Syracuse University Nutrition Science and Dietetics Programs

NSD 466 Nutritional Biochemistry II Spring 2020

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Office Monday 1:00 p.m. – 2:00 p.m. Hours Thursday 1:00 p.m. – 2:00 p.m.

And by appointment

Teaching Nick Marino Office TBD

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Catalog Course Description

Metabolic processes of the body. Interrelationships and interdependence of nutritional factors.

Additional Course Description

Prerequisite/Corequisite

NSD 225 AND NSD 456 AND BIO 216 AND BIO 217

Audience

Upper division undergraduate students

Credits

3

Course Fees and/or Costs

none

Learning Objectives

After taking this course, students will be able to:

- Identify the key hormones for maintaining energy homeostasis
- Describe and explain the responses to stress and stress adaptations
- Understand, describe, and explain the role of diet in inflammation
- Understand the role of cytokines in stress adaption and inflammation
- Describe and explain the integration and regulation of metabolism during exercise and acquire basic knowledge of sports nutrition
- Acquire an understanding of the role of diet and drugs on blood lipoproteins with respect to cardiovascular disease
- Understand, describe, and explain the role of vitamins and minerals in the metabolism of energy nutrients and maintenance of body tissues and their functions
- Understand, describe, and explain the role of antioxidants in nutrition
- Acquire a general understanding of the basics of nutrigenomics

NSD 466 fulfills the following knowledge requirements by the Academy of Nutrition and Dietetics:

Knowledge Requirements	Activities	Assessments
KRD 1.1: Demonstrate how to locate, interpret, evaluate, and use professional literature to make ethical, evidence-based practice decisions.	Lecture Assignment	Assignment Quiz Exam
KRD 1.3: Apply critical thinking skills	Homework Assignments Quizzes	Homework Assignments Quizzes
KRD 2.1: Demonstrate effective and professional oral and written communication and documentation	Homework Assignments	Homework Assignments
KRD 3.1: Use the Nutrition Care Process to make decisions, identify nutrition -related problems and determine and evaluate nutrition interventions.	Lecture	Homework Assignments Quizzes Exams
KRD 3.5: Describe basic concepts of nutritional genomics.	Lectures Homework Assignments	Nutrigenomic HW Quiz Exam
KRDN 4.6 Analyze data for assessment and evaluate data to be used in decision-making for continuous quality improvement.	Lectures Homework Assignments	Assignment Quizzes Exam

Bibliography/Texts/Supplies- Required

Cengage MindTap

- Open BlackBoard and click on the MindTap link in the content folder
- Follow the prompts to register for MindTap.
- The course will be named NSD 466 Spring 2019
- To check whether your computer meets the requirements for using MindTap, go to http://ng.cengage.com/static/browsercheck/index.html

You will also need certain software installed and cookie settings configured correctly. Click here to test your current configurations. The minimum requirements for this course are:

- 1. Flash Player (required for viewing video clips)
- 2. Adobe Acrobat Reader (required, some course materials are in PDF format)
- 3. JavaScript (required for interactive features)

Bibliography/Texts/Supplies- Additional

Recommended texts:

Gropper SS, Biochemistry of Human Nutrition: Desk Reference, 2nd Edition, Wadsworth 2000 Nelms et al, Nutrition Therapy and Pathophysiology, 2nd Edition, Cengage 2011

Other Resources

Supplemental materials provided by the instructor.

Textbooks and class notes from general chemistry, biology, anatomy and physiology and basic nutrition.

Students are expected to review the contents covered in those courses as necessary in their own time.

I will use Arkaive to monitor classroom attendance. You will need to download the Arkaive mobile app from the App Store or Google Play. If you choose to use your laptop, you can access the website (www.arkaive.com) on a web browser (i.e. Chrome, Safari, Mozilla Firefox). The enrollment code is VSKG. You will have 20 minutes to check into class each day beginning at 10:25 AM. Professionalism scores will be based on percent of classes attended (e.g., 70% attendance = 7/10 points).

