ANS 597: Animal Metabolism
COURSE SYLLABUS: Fall 2017

INSTRUCTOR INFORMATION

Instructor: Dr. Jason Turner, Adjunct Professor
Office Location: Online
Office Hours: Monday 10-11am, Wednesday 2-3 pm; others by appointment
Cell Phone: (575)-640-6550

University Email Address: jlturner234@gmail.com

Preferred Form of Communication: Email is best, followed by a text if needed.
Communication Response Time: I'll respond to emails within 24 hours unless you are notified otherwise with an automatic reply.

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required
Comparative Animal Nutrition and Metabolism (1st Edition) by P. Cheeke and E. Dierenfeld. 2010. ISBN-13: 978-1845936310

Software Required
The course will use Microsoft OneNote from the free Office 365 package available at: https://products.office.com/en-us/student/office-in-education. The course materials and assignments will be maintained in the OneNote notebook.

Course Description
This course will provide a survey of metabolic processes in domestic farm animals as it relates to digestion, absorption, and cellular metabolism of macronutrients including carbohydrates, fats, and proteins. Integration of metabolic pathways for nutrient utilization by various body tissues will be discussed.

Student Learning Outcomes (Should be measurable; observable)
Upon successful completion of this course, students will be able to:

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1. identify key steps in the digestion and absorption of carbohydrates as well as their metabolism at the cellular level.
2. identify the key steps in the digestion and absorption of fat as well as the metabolism of fatty acids at the cellular level.
3. identify key steps in the digestion and absorption of protein as well as the fate of key amino acids in metabolic pathways at the cellular and interorgan level.
4. discuss and/or diagram how the above macronutrients are metabolized differently depending on the nutritional state of the animal (energy abundance or energy deficiency).
5. analyze experimental design and data from peer-reviewed journal articles in the field of animal metabolism and relay meaningful implications to colleagues.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students should be able to use the Microsoft Office 365 software package, browse the internet, and use email to complete this course successfully.

Instructional Methods

This course will primarily use asynchronous delivery of course content and reading assignments from the required text for the students. During the 1st week of class, the students will select a one hour time slot for a weekly synchronous online discussion session to ask questions, give routine homework assignments, and clarify content in the course. The instructor will also provide routine announcements/emails concerning deadlines for assignments and adjustments to the course schedule.

Student Responsibilities or Tips for Success in the Course

Communication is the key to success in any interpersonal activity, and online courses are no exception. Please do not hesitate to contact the instructor with any questions that you may have. I look forward to your questions as part of the learning process. Students will need to be diligent with their time management in the online course to make sure that they stay up on the reading assignments and discussion times. Although the course is online, you should plan to devote the normal time allotted for a 3-credit course of similar complexity in order to be successful.

GRADING

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

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

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There is not a set number of total points available in the course. Rather the following aspects of the course will have the weighted percentage given in determining the final course grade. Format, delivery, and submission of the exams will be discussed within the first three weeks of the course. Discussion participation, routine homework, and exams will be graded within a week of submission. The metabolism poster, journal article summary, and PowerPoint Presentation projects will be discussed in greater detail during class. For graduate students, the PowerPoint Presentation will be due by November 1. The journal article summary will be due the week before the Thanksgiving holiday, and the metabolism poster will be due in final form the week following the Thanksgiving holiday. These assignments will be graded and returned by final exam week.

Assignment	Percentage of total grade
Routine homework questions	15%
Mid-Term Exam	15%
Final Exam	20%
Metabolism Poster	20%
PowerPoint Presentation	15%
Journal article summary	15%

TECHNOLOGY REQUIREMENTS

- To fully participate in online courses you will need to use a current Flash enabled internet browser. For PC and Mac users the suggested browser is Mozilla Firefox.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
    - 512 MB of RAM, 1 GB or more preferred
    - Broadband connection required courses are heavily video intensive
    - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:
    - Sound card, which is usually integrated into your desktop or laptop computer
    - Speakers or headphones.
    - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning

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management system. The most current version of Java can be downloaded at: JAVA web site http://www.java.com/en/download/manual.jsp

- Current anti-virus software must be installed and kept up to date.

- Run a browser check through the Pearson LearningStudio Technical Requirements website. Browser Check   http://help.ecollege.com/LS_Tech_Req_WebHelp/en-us/#LS_Technical_Requirements.htm#Browset

Running the browser check will ensure your internet browser is supported.
> Pop-ups are allowed.
> JavaScript is enabled.
> Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader https://get.adobe.com/reader/
  - Adobe Flash Player *(version 17 or later)* https://get.adobe.com/flashplayer/
  - Adobe Shockwave Player   https://get.adobe.com/shockwave/
  - Apple Quick Time   http://www.apple.com/quicktime/download/

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

- For additional information about system requirements, please see: System Requirements for LearningStudio https://secure.ecollege.com/tamuc/index.learn?action=technical

ACCESS AND NAVIGATION

Pearson LearningStudio (eCollege) Access and Log in Information

This course will be facilitated using Pearson LearningStudio, the learning management system used by Texas A&M University-Commerce. To get started with the course, go to myLeo and from the top menu ribbon select eCollege. Then on the upper left side of the screen click on the My Courses tab.   http://www.tamuc.edu/myleo.aspx

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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@tamuc.edu.

