Instructor: Nina Roofe, PhD, RD, LD  
Office: McAlister 212  
Phone: 450-5955  
E-mail: nroofe@uca.edu; Blackboard Mail tab preferred  
Office Hours: MW: 1-4:30 pm; F: 1-4 pm  
Semester: Spring 2012

Department: Family and Consumer Sciences  
Course: NUTR 3390 (CRN 23498)  
Days/Times/Location: MWF 9:00 am – 9:50 am, MAC 210  
Title: Nutrition and Metabolism  
Catalog Description: A required course for the dietetic major. The course includes a study of the principles and application of macronutrient and micronutrient metabolism, focus on the major metabolic diseases, and relevant information for the health professional. Lecture and discussion. Spring and Fall.  
Prerequisites: NUTR 3370 and CHEM 1402  
Credit Hours: 3  
Clock Hours per Week: Total – 3  Didactic – 3  Laboratory – 0  
Required Text and Materials:  
- Non-programmable calculator—not on cell phone  
Required Technology:  
- The course is Web-enhanced. Students must have access to a computer with internet access and establish a Blackboard account through UCA in order to download handouts and assignments.  
- **Computer software utilized in course:** Microsoft Word; Power Point.  
- Note: If you do not have Power Point, you may download Power Point Viewer for free from UCA’s Blackboard log-in page. This will allow you to view and print Power Point slides; however, you will not be able to create Power Point presentations.  

Overall Goal of the Course:  
The student will be able to demonstrate the knowledge and skills which form the foundation of nutrition and metabolism including but not limited to macronutrient metabolism, micronutrient metabolism, and application to metabolic disease states.
Course Objectives: Students who successfully complete the requirements for this course will be able to:

1. Demonstrate how to locate, interpret, evaluate and use professional literature to make ethical evidence-based practice decisions (KR 1.1.a).
2. Apply the physical and biological science foundation pertaining to nutrient metabolism (SK 5.2).
3. Identify cell organelles and the functions of each organelle.
4. Identify the roles and functions of the organs and secretions of digestion.
5. Discuss the roles of water and electrolytes in the body.
7. Discuss the functions, food sources, deficiency and toxicity symptoms, and interrelationships of vitamins and minerals.
8. Discuss the metabolism of each macronutrient, its role in the energy pathway, and health-related intake recommendations.
9. Discuss energy balance as it pertains to the human energy pathway.
10. Evaluate landmark nutrition research studies including the National Weight Control Registry, the Framingham Heart study and the Diabetes Control and Complications Trial as it pertains to nutrition practice.
11. Evaluate current research and discuss how it informs nutrition practice.

Course Outline:

I. Cells & Digestion
II. Carbohydrates
III. Lipids
IV. Protein
V. Integration of Metabolism
VI. Fluids, Electrolytes, Acid-Base Balance
VII. Vitamins
VIII. Minerals
IX. Research

Course Requirements:

1. CHO Pathways Presentations
2. Vitamin and Mineral Presentations
3. Research Article Review
4. Research Article Presentation
5. Quizzes
6. Exams
Methods for Evaluating Student Performance:

1. **Carbohydrate Pathways Presentations**—45 points
   Each student will present in a group one of the CHO metabolic pathways for 45 points. A scoring rubric will be provided to the student.

2. **Vitamin and Mineral Presentations**—90 points
   Each student will present one vitamin and one mineral for 45 points each. A scoring rubric for each presentation will be provided to the student.

3. **Research Article Review**—70 points
   Students will review a current research article on a topic relevant to the course material and prepare a written review of their chosen research article. A scoring rubric will be provided to the student.

4. **Research Article Presentation**—45 points
   Students will orally present the findings of their research article review. A scoring rubric will be provided to the student.

5. **Quizzes**—50 points
   There will be a total of 6 quizzes throughout the semester worth 10 points each. The prerequisite quiz covers material from the prerequisite courses. The remaining quizzes cover material presented in the course. One quiz counts for bonus points.