Method of Instruction:

Although this class meets in person three days a week, some course instruction and communications will also be conducted online. Videos, slide presentations, and Cengage Mind Tap assignments will be used throughout the course to explain chapter content. Blackboard, the Syracuse University Course Management System and Cengage Mind Tap will be used to house the course links and to administer on-line quizzes, exercises, assignments, and exams. A discussion tab has been set up in Blackboard to be used for peer discussions. Periodically I will use my course website for some specialized assignments (https://mavoss.expressions.syr.edu/). All assignments will be submitted to Blackboard — no hard copy assignments will be handed to the instructor. In addition, Blackboard will provide the communication needed between student and instructor outside of classroom hours through email and discussion forums (see below). It will be important for students to pay attention to assignment deadlines. They are posted in each Blackboard folder and the complete list of deadlines for the course can be found the Cengage Mind Tap schedule and in the course schedule below. Students are responsible for meeting assignment deadlines. Late assignments will not be accepted, and the schedule will not be altered after the course has begun. Special circumstances (emergencies, illness, etc.) that prevent a student from meeting a deadline must be discussed with the instructor as soon as possible.

Student / Instructor Communication:

All course questions of a general nature (i.e., those appropriate for the entire group) will be posted to the "Ask the Instructor" Discussion Forum under the Discussions tab on the left-hand side of the Blackboard course page. If you send me an assignment question via email, I will likely ask you to submit it to the discussion forum. Submitting all course questions to the discussion forum eliminates multiple responses to students. In addition, other students can respond to the question as well. If a question is posted to the discussion forum, I will respond within 24 hours. My goal is to be as responsive and accessible as possible, but do not expect to receive a response to assignment questions just a few hours before the assignment is due. Twenty-four (24) hours is the normal response time.

Students are expected to review their Blackboard course email regularly. Schedule changes and assignment notes will be communicated electronically. It is the student's responsibility to monitor Emails and discussion forums.

Course Requirements and Expectations

Before entering this this upper level undergraduate science class in nutrition:

- Students will have completed all prerequisite courses.
- Students understand that it the instructor's responsibility to identify, select, and revise the topics, materials, activities, and schedule in this class.
- Students fully understand that learning must be done by individual students through continuous participation and effort.
- Students fully understand the university's policy on academic integrity and what constitutes academic dishonesty and violation of the policy.
- Students have basic computer and writing skills.
- Students know how to conduct a literature search for peer-reviewed publications.

In this class, throughout the semester:

- Students will hold themselves to the highest integrity, academic, and professional standards.
- Students will be mature, responsible, and professional in all course related activities, including communications.
- Students will fully apply themselves and utilize all available resources to achieve success.
- Students will not underestimate the amount of work needed both in and OUTSIDE class to succeed in this course.
- Students will communicate with the instructor in a timely manner regarding their progress, questions, problems, help needed, and suggestions.

Quizzes

There will be scheduled quizzes (see course calendar) and as well as unannounced pop quizzes. Always bring a pen/pencil, paper and calculator to class. The <u>single</u> lowest-scored <u>unannounced pop quiz</u> will be dropped. Make-up quizzes are not given for any reason.

Exams

There will be three in-class exams and a final exam. Notify the instructor in advance if you must be absent on the day of an exam for any reason. If you miss an exam for illegitimate reasons, no make-up exam will be given. Students will have the opportunity to check exams and answer keys during class and office hours. No one will be allowed to take exam materials home or make photocopies. Unauthorized access and/or distribution of exam materials violate(s) the Syracuse University Academic Integrity Policy and will be reported.

Homework Assignments

All homework assignments are due on the days announced in the calendar. Late submission will result in a 30% deduction for every 24 hours after the deadline, including weekends and holidays. No assignment will be accepted beyond 72 hours after the deadline. No make-up opportunity will be given. All homework assignments will be product of word processing software such as Microsoft Word. *Handwritten homework will not be accepted.*

The instructor will only grade final version of the homework. The instructor will not provide feedback to any draft submitted without specific questions relevant to the assignments.

Extra Credit Activities

The activities specified in this syllabus provide ample opportunities to succeed. Students should not expect or ask for extra credit activities.

