

## Advanced Nutrition Macronutrients: Readings (11:709:402)

Fall 2023

**Teaching Assistant:** Matthew Selby (Contact email: [mls450@connect.rutgers.edu](mailto:mls450@connect.rutgers.edu))

**Section 01:** Monday 2:00-3:20 in RAB-207 (Ruth Adams Building, 131 George St, New Brunswick NJ 08901)

**Section 02:** Monday 3:50-5:10 in Institute for Food, Nutrition, and Health-205 (IFNH-205) (96 Lipman Drive, New Brunswick NJ 08901)

The first class will be on **Monday, Sep 11<sup>th</sup>, 2023**

**Office hours:** Available upon request. If you would like to arrange a meeting, email Matt with a few times that work for you.

**Contact:** Contact Matt by email at [mls450@connect.rutgers.edu](mailto:mls450@connect.rutgers.edu). For prompt responses, include 11:709:402 at the end of the subject line.

**All students must also be registered for the lecture portion of this course, Advanced Nutrition Macronutrients (11:709:400).**

### Objective

The purpose of this course is to utilize a small classroom environment to discuss and review problems and study questions based on the material covered in Advanced Nutrition lectures each week. This course is intended for students who feel that their background and understanding of biochemistry limit their achievement in the main course. Students are expected to come to each class meeting prepared to ask questions and participate in topic reviews.

### Attendance & Participation

Attendance and participation are mandatory during class. If you have a true scheduling conflict, please email the TA to discuss the matter.

### Course Material

Materials will be accessible on the Canvas sites (11:709:402:01&02 RDGS MACRONUTRIENTS)

### Homework

*Written Work:* Homework will be posted on Canvas (in Assignments tab) by every Tuesday covering the previous week's lecture materials. Homework should be submitted in *Word* document in Assignments tab **by Monday at 2 PM**. In preparation for class discussion, you should answer all questions, and bring a copy of your answers to class. Questions that are **bolded** will be graded as part of the homework assignment. Each homework will account for 5 points. Because homework is discussed in class and an answer key is posted after the assignment is due, homework must be completed prior to class for full points. Assignments turned in late will be docked 2 points. Missing class and failing to turn in an assignment will get 0 points. Refer to the schedule below for due dates.

*Artistic work:* Turning words on a page into an *illustration* is one of the best ways to learn material, so part of your weekly assignment is to turn draw a diagram illustrating a concept from lecture. It can be any concept you want, simply submit your masterpiece on Canvas to earn 5 points. An example from Matt's notes is shown in **Figure 1** at the end of the document.

*Extra credit:* Extra credit opportunities for the 11:709:402 will be made available as Matt sees fit, or when inspiration for more learning opportunities strike him. Note that extra credit is *only* offered for 11:709:402, and not the lecture portion of the class.

### Plagiarism

Plagiarism of any kind will not be tolerated. This class is for **your benefit** and cheating on material just cheats yourself. All submitted homework assignments must be in your own words and include a proper citation of your sources when appropriate. Incorrect use of someone else's intellectual property will result in a score of 0, and will be reported to the instructors and an Academic Integrity Facilitator.