6. **Exams**—300 points
   There will be three course exams worth 50 points each and one comprehensive final exam worth 150 points.

### Course Evaluation:

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Points Possible</th>
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</thead>
<tbody>
<tr>
<td>Pre-Requisite Quiz</td>
<td>10</td>
</tr>
<tr>
<td>CHO Metabolic Pathway Presentation</td>
<td>45</td>
</tr>
<tr>
<td>Vitamin Presentation</td>
<td>45</td>
</tr>
<tr>
<td>Mineral Presentation</td>
<td>45</td>
</tr>
<tr>
<td>Research Article Review</td>
<td>70</td>
</tr>
<tr>
<td>Research Article Presentation</td>
<td>45</td>
</tr>
<tr>
<td>Quizzes (4 @ 10 points each)</td>
<td>40</td>
</tr>
<tr>
<td>Exams (3 @ 50 points each)</td>
<td>150</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150</td>
</tr>
<tr>
<td><strong>TOTAL POINTS FOR COURSE</strong></td>
<td><strong>600</strong></td>
</tr>
</tbody>
</table>

### Grading Scale:
- 90-100% = A
- 80-89% = B
- 70-79% = C
- 60-69% = D
- <60% = F
**Student Responsibilities:**

1. **Attendance and Punctuality:**
   - Students are responsible for attending class each day, being on time and staying through the entire class period. Students who are late to class are counted as absent.
   - Students who miss class must notify the instructor within 24 hours of the absence with a legitimate reason for being absent and provide written documentation for the absence upon returning to class (i.e. – doctor’s note, traffic report from car wreck, obituary from funeral).
   - Legitimate reasons for missing class include illness, accident or death in the family. Examples of unexcused absences include, but are not limited to, over-sleeping and having to work.
   - In the event of an absence, it is the student’s responsibility to obtain assignments and information missed in class.
   - Missed quizzes will not be made up, but one quiz counts as bonus points.
   - Missed exams will not be made up. The percentage score earned on the comprehensive final exam will count for one missed exam. If a student misses two exams, he/she will receive a zero for the second missed exam.
   - Any scheduled absences, including travel for athletic events or professional conferences, should be provided to the instructor at the beginning of the semester or as soon as possible. Absences for university-related activities are excused absences. Assignments due during the scheduled absence must be turned in before the student leaves for the event.

2. **Drop Policy:**
   - If a student misses 3 classes without notifying the instructor, the instructor reserves the right to drop the student from the course with a “WF”.
   - **Note:** Students may drop a class with a non-punitive “W” grade before March 30, 2012.

3. **Classroom Environment:**
   - Students are expected to respect other students and the instructor.
   - It is unacceptable to talk while others are talking, sleep in class, work on other assignments or take phone calls or text during class.
   - **Phones must be turned off during class or put on silent mode.**
   - Students who continuously exhibit these unacceptable behaviors will be asked to leave the class and will be unable to make up points missed.

4. **Readings:**
   - The student is responsible for reading the chapters in the textbook and other assignments. This is necessary to facilitate learning.
   - The student is responsible for all material in the textbook whether or not discussed in class, presented in multi-media presentations, and guest speakers.
   - If you are absent, it is your responsibility to get the notes and/or announcements from a classmate.
5. **Grading & Quiz/Exam Policies:**
   - Students are expected to complete all required assignments by the completion date assigned by the instructor.
   - Unless the student has made arrangements with the instructor 24 hours prior to the due date or has written documentation from the hospital, doctor, or police the assignment will not be accepted.
   - Written assignments will be submitted on Blackboard. Students should submit their assignments in Word software well ahead of the due date and time in case there is a technical issue with his/her computer. “Computer issues” are not a valid excuse for not submitting an assignment before the due date and time.
   - The percentage grade earned on the final exam will substitute for one missed exam in the class. If a student misses two exams, the student will receive a zero for the second missed exam and may need to drop the course. Quizzes will not be made up but one quiz counts as bonus points.
   - Students will be allowed one minute per question on quizzes and exams. Students who arrive late for a quiz or exam will not be given extra time. If a student arrives to a quiz or exam after another student has left the room, the late student will not be allowed to take the quiz or exam.

