Instructor: Matthew Palmtag
Office: Whitaker 229
E-mail: mpalmtag@fgcu.edu
Tel: 239 – 590 - 1263

Office Hours: Tues./Thur. 9:15 – 10:15 and 2:15 – 2:45 or by appointment (Last day of office hours will correspond with the date of the Unit 4 exam, and office hours will not be available on days that classes do not meet at FGCU)

Course Description: This course is intended for science majors. It will investigate the science of animal nutrition from the chemical to organismal level across a diverse range of animals. Topics include: the major nutrient classes, the anatomy and physiology of digestion and nutrient utilization, diet formulation, analytical methods used to study animal nutrition, the nutritional requirements of various animal taxa, as well as the dynamic role of nutrients in reproduction, development, and energy transformation.
Credits: 3
Prerequisites: BSC 1010C, BSC 1011C, and CHM 1045C

Required Texts:


Student Learning Outcomes: At the completion of the course, students should be able to:

- Explain the significance of the discipline “animal nutrition” from a historical and contemporary perspective.
- Identify the six major nutrient classes, understand their sources, chemical properties, nomenclature, how they react in biological systems, and how they pertain to the nutritional requirements of animals.
- Explain the anatomy and physiology of cells, tissues, organs, and organ systems that are involved in the digestion, absorption, distribution, and utilization of nutrients in animals.
- Describe animal nutrient requirements in the context of reproduction, development, and growth.
- Understand animal nutrient requirements from the perspective of energy transformation and utilization.
- Describe the process by which diets are formulated based on the nutritive requirements of various taxonomical distinctions of animals.
- Explain the methods and technology that are used to prepare, process, preserve, and administer feed for animals.
- Understand the methodologies and equipment used to investigate and analyze nutrient requirements for animals, nutrient composition of food ingredients, and utilization rates of nutrients by animals.
- Describe the history, current state, and future direction of animal nutrition as it applies to:
  - Mollusks*
  - Crustaceans
- Fish
- Birds and Reptiles
- Felines
- Canines
- Cattle
- Horses*

- Investigate the primary literature regarding a select topic in animal nutrition and prepare and deliver an educational and intellectually stimulating ten-minute presentation on the topic.

Course Communication:

Canvas will be used extensively in this course, as a means to provide course related information to you and as a way for you to return certain assignments. Email the instructor using the email addresses at the top of the syllabus from within Canvas. Additionally, the instructor will be corresponding with you through your student email account so it is very important for you to have your student email activated. If you need assistance with this, please review the FGCU instructions for activating, forwarding, and getting help with your email at http://eagle.fgcu.edu/ts.html. Students will not use any other e-mail addresses (Yahoo, Hotmail) that they may have as a means for communication.

Evaluation and Grading:

- There will be four exams (18% each), one student presentation (18%), and a discussion component of class (10% cumulative).
- There are no make-up exams. Missing a scheduled exam will result in zero credit. If you do have a legitimate excuse, you must notify us prior to missing the exam.
- Final course grades will be determined on a straight percentage basis; no extra credit is possible. The +/- system may be used at the instructors discretion for final grades.
- Final grades will be reduced at my discretion for violating the electronics policy.
- Grading scale: > 90% - A; 80-89% - B; 70-79% - C; 60-69% - D; < 60% - F

Course Policies:

- Exams:
  - Exams begin at the start of class and penalties will be assessed to students that do not arrive on time for the exam. If a student arrives after the instructor begins to explain the directions for the exam, the student will be penalized 5 points. If a student arrives 10 minutes late they will automatically loose 10 points from their final score, 20 minutes late will result in losing 20 points from their final score, and 30 minutes late will result in losing 50% of points earned on the exam.
  - Once you begin an exam you cannot leave the room until you hand in your exam.
  - All exam materials remain the property of the course instructors and may not be taken from the exam room or instructor offices under any circumstances.
  - Exams will only be given on the date scheduled.
  - **No electronic devices** are to be on or used during exams.
  - All incidents of suspected cheating will be referred to appropriate university authorities.
  - Tardiness, leaving class early or failure to come to class minimizes your opportunity to learn. If you are not in class at the time assignments are given or begin, you forfeit the opportunity to take part in that assignment or laboratory. You are still responsible for all notes, assignments, announcements and schedule changes.
  - **Cell phones are to be turned off during class. Computers may be used for taking notes during class; if they are used for any other reason you will not be able to bring them back into the classroom.** Violations of electronics policies will result in grade devaluation at our discretion.
  - All assignments are due on the dates specified. Work may be turned in earlier than the due date, but will not be accepted after the due date.
  - **Unusual** circumstances resulting in tardiness or class absence will be evaluated on a case-by-case basis. The circumstances must be communicat ed as soon as possible and not at the end of the semester. Reference the absence documentation form on the last page of this syllabus.
  - If you experience a catastrophic event in your life that precludes you from completing course requirements, you may elect to petition for an incomplete grade provided that you are passing the course.
Faculty adhere to the FGCU policies provided in the Florida Gulf Coast University Student Guidebook and include but are not limited to Code of Conduct, academic integrity including dishonesty/cheating, plagiarism, authorized absence, and absences due to other causes. Violations may result in a failing grade on the assignment, in the course, or dismissal from the class or from the University, depending on the severity of the incident.

The faculty reserves the right to modify the syllabus as needed to accommodate situations that may arise during the semester.

If a student removes any exam materials from the classroom they will receive a zero on the exam.

The instructor(s) reserve(s) the right to administer a written or oral make up exam for any test not taken at the times specified on the syllabus. This only applies to students that have been excused from the scheduled exam by their instructor.

University Policies:

Academic Behavior Standards and Academic Dishonesty
All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the Student Code of Conduct and Policies and Procedures sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at http://studentservices.fgcu.edu/judicialaffairs/new.html

University Nondiscrimination Statement
Florida Gulf Coast University is committed to ensuring equity and fairness for all University employees, students, visitors, vendors, contractors and other third parties. As such, the University prohibits discrimination on the bases of race, color, national origin, ethnicity, religion, age, disability, sex (including sexual harassment/assault), gender identity/expression, marital status, sexual orientation, veteran status or genetic predisposition with regard to admissions, employment, programs or other activities operated by the University. This prohibition extends to enforcement of Title IX of the Education Amendments of 1972. Questions or complaints should be directed to the Office of Institutional Equity and Compliance (OIEC). The OIEC’s phone number is (239)745-4366; the OIEC email address is OIEC@fgcu.edu.

Disability Accommodations Services Approved 3-27-09 by Faculty Senate; Approved 4-30-09 by VPAA; Revised & Approved by Faculty Affairs Team 4-11-16, Faculty Senate Approved 4/15/16

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university’s guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services.

Student Observance of Religious Holidays
All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is
to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence.

**Resources for Faculty General Education**
Information on General Education program requirements is available online at http://www.fgcu.edu/General_Education/index.html

**Service-Learning**
Information on integrating service-learning into the course and course syllabus is available online at http://www.fgcu.edu/Connect/

**Distance-Learning**
Information on distance learning courses is available online at http://itech.fgcu.edu/distance/

**Online Tutorials**
Information on online tutorials to assist students is available online at http://www.fgcu.edu/support/Approved

**Canvas Learning Management System and Demonstration Site** Information on Canvas is available online at http://canvas.fgcu.edu/ and https://fgcu.instructure.com/courses/7692

**Library Resources**
Main page: http://library.fgcu.edu/
Tutorials & Handouts: http://library.fgcu.edu/RSD/Instruction/tutorials.htm
Research Guides: http://fgcu.libguides.com/
Faculty Support: http://library.fgcu.edu/faculty_index.html Approved 3-27-09 by Faculty Senate; Approved 430-09 by VPAA; Revised & Approved by Faculty Affairs Team 4-11-16, Faculty Senate Approved 4/15/16

