



NUTR 531 – 01W

Advanced Nutrition and Metabolism

COURSE SYLLABUS: Fall 2025

INSTRUCTOR INFORMATION

Instructor: Katharine Halfacre, PhD

Office Location: NHS 135

Office Hours: MWF 11:00 AM – 12:00 PM; Tuesday (Virtual) 2:00 PM – 4:00 PM

Office Phone: 903-886-5549

University Email Address: Katharine.Halfacre@etamu.edu

Preferred Form of Communication: **Email**

Communication Response Time: 24 – 48 hours

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Required Text

Gropper, S.S, Smith, J.L., & Carr, T.P. (2022). *Advanced nutrition and human metabolism* (8th ed.). Cengage.

Access at <https://www.cengage.com/c/advanced-nutrition-and-human-metabolism-8e-gropper-carr-smith/9780357449813/>

Other materials and supplementary readings will be provided in the LMS.

Course Description

This course includes a comprehensive review of human nutritional biochemistry. The biochemical and physiological fundamentals of nutrition are emphasized. This course applies biochemistry to nutrient use from consumption through digestion, absorption, distribution, and cellular metabolism. This course explores how nutrition is a science

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that integrates life process from the molecular to the cellular level and through the multisystem operation of the human organism.

Student Learning Outcomes

1. Understand nutrient metabolism in normal and disease states.
2. Integrate the regulation of nutrient metabolism under normal and disease states.
3. Understand the biochemical and molecular functions of nutrients we consume.
4. Apply how nutrients affect pathogenesis of health.
5. Think critically about nutrient claims and fads using your knowledge of nutritional biochemistry.
6. Integrate current research in the area of metabolism and micronutrient function to guide future research.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Ability to utilize D2L, word processing, presentation, and database software; ability to utilize university email

Instructional Methods

We will review various nutritional topics and the role of nutrition in human biochemistry. Instructional activities will include assignments, quizzes, exams, research papers, and projects.

Student Responsibilities or Tips for Success in the Course

This graduate-level course will require students to be highly disciplined, motivated, and professional. Attendance, attentiveness, and quality of work should reflect that students are in professional preparation. Plan to dedicate about nine hours of effort each week to succeed in this course. This time will be committed to reading the course text, reviewing lecture materials, and completing assignments. Be focused, prepared, and hardworking.

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GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

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D = 60%-69%

F = 59% or Below

Total points corresponding to the final letter grades

A = 450- 500 Points

B = 400- 449 Points

C = 350- 399 Points

D = 300- 349 Points

F = Less than 300 Points

Weights of the assessments in the calculation of the final letter grade.

Grade Item	Point Value	Percentage of Final Grade
Exams (4)	50 points each	10% x 4 = 40%
Final Exam	75 points	15%
Research Papers (4)	25 points each	5% x 4 = 20%
Quizzes (3)	25 points each	5% x 3 = 15%
Assignments (5)	10 points each	2% x 5 = 10%
TOTAL	500 points	100%

Assessments

Exams

Four exams will be used to assess knowledge of topics covered in class and in the text. Specific details will be provided in the LMS.

Final Exam

A final exam will be administered at the end of this course to assess knowledge of the topics covered in this class. This knowledge is essential in executing scientific and evidence-based dietetics practice.

Research Papers

Periodically during this course, students will be tasked with evaluating a technical research paper. Students will prepare a report evaluating the quality of the study, summarizing its findings and identifying its strengths and limitations. Finally, students will identify the implications of the research and next-steps for future research. Specific details will be provided in the LMS.

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Quizzes

Quizzes will be conducted to assess knowledge of select chapters in the text and lecture materials. Specific details will be provided in the LMS.

Assignments

Students will complete formative assignments to build their understanding of select concepts within the text and lecture materials. Specific details will be provided in the LMS.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/enus/articles/115007031107-Basic-SystemRequirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@ETAMU.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

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Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

Students can expect a response to contact (email preferred) within 48 hours. Generally, the instructor will attempt to respond to contact as soon as possible. Assignments will be graded and posted in a timely manner. Office hours are posted and appointments should be scheduled during those times.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Electronic Devices & Acceptable Use Policy: Cell phones and other electronic devices should be silenced and put away upon entry into the classroom. This practice ensures that your electronic devices will not be a distraction. You should only use electronic devices to take notes or for relevant class activities. There will be no penalty for utilizing your cell phone or other electronic devices in a manner that does not impact the learning environment for others. Students who negatively impact the learning environment may be asked to leave the classroom, if necessary, and will not receive credit for missed work. Photos, video, or any other type of recording may not be taken in class without prior expressed written consent of every individual who may appear in such recordings. With respect to online activities, the use of cell phones and other electronic devices is strictly prohibited during quizzes and exams.

Artificial Intelligence: Intellectual honesty is vital to an academic community and for my fair evaluation of your work. All work submitted in this course must be your own, completed in accordance with the University's academic regulations. You may not engage in unauthorized collaboration or make use of ChatGPT or other AI composition software.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

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University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.ETAMU.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

ETAMU Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.ETAMU.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.ETAMU.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

[Undergraduate Student Academic Dishonesty Form](#)

<http://www.ETAMU.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.ETAMU.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

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<http://www.ETAMU.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@ETAMU.edu

Website: [Office of Student Disability Resources and Services](http://www.ETAMU.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

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Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.



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Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and East Texas A&M University Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.ETAMU.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M University campuses. Report violations to the University Police Department at 903886-5868 or 9-1-1.

East Texas A&M University Supports Students' Mental Health

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.ETAMU.edu/counsel

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Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR

subject to change

NUTR 531 Planned Schedule		
Week	Topic	Assignments (Due Date)
1	Syllabus Introduction CH 1: The Cell	Syllabus Acknowledgment (8/31)
2	CH 2: The Digestive System	Assignment 1: Digestion Concept Map (9/7)
3	CH 3: Carbohydrates	Assignment 2: TCA Cycle (9/14) Exam 1 (9/14)
4	CH 4: Fiber	Research Paper 1 (9/21)
5	CH 5: Lipids	Quiz 1 (9/28)
6	CH 6: Protein	Exam 2 (10/5)
7	CH 7: Integration and Regulation of Metabolism and the Impact of Exercise	Assignment 3: Fed-Fast Cycle (10/12) Quiz 2 (10/12)
8	CH 8: Energy Expenditure, Body Composition, and Healthy Weight	Research Paper 2 (10/19)
9	CH 9: Water-Soluble Vitamins	Assignment 4 (10/25)
10	CH 10: Fat-Soluble Vitamins	Exam 3 (11/2)

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11	CH 11: Major Minerals	Quiz 3 (11/9)
12	CH 12: Water and Electrolytes	Research Paper 3 (11/16)
13	CH. 13 Essential Trace and Ultratrace Minerals	Exam 4 (11/23)
14	Review Exams 1-4 THANKSGIVING	
15	CH 14: Nonessential Trace and Ultratrace Minerals	Research Paper 4 (12/7)
FINALS	Final Exam	Final Exam (12/12)

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