, I have assigned a REQUIRED TEXT, Human Molecular Genetics by Strachan and Read, THIRD Edition (2003) published by Garland Science, which is an excellent text and which will provide the necessary background and perspectives in the areas to be covered.

The main area of consideration will be research papers and review articles, most of which are from the current literature. The assigned papers should be read in advance of coming to class where most of them will be presented in detail. Others will be assigned for ORAL PRESENTATION by students. You will need to read a paper several times before you can obtain
its full contribution or lack thereof. I suggest that you read through the paper first to get an overview and to see where things are going and then you re-read it more slowly and carefully for the important details. For some articles you will be asked to turn in a SUMMARY in which the important points are conceptualized. However, you should get in the habit of doing this on your own for all the papers, unless you are asked to read the ABSTRACT only. This is best done soon after the paper has been discussed in class, a practice that will increase your ability to grasp information from the literature. Each student should acquire a copy of all the papers most of which can be downloaded from e-Journals in our library resources, using the archive option.

3. GRADING:

Grades will be determined as follows:

10% Class Participation
30% Type-written Reports (3)
30% Midterm Exam
30% Final Exam- covering the second half of the course.

The grade for Class Participation will be assigned in the following manner: i) for helping to discuss and explain required readings and answering questions in class, plus any homework assignment; ii) performance on occasional unannounced mini or “I should have thought to look that up” quizzes; iii) for some of the articles you will be asked to prepare a SUMMARY DIAGRAM before you come to class; iv) oral presentation. Depending on the size of the class you will most likely be making presentations in pairs or in small groups.

4. TYPE-WRITTEN REPORTS

Three type-written reports summarizing the major points discussed in papers in class will be required. The dates (in March, April, and May) for these reports can be found in the syllabus. Each report should not be longer than two sides of the standard 8 ½ x 11 inch page and should be SINGLE SPACED with no more than 53 lines per page. Every tenth line should be numbered in the left margin and the font size should not be small than 11 points.

The purpose of the reports is to give you an opportunity to separate the essence from the veneer and express what you think are the important findings from the readings. It will be important for you to organize your thoughts and express them succinctly as you integrate material from disparate sources into a cohesive story. This should provide a means for you to improve your writing skills.
You will be required to use the first 1½ page of each report to present the integrated facts of the papers. The last ½ page of each report should be devoted to the design of an experiment to further investigate any aspect of the material that you find particularly important or fascinating. You will need to a) explain why it is important, and b) be creative in speculating about what might be going on. For this EXPERIMENTAL SECTION you MUST select at least one paper that DOES NOT APPEAR on the reading list but may have appeared in a) the discussion or reference section of an assigned paper, or b) a paper that you have prior knowledge of or that you may locate by searching PUBMED OR MEDLINE. You will need to attach a copy of the first page of that paper(s) to your report, in which you will incorporate it and discuss it in the context of the material presented in the first 1½ page.

4. INSTRUCTOR’S GOAL AND PHILOSOPHY: My goal is to create a learning environment that will encourage students to realize their maximum potential. I truly believe in the axiom which says “the greater the effort, the greater the reward” and will strive to provide you with a challenging experience to elicit your very best. Consequently, the grade you will receive in this course will be one that has been richly earned through disciplined hard work. Hopefully, it will be a grade of which you will be proud.

5. NOTE: I reserve the right to change deadlines, classroom procedures, and policies if it becomes necessary to do so. Any changes will be announced in class and/or via email, and it will be your responsibility to be aware of them.

6. A FINAL POINT TO REMEMBER

Be the best that you can be and remember that in the game of life the scorer counts not whether you win or lose, but how you play the game.

To end I borrow four lines of 20th century poetry (Eliot 1963 “Little Gidding”):

We shall not cease from exploration
The end of all our exploring
Will be to arrive where we started
And know the place for the first time.