6. **Academic Integrity:**
   - The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity.
   - Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate.
   - Continued enrollment in this course affirms a student's acceptance of this university policy.
   - Examples of academic dishonesty and plagiarism include, but are not limited to, duplicating an assignment from one class to another, copying written assignments from the internet, and copying another student’s work or exam answers.
   - Academic dishonest/plagiarism will not be tolerated. See Student Handbook for definition and punishment.

7. **Americans with Disabilities Act & University Services:**
   - The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Office of Disability Services, 450-3613.
   - Counseling Services: If you find at some point during the semester that personal problems are keeping you from completing course work, you may find it beneficial to visit the Counseling Center. All students are entitled to free, confidential and
professional counseling. The office is located in Room 313 of Bernard Hall. The phone number is 450-3138.

- **Student Health Services:** A number of services are available to students through Student Health Services (*Student Handbook*). Since these services are paid for in your student fees, there is no additional cost to you for these services. If you are having health problems during the semester, it would benefit you to use these services. They are located on the 1<sup>st</sup> floor of the Student Health Center. Their hours are Monday-Friday, 8:00 am until 4:45 pm.

8. **Academic Policies:**
   - All students are strongly encouraged to familiarize themselves with the policies set forth in the *Student Handbook*.

9. **Sexual Harassment Policy:**
   - The *Student Handbook* defines the sexual harassment policy for UCA.
   - Students who perceive they have a complaint in this area may seek recourse as stated in the policy.
   - All students, faculty and staff are obligated to adhere to the policy as stated in the handbook.

10. **Inclement Weather:**
    - If class is canceled due to inclement weather, any assignment or exam scheduled for that class will be given at the next class meeting.
    - Students should check the UCA web page and/or listen to the local news or radio stations to see if classes are canceled due to hazardous conditions.
    - Each student should use their own judgment in determining safe travel conditions.
# NUTR 3390: Nutrition and Metabolism