Grading:

Assessment	Points
Professionalism (attendance)	10
In class quizzes	50
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	150
HW Assignments (3 @ 20 pts)	60
MindTap points	117
Citizenship Assignment	15
Total	692

Grades in this course are earned by students through honest, hard work in this course only. Performance in other courses, involvement in student organizations, or extracurricular activities is not part of the assessment of this class, therefore does not contribute to students' final grades.

Grades are not open for negotiation or discussion. Students have five business days to raise questions regarding grading after grades are posted. Grading errors, if any, will be corrected. Students can request their exams, quizzes, and assignments be graded for a second time with the understanding that grades as the result of the second grading will be final and may be lower than the original. Posted grades become final after five business days.

Grades*	Grade	Percentage	Total points
	points/credit*	range	
Α	4.0	93-100	639.9-687.00
Α-	3.66	90-92.9	618.3-638.22
B+	3.33	87-89.9	597.7-617.6
В	3.0	83-86.9	570.2-597.0
B-	2.66	80-82.9	549.6-569.5
C+	2.33	77-79.9	529.0-548.9
С	2.0	73-76.9	501.5-528.3
C-	1.66	70-72.9	480.9-500.8.
D	1.0	60-69.9	412.2-480.2
F	0	<60	412.2

^{*}Source Grading FAQ for Students

University Attendance Policy

Attendance in classes is expected in all courses at Syracuse University. It is a federal requirement that students who do not attend or cease to attend a class to be reported at the time of determination by the faculty that the student never attended or stopped attending the class. Faculty should use Early-Semester Progress Reports and Mid-Semester Progress Reports in Orange SUccess to alert the Registrar and Financial Aid Office. For more information visit <u>Faculty Non-attendance</u> or <u>Students Non-attendance</u>.

Excuses for class absences for medical reasons will be given only if such absences are advised by a licensed health care provider, based on clinical findings and prescribed treatment recommendations. Excused notes will not be given solely to confirm a visit to the Health Center. For complete details on excuse notes, visit Health Services Excuse Notes.

Course-Specific Expectations and Policies

Faculty and Student Responsibilities

University courses are necessary preparation for a professional career. Therefore, you are expected to treat all courses in a professional manner. Professional behavior includes meeting deadlines, taking responsibility for your own learning, and respect for others. Active participation is monitored, expected, and is an indicator of professional behavior.

Verification of medical condition

Excuses for failure to meet deadlines for medical reasons will be given only if such absences are advised by a health care provider, based on clinical findings and prescribed treatment recommendations.

Punctuality

Students are expected to attend class, including exams, on time. No one will be allowed to enter the classroom ten (10) minutes after exams start. No one will be allowed to enter the classroom twenty (20) minutes after the final exam starts.

Electronic Devices

All cell phones must be put on silent or turned off. No cell phones should be visible in class or exams at any time. If it is impossible for you to take a 1-hour break from your electronics, I ask that you move to the last row at the back of the classroom. In general, and to prevent distraction to other students, *laptops can only be used in the last two rows of the classroom* unless cleared first with the instructor. The instructor and designated students carry the responsibility to check text messages from Orange Alert.

Negative Participation

Irresponsible behaviors are considered negative participation and will lead to deduction (1% per incidence minimum) from the final grades, exclusion from any potential grade adjustment, up till course failure. Below is an incomplete list of behaviors that are not tolerated in this course:

- Coming to class late, leaving class early without communication with the instructor in advance
- Talking to each other in class

- Sleeping
- Use of cell phone without authorization from the instructor, <u>including checking and sending</u> <u>text messages</u>.
- Use of laptop, iPod, or other electronic devices without authorization of instructor
- Disrespect of others

To ensure teaching and learning activities are not interrupted, all questions should be directed to the instructor. The instructor reserves the right to make permanent seat assignment to students.

Syracuse University Policies

Academic Integrity Policy:

Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectation. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered in described in the Violation and Sanction Classification Rubric. Syracuse University students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice per year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level.

To view the policy in its entirety, please visit Academic Integrity – Expectations and Policy.

<u>Turnitin Usage</u>

This class will use the plagiarism detection and prevention system Turnitin. You will have the option to submit your papers to Turnitin to check that all sources you use have been properly acknowledged and cited before you submit the paper to me. I will also submit all papers you write for this class to Turnitin, which compares submitted documents against documents on the Internet and against student papers submitted to Turnitin at Syracuse University and at other colleges and universities. I will take your knowledge of the subject matter of this course and your writing level and style into account in interpreting the originality report. Keep in mind that all papers you submit for this class will become part of the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers.

