CLFS 609I Endocrinology

Course Instructor
Dr. Tammatha O’Brien
On-Line Office hours: Wednesdays 7:30-8:30 pm
www.elms.umd.edu faculty information tab

Course Description
This course will introduce the normal function, anatomy and physiology of the endocrine system of the human body.

Recommended Textbook

Web-based Information
http://elms.umd.edu
Use of the Enterprise Learning Management System or Blackboard is mandatory for students in CLFS 609I as discussion material as well as lecture material will be found on the website. Everyone who has a University ID and password has a Blackboard account. Other instructions can be found on the entry page. Please contact OIT with problems logging on to Blackboard. Elms-help@umd.edu

Method of Evaluation
Competency of course material will be assessed by participation in on-line discussions, problem solving of case studies, and group presentations throughout the semester will be considered in rendering a final grade for this course. **While many projects in this class will be handed in as a group, most of the grade for these projects will be assessed through your individual effort, over 75% of your grade is based on your individual contributions** Please note that out of the 425 total point available, 323 points or 76% of your grade is based on your individual contributions.

Honor Code
The Code of Academic Integrity of the University of Maryland will be enforced in this course. Any student found breaking any aspect of this code will be reported to the Honor Council. The Honor Council will have the option expulsion for any breach of the code. http://www.gradschool.umd.edu/catalog/academic_record.htm#4

Acts of dishonesty include:
**Cheating:** Intentionally using or attempting to use unauthorized materials, information or study aids in any academic exercise.
**Fabrication:** Intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
**Facilitating Academic Dishonesty:** Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.
**Plagiarism:** Intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise.
Responsibilities and Expectations
Students and instructors benefit from your active involvement in all discussion activities; therefore participation is required for this class discussions and a major portion of all grades is your individual, meaningful contributions. Failure to participate in scheduled discussions will result in reduction of your final grade with the potential for failure of this course.

Professionalism
There is an expectation that students demonstrate professionalism at all times. This will be assessed both during all interactions within the on-line forum. Should issues of concern arise, they will be addressed by the instructor to enhance your professional development. Significant issues may be referred to the student’s advisor and/or the academic standing committee.

The final grade for this course will be based upon the following:
Two Group PowerPoint projects, 50 points each. The first one will be from a list of topics about current research. General topics you may write about for your first presentation are:
- Hormones and Obesity, Hormones and Cancer
- Hormones and Behavior
- Environmental Endocrine Disruptors
- Hormones and Stress
- Hormones and Gender
The second presentation will be from a topic your group decides on that deals with a current issue and research in endocrinology. You must have the topic approved by me before you begin working in your project.

You will create PowerPoint lectures that you will present to the class for each project. You will need to incorporate current research and primary literature in your presentation. You may not use encyclopedia or on-line references unless they are a government we-page, you must cite recent (less than 5 years old) peer-reviewed journal articles.

Six case studies, 40 points each. Each group will be permitted to select the endocrine disorder you wish to perform your case study on based on the topic covered that week. For example, when we are covering the adrenal glands, you may pick any endocrine disorder as related to the adrenal glands. You must have your disorder approved by me before you begin your case study. • You will not be given credit for quoting or simply “copying and pasting” contributions and may be taken to the Honor Council for such actions; you need to properly paraphrase all sources.

Critique Paper, 25 points. Near the end of the semester, you will be required to review any one of your classmates PowerPoint presentations and critique the project.

Individual project, 60 points. You will create a presentation using PowerPoint that covers any on one of the topics you did not do your group project on. You will design a presentation that that you would use to teach a class of high school aged students. The project will be on any topic you did not do for your first group project. The grade will be based on the following:
<table>
<thead>
<tr>
<th>Assignment</th>
<th>Total Points</th>
<th>Individual Contribution</th>
<th>Group Contribution</th>
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</table>
| PowerPoint Presentation #1          | 50           | • Up to 15 points for your individual contribution to the project (as monitored as meaningful on-line contributions through Blackboard).  
• Up to 20 points will be given for posting a comprehensive rough draft of your portion of the presentation by midnight Wednesday of the week the assignment is due. (2 points deducted or every 12 hours the assignment is posted late after the deadline) | Up to 15 points will be assigned for the final project based on: posting by the due date, depth of background discussion of subject matter, images used, how well the presentation is organized and presented, how well the topic was addressed, use of current research and literature, future direction of research, controversies in the field, if the presentation flows in a clear logical fashion, comprehensive reference section. |
| PowerPoint Presentation #2          | 50           | Same as PowerPoint Presentation #1                                                                                                                                                                                          | PowerPoint Presentation #1                                                                                                                                                                                                                                                                                                                                 |
| Case study #1                       | 40           | • You will be given up to 15 points for your individual contribution to the project (as monitored as meaningful on-line contributions through Blackboard with references).  
• Up to 13 points will be given for posting your individual contribution as a rough draft of the case study by the assigned deadline. (1 point deducted or every 12 hours the assignment is posted late) | Up to 12 points for your groups ability to:  
• Explain and discuss what the cause of the disease/condition is  
• Give a sample patient, name, age, gender and any other factors that would make this person a likely candidate to be inflicted by this disease  
• Explain what the underlying molecular cause is for the symptoms are observed with this disease (for example, why do people with diabetes mellitus often have high blood pressure?)  
• List all normal values expected for tests performed and how your patient's values deviated from the normal values  
• List and explain follow-up tests that should be performed to confirm you diagnosis  
• Discuss recommended standard course of treatment for the patient. State conditions (i.e. obesity, pregnancy, medications) that may complicate the patient's treatment  
• Research current literature to find new treatments or research available or that may be available in the near future  
• Cite all references, have a complete reference page (you may not use encyclopedias or |