## Spring 2012

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 9</td>
<td>Classes Begin</td>
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<tr>
<td>January 11</td>
<td>Intro Module, Chapters 1 &amp; 2</td>
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<tr>
<td>January 13</td>
<td>Prerequisite quiz—10 points online; CHO Module, Chapter 3</td>
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<tr>
<td>January 16</td>
<td>Martin Luther King Jr. Holiday</td>
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<tr>
<td>January 18</td>
<td>Quiz 1 (Chapters 1 &amp; 2)—10 points; CHO Pathways Presentations—45 points</td>
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<tr>
<td>January 20</td>
<td>Exam 1 (Chapters 1-3)--50 points</td>
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<tr>
<td>January 23</td>
<td>Intro Module, Chapters 1 &amp; 2</td>
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<tr>
<td>February 1</td>
<td>Lipid Module, Chapter 4</td>
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<tr>
<td>February 3</td>
<td>No Class; work on modules</td>
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<tr>
<td>February 6</td>
<td>Quiz 2 (Chapter 4)—10 points; Chapter 4</td>
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<tr>
<td>February 8</td>
<td>Protein Module, Chapter 5</td>
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<td>February 10</td>
<td>Chapter 5</td>
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<tr>
<td>February 13</td>
<td>Integration Module, Chapter 6</td>
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<td>February 15</td>
<td>Chapter 6</td>
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<tr>
<td>February 17</td>
<td>Fluids, Electrolytes, Acid-Base Balance; Chapter 6</td>
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<td>February 19</td>
<td>Service Learning</td>
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<td>February 22</td>
<td>Service Learning</td>
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<td>February 24</td>
<td>Service Learning</td>
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<td>February 27</td>
<td>Quiz 3 (Chapters 5 &amp; 6)—10 points; Chapter 7</td>
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<td>February 29</td>
<td>Chapter 7</td>
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<tr>
<td>March 2</td>
<td>Exam 2 (Chapters 4-7)—50 points</td>
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<tr>
<td>March 5</td>
<td>Go over Exam 2</td>
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<td>March 7</td>
<td>Vitamins Module, Chapter 9</td>
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<td>March 14</td>
<td>Chapter 10</td>
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<tr>
<td>March 16</td>
<td>Vitamin Presentations A &amp; D—45 points; Chapter 9</td>
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<tr>
<td>March 19</td>
<td>(Spring Break)</td>
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<tr>
<td>March 21</td>
<td>(Spring Break)</td>
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<td>March 26</td>
<td>Vitamin Presentations B3, B6, &amp; Folate—45 points; Chapter 10</td>
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<tr>
<td>March 28</td>
<td>Vitamin Presentations B12, Biotin, &amp; Pantothenic Acid—45 points; Quiz 4 (Chapters 9 &amp; 10)—10 points Chapter 10</td>
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<tr>
<td>March 30</td>
<td>Exam 3 (Chapters 9 &amp; 10)—50 points</td>
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<tr>
<td>April 2</td>
<td>Go over Exam 3</td>
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<tr>
<td>April 4</td>
<td>Minerals Module, Chapter 11; You Tube Video due (optional)</td>
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<tr>
<td>April 9</td>
<td>Mineral Presentations Sodium, Chloride, Potassium, &amp; Sulfur—45 points; Chapter 11</td>
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<tr>
<td>April 11</td>
<td>Quiz 5 (Chapters 10 &amp; 11)—10 points; Chapter 12</td>
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<tr>
<td>April 13</td>
<td>Mineral Presentations Iron, Zinc, Iodine, &amp; Copper—45 points; Chapter 12</td>
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<tr>
<td>April 16</td>
<td>Mineral Presentations Selenium, Fluoride, Chromium, &amp; Manganese—45 points; Chapter 12</td>
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<tr>
<td>April 18</td>
<td>Research Module, Research &amp; Landmark Research Studies in Nutrition—“So What” Lecture</td>
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<tr>
<td>April 20</td>
<td>DEP Meeting, no class; Research Article Reviews due online—70 points</td>
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<tr>
<td>April 23</td>
<td>Panel Research Presentations—45 points; Course Evaluations</td>
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<tr>
<td>April 25</td>
<td>Panel Research Presentations—45 points; Course Evaluations</td>
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<tr>
<td>April 27</td>
<td>Study Day, no class, ArDA Meeting—Little Rock</td>
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<tr>
<td>May 2 @ 2 pm</td>
<td>Final Exam—150 points</td>
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</tbody>
</table>
Dates of Interest:

January 16, Monday: Dr. Martin Luther King, Jr. Holiday

January 18, Wednesday: Change-of-course period ends for Jan. 12 - May 5 classes; Final date to register or add classes

February 10, Friday: Final date to make degree application for May graduation and be included in the commencement program

March 17-25, Sat-Sun: Spring Break

March 30, Friday: Final date to officially withdraw from a Jan 12 - May 5 classes or the university with a W grade unless already dropped for non-attendance

April 2-23: Advance Registration for Summer and Fall 2012

April 20, Friday: Final date to officially withdraw from a Jan 12 - May 4 course or the university with a WP or WF grade unless already dropped for non-attendance

April 20, Friday: Recommended date to make degree application for May 2013 graduation

April 27, Friday: Study Day

April 30-May 4, Mon-Fri: Final Examinations - day and night classes

May 5, Saturday: Spring Commencement

May 8, Tuesday-NOON: Final grade report date