Blackboard Learning System

Syracuse University recognizes the importance of teaching and the use of appropriate teaching materials to successful student learning. The Blackboard Learning Management System is a key instructional technology tool that enables Syracuse University instructors to engage in transformative teaching and learning, both for face-to-face and online courses. All faculty, staff and students at Syracuse University can access Blackboard using their University NetID. Course access is granted through an integrated data feed with the MySlice student information system. This integration automatically generates course sites and enrollments for all officially recognized courses each semester.

Information Technology Services ensures the optimal performance of the Blackboard system by overseeing system access, account creations, system operations, user training and technical support. Additional information about Blackboard is available on Answers Blackboard; alternatively, you can contact Information Technology Services by sending email to help@syr.edu or by calling 315.443.2677.

Syracuse University is using Blackboard Ally, a tool to help enhance the usability and accessibility of course documents in the Blackboard learning management system. Ally provides students with multiple accessible formats of the original document so they can select the best one that fits their unique needs. Currently, Ally offers accessible versions of Portable Document Format (PDF) files, Microsoft Office files (Word and PowerPoint), images and uploaded HTML files. Students will see a dropdown menu to the right of each document. From this dropdown menu, they can select one or more Accessible versions to download and use.

Additional information on the Blackboard Ally tool is available on <u>Answers Blackboard Ally</u>; alternatively, you can contact Information Technology Services by sending email to <u>help@syr.edu</u> or calling 315.443.2677.

Faith Traditions Observances:

Syracuse University does not set aside days for any religious holiday. **Students must notify instructors by the end of the second week of classes** for regular session classes and by the submission deadline for flexibly formatted classes when they will be observing their religious holiday(s). Please remind students in class of their obligations to do so. Students will have access to an online notification form through MySlice for two weeks beginning on the first day of class.

Syracuse University's religious observances policy, found at Syracuse University Religious Observances Policy, recognizes the diversity of faiths represented in the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students should have an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors no later than the end of the second week of classes for regular session classes and by the submission deadline for flexibly formatted classes. Student deadlines are posted in MySlice under Student Services/Enrollment/My Religious Observances/Add a Notification.

Disability-Related Accommodations:

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) located at 804 University Avenue, third floor, or go to the ODS website and click Students tab to register on-line. You may also call 315.443.4498 to speak to someone regarding specific access needs. ODS is responsible for coordinating disability-related accommodations and will issue 'Accommodation Letters' to students as appropriate. Since accommodations may require early planning, and are not provided retroactively, please contact ODS as soon as possible.

Email Policy

Syracuse University has established email as a primary vehicle for official communication with students, faculty, and staff. Emergency notifications, educational dialog, research, and general business correspondence are all consistently enhanced in institutions of higher learning where email policies exist and are supported by procedures, practice, and culture.

An official email address is established and assigned by Information Technology Services (ITS) for each registered student, as well as for all active faculty and staff members. All University communications sent via email will be sent to this address. Faculty and staff members must use the officially established University email address to communicate with students registered in their classes. Keep in mind that student records sent to a non-syr.edu email address may create a FERPA violation (See the complete policy at Syracuse University E-Mail Policy)

Policy on Student Academic Work/FERPA

The Family Educational Rights and Privacy Act (FERPA) sets forth requirements regarding the privacy of student records. FERPA governs both the access to and release of those records, known as education records, and the information they contain. Under FERPA, faculty have a legal responsibility to protect the confidentiality of student records. For additional information about FERPA and Syracuse University's FERPA policy, see Syracuse University Compliance with FERPA or contact the Office of the Registrar (315.443.3535).

In compliance with FERPA, works in all media produced by students as part of their participation in this course at Syracuse University may be used for educational purposes. It is understood that registration for and continued enrollment in a course where such use of student work is announced constitutes permission by the student.

After this course has been completed, any further use of student works will meet one of the following conditions: (1) the work will be rendered anonymous through the removal of all personal identification of the work's creator/originator(s); or (2) the creator/originator(s') written permission will be secured.