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| Case study #2 | 40 | Same as Case study #1 | Same as Case study #1 |
| Case study #3 | 40 | Same as Case study #1 | Same as Case study #1 |
| Case study #4 | 40 | Same as Case study #1 | Same as Case study #1 |
| Case study #5 | 40 | Same as Case study #1 | Same as Case study #1 |
| Case study #6 | 40 | Same as Case study #1 | Same as Case study #1 |
| **Critique Paper** | **25** | This is a 1-2 page typed paper discussing how well you feel the group discussed the following (up to 15 pts): The depth of background discussion of subject matter, Images used, How well the presentation is organized and presented, How well the topic was addressed, use of current research and literature, Future direction of research, controversies in the field and if the presentation flows in a clear logical fashion. You will also be graded based on your recommendations for improving the project. (up to 10 points) |
| **Individual Project** | **60** | • Handing in the rough draft on time (8 pts) (1 point deducted or every 12 hours the assignment is posted late after the deadline)  
You will project will be assessed on (up to 34 pts): depth of background discussion of subject matter, images used, how well the presentation is organized and presented, how well the topic was addressed, use of current research and literature, future direction of research, controversies in the field, if the presentation flows in a clear logical fashion, comprehensive reference section  
• Handing in the final project on time (8 pts) (2 points deducted or every 12 hours the assignment is posted late after the deadline)  
• How well your project is geared to its target audience (up to 10 points) |
| **Total Pts** | **425** | **323** | **102** |

90% and above = A  
80-89.9% = B  
70 and below = C  

+- will be assigned when and if necessary
One last note… Hints for academic success

To be successful in this course you need to think about the material, integrate it, and put it all together. That is why we advocate doing part of your studying with small groups of students. Try to take the time to try and explain the concepts to yourself and to try and put ideas together. For example, we will discuss several different topics under the general heading of tropic hormones. It is going to be your responsibility to see how these come together. Ask yourself how the parts are interrelated and how they interact. If you cannot explain every topic to yourself, then you do not understand the material. Study groups work the same way, but they challenge you even more since you have to explain ideas and concepts, not just facts, to others. In effect, you are teaching the material. If you don't understand the material yourself, you cannot teach it to others. Keep in mind that study groups don't have to include the “brains” of the class. Each of you knows and understands different material, and you can share this no matter how good the students in the group are, as long as you have students of different knowledge levels.

Lecture Schedule

Please enter each discussion forum reading through the assigned chapters, printing, and reviewing Power Point slides from Blackboard.

The instructor may alter the course schedule and experiences when deemed necessary for the accomplishment of the course objectives. With notification, the instructor reserves the right to alter this syllabus to best meet the needs of the students in the class. All lecture slides are posted on Blackboard.

Lecture Schedule

<table>
<thead>
<tr>
<th>Date/Week</th>
<th>Topic</th>
<th>Text Ch</th>
<th>DUE</th>
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<tbody>
<tr>
<td>#1 Feb 28</td>
<td>Overview of Endocrine Physiology - Background in cell biology, physiology and homeostasis - Chemical messengers - Interactions and Receptors</td>
<td>1-4</td>
<td>Topic for the first presentation due by midnight Sunday</td>
</tr>
<tr>
<td>#2 Mar 5</td>
<td>Overview of Endocrine Physiology - Second messengers - Endocrine glands and hormones - Mechanisms of Hormone Action and regulation - The Hypothalamus</td>
<td>5-7</td>
<td>Case study #1 Rough draft by midnight Wednesday Final version due on Sunday</td>
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<tr>
<td>#3 Mar 12</td>
<td>The Hypothalamic-Pituitary Axis - The Anterior &amp; Posterior Pituitary Hormones - Hypothalamic–pituitary Disorders</td>
<td>5-8</td>
<td>Case study #2 Rough draft by midnight Wednesday Final version due on Sunday</td>
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<tr>
<td>#4 Mar 19</td>
<td>The Adrenal Glands Development and Morphology - Intro to the Adrenal Glands and Hormones - Cortisol and Stress - Disorders of the Adrenal Glands</td>
<td>14-15</td>
<td>Case study #3 Rough draft by midnight Wednesday Final version due on Sunday</td>
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<td>#5</td>
<td>Mar 26</td>
<td>The Thyroid Development and Morphology - The Thyroid Glands and Hormones - Receptors and Disorders of Thyroid Function</td>
<td>13</td>
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<tr>
<td>#6</td>
<td>Apr 2</td>
<td>Calcium Regulation The Importance of Calcium - Calcium Homeostasis - Parathyroid Hormone (PTH)</td>
<td>9</td>
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<tr>
<td>#7</td>
<td>Apr 9</td>
<td>Calcium Regulation The Importance of Calcium - Calcitriol and Calcitonin - Disorders of Calcium Homeostasis</td>
<td>9</td>
</tr>
<tr>
<td>#8</td>
<td>Apr 16</td>
<td>Regulation of Digestion and Appetite - Metabolism and Digestion - Gastrointestinal Hormones</td>
<td>10-12</td>
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<tr>
<td>#9</td>
<td>Apr 23</td>
<td>Regulation of Glucose and Metabolism - Morphology and Functions of the Pancreas - The Pancreatic Hormones - Glucose Metabolism</td>
<td>10-12</td>
</tr>
<tr>
<td>#10</td>
<td>Apr 30</td>
<td>Reproductive Endocrinology - Primary Sex Determination and Differentiation - Male/Female Reproductive Physiology - Fertilization to Birth</td>
<td>16-19</td>
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<tr>
<td>#11</td>
<td>May 7</td>
<td>Individual presentations</td>
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<tr>
<td>#12</td>
<td>May 14</td>
<td>Individual presentations</td>
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