**Grading (% of total grade)**

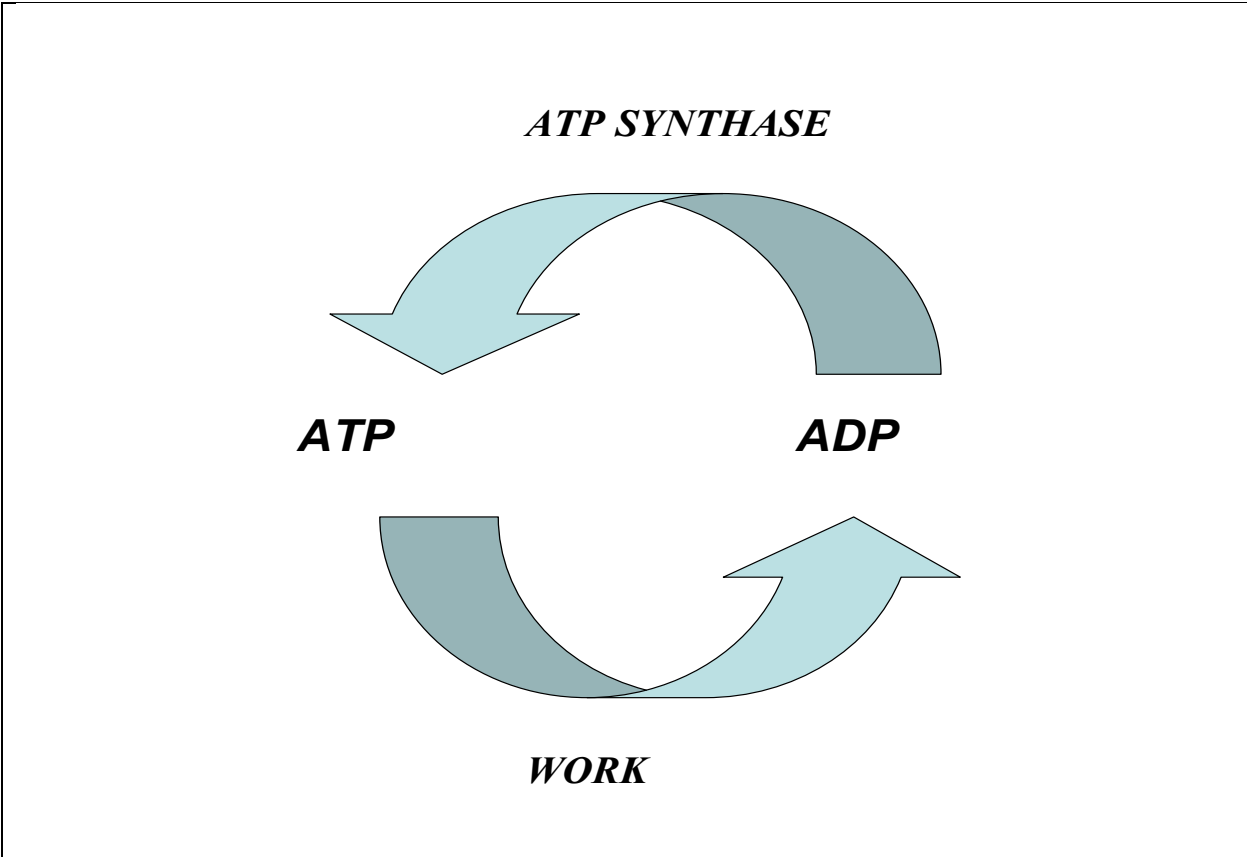
Homework 64%

Participation and Attendance 36%

	Points Each	Total Points	<b>Grading:</b> A: 171-190 B+: 165-170 B: 152-164 C+: 146-151 C: 133-145 D: 114-132 F: 0-113
<b>Participation + Attendance (14 classes)</b>	5	70	
<b>Homework (12)</b>	10	120	
<b>Total (Final grades will be rounded appropriately)</b>		190	

**Tentative schedule (subject to change)**

Date	Lecture(s) covered
Sep 11	Carbohydrates, Fiber, & HMOs Digestion/Transport/Regulation/Glycolysis 1
Sep 18	Glycolysis 2/Pentose Shunt/PDHC Tissue specific metabolism/TCA Cycle
Sep 25	Oxidative Phosphorylation/Glycogen Gluconeogenesis/Exam Review
Oct 2	Dietary Protein: Quantity and Quality
Oct 9	B6/Non-protein nitrogen metabolism Non-protein nitrogen continued/Protein turnover
Oct 16	Interorgan amino acid flux 1/Gly/BCAA Interorgan amino acid flux 2/Glut/GLN
Oct 23	Introduction to Lipids
Oct 30	Digestion and Absorption – Part I + II
Nov 6	Lipoproteins Anabolic lipid metabolism
Nov 13	Catabolic lipid metabolism Cholesterol
Nov 20	Lipids – CHD Part I + II Exam Review
Nov 27	No Class
Dec 4	Nitrogen Excretion Starvation/Exercise
Dec 11	Diabetes, Obesity, Metabolic Syndrome



**Figure 1.** An example of a figure from lecture. The idea behind the drawing assignment is to slow down and engage with the course content to figure out what it really *means*. It is also important to always read figure captions; for example, by reading this caption, you know that if you email “I can’t wait to learn about metabolism this term!” to Matt, you can get 3 extra credit points in 11:709:402 (not transferrable to the lecture class).