Orange Alert

Orange Alert, Syracuse University's crisis notification system, uses text messages, phone, and email alerts to provide rapid notification and instructions to members of the University community in the event of a critical incident in progress. Critical incidents could include an individual who is considered armed and dangerous, a hazardous materials incident, an explosion, or any other event in which there is an immediate threat of physical harm or death to campus community members.

In the event of an emergency

- Phone emergency line from on-campus: 711
- Phone emergency line from off-campus: 443.2224
- Phone emergency line from cell phone providers ATT/Verizon/Nextel: #78

For complete details on emergency procedures, visit **Syracuse University Emergency Guide**.

Course Calendar

Week/Lecture	Topic	Required Reading and Assignment
Week 1 1/13	Syllabus; Exercise Metabolism	
Week 1 1/15	Exercise Metabolism	
Week 1 1/17	Enzymes	Quiz 1 in class (10 pts) Case Study 1 assigned (12 pts, MindTap)
Week 2 1/20	NO CLASS (MLK)	Case Study 1 Due by 11:59 PM
Week 2 1/22	Energy Expenditure, Energy Balance, and Body Composition	Quiz 2 assigned (15 pts MindTap). Timed one hour
Week 2 1/24	Micronutrients & Energy;	Quiz 2 Due by 11:59 PM on 1/26
Week 3 1/27	Micronutrients & Energy	
Week 3 1/29	Micronutrients & Energy	
Week 3 1/31	Micronutrients & Energy;	Quiz 2 assigned (15 pts MindTap) HW 1 Assigned (20 pts)
Week 4 2/3	Cholesterol & Fiber	
Week 4 2/5	Cholesterol & Fiber	Case Study 2 assigned (12 pts, MindTap)
Week 4 2/7	Cholesterol & CVD	Case Study 2 Due by 11:59 PM
Week 5 2/10	Cholesterol & CVD	HW # 1 due @ 11:59 PM
Week 5 2/12	Exam 1 Part 1	Exam 1 Part 1
Week 5 2/14	Exam 1 Part 2	Exam 1 Part 2

Week/Lecture	Topic	Required Reading and Assignment
Week 6	Micronutrients and	
2/17	Anemia	
Week 6	Micronutrients and	
2/19	Anemia	
Week 6	Micronutrients and	Quiz 3 in class (10 pts)
2/21	Anemia	, , ,
Week 7	Single Carbon metabolism-	Case Study 3 assigned
2/24	Folate and B12;	(12 pts, MindTap)
Week 7	The "other" B vitamins	Case Study 3
2/26		Due by 12:00 PM
Week 7	The "other" B vitamins	Quiz 4 in class (10 pts)
2/28		
Week 8	The "other" B vitamins	
3/2		
Week 8	The "other" B vitamins	Case Study 4 assigned
3/4		(12 pts, MindTap)
Week 8	The "other" B vitamins	Case Study 4
3/6		Due by 12:00 PM
Week 9	Micronutrients and	
3/9	skeletal health	
Week 9	Exam 2 Part 1	
3/11		
Week 9	Exam 2 Part 2	
3/13		
3/16-3/19	Spring Break	
Week 10	Micronutrients and	HW# 2 assigned (20 points)
3/23	skeletal health	
Week 10	Micronutrients and	
3/25	skeletal health	
Week 10	Micronutrients and	HW #2 due @ 11:59 PM
3/27	skeletal health	
Week 11	Nutrigenomics	HW#3 assigned (20 points)
3/30		
Week 11	Nutrigenomics	
4/1		
Week 11	Diet and Inflammation	<i>HW # 3</i> due
4/3		
Week 12	Diet and Inflammation	
4/6		

Week/Lecture	Topic	Required Reading and Assignment
Week 12 4/8	Exam 3 Part 1	Exam 3 Part 1
Week 12 4/10	Exam 3 Part 2	Exam 3 Part 2
Week 13 4/13	Antioxidants	Case Study 5 assigned (12 pts, MindTap)
Week 13 4/15	Antioxidants	Case Study 5 Due by 11:59 PM
Week 13 4/17	Minerals I	Quiz 5 assigned (30 pts MindTap). Timed one hour
Week 14 4/20	Minerals II	Case Study 6 assigned (12 pts, MindTap) Quiz 5 due at 11:59 PM
Week 14 4/22	Fluid & Electrolyte Balance	
Week 14 4/24	Acid-Base Balance	Case Study 6 Due by 11:59 PM
Week 15 4/27	Acid-Base Balance	