Contact Us: http://library.fgcu.edu/LBS/about/contactus.htm

**Respondus Monitor – Remote, Online Exam Monitoring**
In order to protect the integrity of online assessments that are delivered to students off site in a non-proctored location, this course may employ Respondus Monitor technology that will allow for the web-enabled monitoring of exams and quizzes. Students must own a computer device and an associated webcam that meet the minimum requirements of the University’s standard remote monitoring system. Additional information: Respondus Monitor overview: http://respondus.com/products/monitor/ Respondus Monitor Faculty Training and Workshops: TBA

**Respondus LockDown Browser – Classroom and/or Remote Online Exams**
In order to protect the integrity of classroom or remote online exams, this course may employ Respondus LockDown Browser technology that will allow for the student’s temporary restriction to a designated online testing website, disabling the ability to print, copy, access other applications or move to any other URL for the duration of the assessment. This technology may be used on campus in University computer classrooms or for remote delivery of quizzes and exams. [For online classes only: students must own a computer that meets the minimum requirements of the University’s standard lock down browser application.] Additional information: Respondus LockDown Browser overview: http://respondus.com/products/lockdown-browse/ Respondus LockDown Browser Faculty Training and Workshops: TBA

**Lecture Capture Technology/FGCU Capture – Classroom Recording**
This course may employ technology that will allow for audio and/or video recording of live classroom sessions. This lecture capture technology is utilized for the sole purpose of enhancing student learning. It may provide for supplemental student instruction via secure links to recorded session(s,) the live stream of courses, presentations of off-site guest speakers and/or the delivery of course instruction utilizing “flipped classroom” methodologies. Student questions and/or comments may be included as a part of any session being recorded. See FGCU-CAPTURE for additional details and training http://aets.fgcu.edu/fgcucapture.asp
Syllabus Statement for Center for Academic Achievement
The Center for Academic Achievement (CAA) provides academic support services to all FGCU students. Students can take advantage of our free peer tutoring and Supplemental Instruction sessions for lower-level math and science courses, as well as workshops to facilitate the development of skills necessary for college success. If you would like to participate in any of our programs, learn about tutoring services, or meet with an Academic Retention Coordinator, please visit the CAA in Library 103 or call us at (239) 590-7906. Our website is www.fgcu.edu/caa.

Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>Tue 22-Aug</td>
<td>Course Introduction / Fundamentals of Biology</td>
<td>Ch 9 Byrd-Bredbenner et al.</td>
</tr>
<tr>
<td>Th 24-Aug</td>
<td>Course Introduction / Fundamentals of Biology</td>
<td>Ch 9 Byrd-Bredbenner et al.</td>
</tr>
<tr>
<td>Tue 29-Aug</td>
<td>Applied Animal Nutrition</td>
<td>Palmtag and Holt 2007</td>
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<tr>
<td>Th 31-Aug</td>
<td>Carbohydrates</td>
<td>Ch 5 Byrd-Bredbenner et al.</td>
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<tr>
<td>Tue 5-Sep</td>
<td>Carbohydrates / Lipids</td>
<td>Ch 5 &amp; 6 Byrd-Bredbenner et al.</td>
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<tr>
<td>Th 7-Sep</td>
<td>Lipids (discussion 1a, Prof Palmtag will lead)</td>
<td>Ch 6 Byrd-Bredbenner et al.</td>
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<tr>
<td>Tue 12-Sep</td>
<td>Protein</td>
<td>Ch 7 Byrd-Bredbenner et al.</td>
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<tr>
<td>Th 14-Sep</td>
<td>Protein (discussion 1b, lipid, team 1)</td>
<td>Ch 7 Byrd-Bredbenner et al.</td>
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<tr>
<td>Tue 19-Sep</td>
<td>Unit I Exam</td>
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<tr>
<td>Th 21-Sep</td>
<td>Fat soluble vitamins (discussion 2, protein, team 2)</td>
<td>Ch 12 Byrd-Bredbenner et al.</td>
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<tr>
<td>Tue 26-Sep</td>
<td>Fat soluble vitamins/ Water Soluble Vitamins</td>
<td>Ch 12 &amp; 13 Byrd-Bredbenner et al.</td>
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<tr>
<td>Th 28-Sep</td>
<td>Water soluble vitamins</td>
<td>Ch 13 Byrd-Bredbenner et al.</td>
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<tr>
<td>(discussion 3, vitamins, team 3)</td>
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<tr>
<td>Tue 3-Oct</td>
<td>Minerals</td>
<td>Ch 14 Byrd-Bredbenner et al.</td>
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<tr>
<td>Th 5-Oct</td>
<td>Minerals</td>
<td>Ch 14 Byrd-Bredbenner et al.</td>
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<td>(discussion 4, minerals, team 4)</td>
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<tr>
<td>Tue 10-Oct</td>
<td>Unit II Exam</td>
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<tr>
<td>Th 12-Oct</td>
<td>Feed preparation, processing, preservation, and administration</td>
<td>Ch 12 Cheeke</td>
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<tr>
<td>Tue 17-Oct</td>
<td>Applied mollusk nutrition</td>
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<tr>
<td>Th 19-Oct</td>
<td>Student Presentations (4)</td>
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<tr>
<td>Tue 24-Oct</td>
<td>Student presentations (4)</td>
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<tr>
<td>Th 26-Oct</td>
<td>Applied fish nutrition (discussion 5, mollusk nutrition, team 5)</td>
<td>Kaiser and Holt 2005</td>
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<tr>
<td>Tue 31-Oct</td>
<td>Applied bird nutrition</td>
<td>Ch 14 Cheeke</td>
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<tr>
<td>Th 2-Nov</td>
<td>Feline nutrition (discussion 6, fish nutrition, team 6)</td>
<td>Ch 20 Cheeke</td>
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<tr>
<td>Tue 7-Nov</td>
<td>Feline nutrition</td>
<td>Ch 20 Cheeke</td>
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<tr>
<td>Th 9-Nov</td>
<td>Unit III Exam</td>
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<tr>
<td>Tue 14-Nov</td>
<td>Canine nutrition (discussion 7, feline nutrition, team 7)</td>
<td>Ch 20 Cheeke</td>
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<tr>
<td>Th 16-Nov</td>
<td>Cattle nutrition</td>
<td>Ch 15 &amp; 17 Cheeke</td>
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<tr>
<td>Tue 21-Nov</td>
<td>Horse nutrition (discussion 8, canine or ungulate nutrition, team 8)</td>
<td>Ch 18 Cheeke</td>
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<tr>
<td>Th 23-Nov</td>
<td>Thanksgiving – NO CLASS</td>
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<tr>
<td>Tue 28-Nov</td>
<td>Unit IV and Final Exam (Canine, Cattle, Horse, and cumulative final)</td>
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<tr>
<td>Th 30-Nov</td>
<td>Student Presentations (5)</td>
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<tr>
<td>Tue 5-Dec</td>
<td>Student Presentations (5)</td>
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</tbody>
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*IMPORTANT NOTES* Dates of topics listed in boldface and italic print will not change. Dates of topics listed in normal typeface are subject to change. Schedule change announcements will be made during class. It is each student's responsibility to attend class to learn about scheduling changes.
Absence Documentation Form

If you have a valid excuse for missing class, please print out and fill out two copies of this document. This document should be turned into the instructor before the date of absence. Each case will be evaluated by the instructor and excused absences will be granted on a case by case basis.

Name_________________________________________  CRN_____________  Todays date________

Date(s) you will not be in attendance_______________________________________________________

Assignment(s) missed during absence______________________________________________________

Reason for absence:_____________________________________________________________________

*Please attach documentation supporting reason for absence to this form*

*Make a copy of this form, one will be given to the instructor, the other will be given to the teaching assistant*

Student signature______________________________________________________________

Instructor signature______________________________________________________________