Note: It is strongly recommended you perform a "Browser Test" prior to the start of your course. To launch a browser test login to Pearson LearningStudio, click on the My Courses tab, and then select the Browser Test link under Support Services.

Pearson LearningStudio Student Technical Support

Texas A&M University-Commerce provides students technical support for the use of Pearson LearningStudio.

Technical assistance is available 24/7 (24 hours, 7 days a week).

If you experience LearningStudio (eCollege) technical problems, contact the LearningStudio helpdesk at 1-866-656-5511 (toll free) or visit Pearson 24/7 Customer Support Site   http://247support.custhelp.com/

The student help desk may be reached in the following ways:

- **Chat Support:** Click on *'Live Support'* on the tool bar within your course to chat with a Pearson LearningStudio Representative.

- **Phone:** 1-866-656-5511 (Toll Free) to speak with Pearson LearningStudio Technical Support Representative.

Accessing Help from within Your Course: Click on the *'Tech Support'* icon on the upper left side of the screen inside the course. Then you will be able to get assistance via online chat or by phone.

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 TAMUC campus open computer lab, etc.

Policy for Reporting Problems with Pearson LearningStudio

Should students encounter Pearson LearningStudio based problems while submitting assignments/discussions/comments/exams, the following procedure must be followed:

1. Students must report the problem to the help desk. You may reach the helpdesk at 1-866-656-5511.

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2. Students must file their problem with the helpdesk and obtain a helpdesk ticket number
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and provide me with the helpdesk ticket number.

4. I will call the helpdesk to confirm your problem and follow up with you

PLEASE NOTE: Your personal computer and internet access problems are not a legitimate excuses for filing a ticket with the Pearson LearningStudio Help Desk. Only Pearson LearningStudio based problems are legitimate reasons to contact the Help Desk.

You strongly are encouraged to check for your internet browser compatibility **BEFORE** the course begins and take the Pearson LearningStudio tutorial offered for students who may require some extra assistance in navigating the Pearson LearningStudio platform.

myLeo Support
Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at myLeo. https://leo.tamuc.edu

Learner Support
The One Stop Shop was created to serve you by providing as many resources as possible in one location. http://www.tamuc.edu/admissions/onestopshop/

The Academic Success Center provides academic resources to help you achieve academic success.
http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/

FREE MobilE APPS

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.

The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

PEARSON COURSES	**App Title:**	**iPhone –** Pearson LearningStudio Courses for iPhone **Android** – LearningStudio Courses - Phone
	Operating System:	**iPhone** - OS 6 and above **Android** – Jelly Bean, Kitkat, and Lollipop OS
	iPhone App URL:	https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8
	Android	https://play.google.com/store/apps/details?id=com.pearson.lsphone

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	App URL:	

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

• View titles/code/Instructor of all Courses enrolled in online
• View and respond to all discussions in individual Courses
• View Instructor Announcements in individual Courses
• View Graded items, Grades and comments in individual Courses
• Grade to Date
• View Events (assignments) and Calendar in individual Courses
• View Activity Feed for all courses
• View course filters on activities
• View link to Privacy Policy
• Ability to Sign out
• Send Feedback

LearningStudio Notifications

Students can be alerted to course activities via text on their mobile phones or up to two email addresses.

Based on their preferences, students can automatically receive a push notification with every new: course announcement, threaded discussion post, grade, and/or assignment without having to login to the course. Enrolled students will automatically receive email notifications for announcements and can opt out of this feature. To receive text notifications, students must opt in.

To begin setting up notifications, go into your course in LearningStudio and click on the bell-shaped Notifications icon on the main menu ribbon.

By default the student's university email address will appear. This cannot be changed in LearningStudio. Additional email addresses may be added by clicking the Add button. After all of the other selections are completed be sure to click the Save and Finish button.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

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The instructor will respond to email within 24 hours of submission. Feedback on assessments will normally be provided within one week following submission.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies
Attendance/Lateness, Late Work, Missed Exams and Quizzes and Extra Credit

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.

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.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette
http://www.albion.com/netiquette/corerules.html

TAMUC Attendance
For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

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

Academic Integrity
Students at Texas A&M University-Commerce 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

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

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[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

[http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf](#)

ADA Statement

Students with Disabilities

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

Texas A&M University-Commerce
Gee Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

[http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/](#)

Nondiscrimination Notice

Texas A&M University-Commerce 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 Texas A&M University-Commerce 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 A&M-Commerce 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.

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Web url:

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Week of	Topic
August 28	Course Introduction
September 4	Carbohydrate structure, digestion, and absorption
September 11	Carbohydrate metabolism: glycolysis and TCA
September 18	Carbohydrate metabolism: glycogen
September 25	Fat metabolism: structure, terms, digestion, and absorption
October 2	Fat metabolism: β-oxidation, ketogenesis, FA synthesis
October 9	**PowerPoint Project Outline due**; Review for exam
October 16	**Mid-Term Exam**; Protein Digestion and Absorption
October 23	Protein metabolism: Transamination and Deamination
October 30	Protein metabolism: TCA/urea cycle; **PowerPoint due**
November 6	Amino Acid metabolism in energy deficit
November 13	Integration of Metabolic Pathways; **Journal summary due**
November 20	Thanksgiving Holiday week (no class meeting online)
November 27	**Poster due in final form**
December 4	Prepare for **Final Exam**

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