Final Exam 5/8 8:00 AM- 10:00AM Falk 200

Emergency Update 3/15/2020

Effective beginning 3/23, the shift to an online format necessitates the following changes:

- 1) I will be tracking the views and activity times for the required lectures. These will be in folders clearly labeled "required." The lectures will be available for 72 hours after they are posted and then they will close. This is to accommodate students who are no longer in the eastern United States time zone. The power point notes will remain up for you to study. You will receive a percentage of the 50 points allotted to "watching video lectures" based on your BB tracking statistics. I will also be online MWF at 10:30 EST to take questions and lead discussions.
- 2) The Citizenship Assignment is no longer mandatory, but I will assign extra credit to those who were able to complete it or are still able to complete it in a new format (volunteering for a

^{***}This syllabus including course calendar is subject to update as necessary***

- COVID phone bank or meals on wheels, etc.). You must still write a 1-page minimum reflection on your experience to earn this credit.
- 3) The remaining exams will be essay format and applied. You will have 24 hours to complete an exam from the time it is posted. For example, the first exam will post at 11:59 PM April 9th and will be due at 11:59 PM April 10th.
- 4) The remaining homework assignments and MindTap assignments will follow the schedule in the modified syllabus below. I have tried to keep things the same as much as possible in terms of due dates and times in an effort to reduce confusion. I am sure I will have to modify some things as we move forward, but I will do my best to keep the content and the schedule as uniform as I possibly can.
- 5) The total points for the class will be modified as we go. As soon as I have a better idea of what is working and what is not, I will give you a point breakdown for grades, however, the final grade percentage table below will still hold.

Grading:

Assessment	Points
Watching Lecture Videos	50
(does not include supplemental material)	
Quizzes	50
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	100
HW Assignments (3 @ 20 pts)	60
MindTap points	117
Citizenship Assignment (now extra credit)	5
Total	682

Grades*	Grade	Percentage
	points/credit*	range
Α	4.0	93-100
A-	3.66	90-92.9
B+	3.33	87-89.9
В	3.0	83-86.9
B-	2.66	80-82.9
C+	2.33	77-79.9
С	2.0	73-76.9
C-	1.66	70-72.9
D	1.0	60-69.9
F	0	<60

^{*}Source Grading FAQ for Students

Modified Course Calendar

Week/Lecture	Topic	Required Reading and Assignment
3/16-3/19	Spring Break	
Week 10	Micronutrients and	HW# 2 assigned (20 points)
3/23	skeletal health	
Week 10	Micronutrients and	
3/25	skeletal health	
Week 10	Micronutrients and	HW #2 due @ 11:59 PM
3/27	skeletal health	
Week 11 3/30	Nutrigenomics	HW#3 assigned (20 points)
Week 11	Nutrigonomics	
4/1	Nutrigenomics	
Week 11 4/3	Diet and Inflammation	HW # 3 due
Week 12	Diet and Inflammation	
4/6		
Week 12	Diet and Inflammation	
4/8		
Week 12	Exam 3	Exam 3
4/10		
Week 13	Antioxidants	Case Study 5 assigned
4/13		(12 pts, MindTap)
Week 13	Antioxidants	Case Study 5
4/15		Due by 11:59 PM
Week 13	Minerals I	Quiz 5 assigned
4/17		(30 pts MindTap). Timed one hour
Week 14	Minerals II	Case Study 6 assigned
4/20		(12 pts, MindTap)
		Quiz 5 due at 11:59 PM
Week 14 4/22	Fluid & Electrolyte Balance	
Week 14	Acid-Base Balance	Case Study 6
4/24		Due by 11:59 PM
Week 15	Acid-Base Balance	
4/27		
Final Exam TBD		

^{***}This syllabus including course calendar is subject to update as necessary***