Time: Wednesdays, 4:55PM-7:15PM

Instructor: Dr. Nataliya Galifianakis
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Office hours: Mondays 3:00-4:00 pm, Brown building, Room 759.

Course Overview
During the semester, we will discuss how normal physiological processes of the human body are disrupted by disease. We will cover the cellular and molecular basis of physiological disorders such as the triad of metabolic syndrome (obesity, hypertension, and diabetes), and discuss how diseases such as cancer affect and interact with physiological systems. Class time will be a combination of lecture, discussion, and recitation.

Learning Objectives
To develop an understanding of the cellular and molecular basis of the metabolic disorders; to sharpen the critical thinking skills by reading and analyzing recently published primary research literature; to gain skills in giving an effective peer-review feedback; to learn how to lead a scientific discussion, design and present a literature-based research project.

Prerequisites
This is an advanced course. Required prerequisite is an undergraduate level physiology course or instructor’s permission.

Textbook:
There is no required textbook assigned for this course; review articles and research papers covering the topics of the lectures will be posted in Resources folder on NYU Classes.

Schedule:

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<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>PAPER DISCUSSION</th>
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<tr>
<td>Sep 2</td>
<td>Regulation of Metabolism</td>
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<td>Sept 16</td>
<td>Metabolic Syndrome: Obesity, insulin resistance</td>
<td>Paper 1</td>
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<td>Sept 23</td>
<td>Metabolic Syndrome: The Role of Microbiome</td>
<td>Paper 2</td>
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<td>Sept 30</td>
<td>Metabolic Syndrome: Circadian Rhythms and Sleep</td>
<td>Paper 3</td>
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<td>Oct 7</td>
<td>Review</td>
<td>Paper 4</td>
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<td>Oct 14</td>
<td>MIDTERM</td>
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<td>Oct 21</td>
<td>Cancer Metabolism</td>
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<td>Oct 28</td>
<td>Immunometabolism</td>
<td>Paper 5</td>
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<td>Nov 4</td>
<td>Cancer Immunotherapy</td>
<td>Paper 6</td>
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<td>Nov 11</td>
<td>Metabolic Syndrome and Cancer</td>
<td>Paper 7</td>
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<td>Nov 18</td>
<td>Review</td>
<td>Paper 8</td>
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<td>Nov 25</td>
<td>FINAL</td>
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<td>Dec 2</td>
<td>Project Presentations</td>
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<td>Dec 9</td>
<td>Project Presentations</td>
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Research paper readings
Primary research papers from the recent scientific literature will be discussed in class. Your participation in the discussion is required and will be assessed qualitatively and quantitatively.

Assignments
Before each meeting that discusses a research paper, you will write its short (500 words) summary and submit it online through Assignments on NYU Classes. The guidelines for writing the assignment will be posted in Resources -> Guidelines folder on NYU Classes. The deadline for the assignment submission will always be at 12pm, noon on the day of the discussion. The assigned papers will be posted in advance and early assignment submissions are encouraged. Late assignments will not be accepted under any circumstances. To receive a full credit for the assignment you will be required to review three assignments from your class members by Saturday of the same week. The assignment grading rubrics and some tips for giving an effective peer review feedback will be posted on NYU Classes.

Student-led scientific paper discussion.
Each discussion of the assignment paper of the week will be led by a group of students (2-3 students). The tips for leading the discussion will be posted on NYU Classes. The grade for leading the discussion will be applied towards that week assignment instead of the written summary and peer review submission. The sign-in sheet for leading the discussions will be distributed through Doodle poll at the beginning of the semester.

Projects.
As part of the course, you will design and complete a project that investigates a topic related to the course. The topic of the project with justification would have to be submitted for approval through the Assignments on NYU Classes by 12 pm, noon on October 16th. Your findings will be presented at the end of the semester. The presentations will be assessed by the instructor as well as peer-reviewed by the class. The full guidelines for the presentations and grading criteria will be posted on NYU Classes.

Attendance/Participation.
Attendance and punctuality are required. Chronic tardiness will result in a reduction of the grade. Unexcused absences will result in a loss of the attendance grade. If you miss a discussion session, you will receive a zero for participation. In case of illness or critical emergency situation your absence can be excused. To be excused, you must notify the instructor about your absence as early as possible and provide the instructor with written documentation from a licensed professional (physician, NYU Health Center, etc.) on your return from the absence.

Exams.
There will be two exams. Each of the exams will be based on the material of the lectures and the assigned research papers. Both exams will be a closed book, no notes. There will be no make-ups. Please, note all exam dates and arrange your travel plans accordingly. In case of serious illness or personal crisis rescheduling of the exam will require presenting supporting evidence (detailed doctor’s note, hospital admission documents, etc.). If the absence is documented, the make-up exam will be administered at the discretion of the instructor.

Grading.

Midterm exam – 25%
Final exam – 25%
Assignments – 20%
Project – 20%
Participation/Attendance - 10%
Final grade distribution:

- **A** 95% and higher
- **A-** 90-94.9%
- **B+** 87-89.9%
- **B** 83-86.9%
- **B-** 80-82.9%
- **C+** 77-79.9%
- **C** 73-76.9%
- **C-** 70-72.9%
- **F** <70%

**Syllabus change policy**
This syllabus is a guide for the course and is subject to change with advance notice. Any change will be posted on NYU Classes. Announcement will be made in class (where possible).

**Disability Disclosure Statement.**
Academic accommodations are available for students with disabilities. The Moses Center website is [www.nyu.edu/csd](http://www.nyu.edu/csd). Please contact the Moses Center for Students with Disabilities (212-998-4980 or mosescsd@nyu.edu) for further information. Students who are requesting academic accommodations are advised to reach out to the Moses Center as early as possible in the semester for assistance.

**Statement on academic integrity**
NYU regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The Graduate School of Arts & Science is committed to enforcing the NYU Policy of Academic Integrity and will pursue cases of academic dishonesty according to the College of Arts & Science Academic Integrity Procedures.
Any deliberate borrowing of the ideas, terms, statements, or knowledge of others without clear and specific acknowledgment of the source is intellectual theft and is called plagiarism.
The Graduate School of Arts & Science guidelines and Honor Code are available online at [http://gsas.nyu.edu/content/nyu-as/gsas/about-gsas/policies-and-procedures/gsas-statement-on-academic-integrity.html](http://gsas.nyu.edu/content/nyu-as/gsas/about-gsas/policies-and-procedures/gsas-statement-on-academic-integrity.html)