Department KIN NuFSP
Instructors Katie Osborne, MA Toni Bloom, MS, RD
Office SPX 301 CCB 200
Telephone (408) 209-3475 (408) 799-3138
E-mail Katie.Osborne@sjsu.edu toni@tonibloom.com
Office hours M 1:30-2:30 By appointment
Class days/time M and W 10:30-11:45 M and W 10:30-11:45am
Classroom Clark Building 324 Industrial Studies 230
Canvas Yes Yes, it’s used

Prerequisites Passing score on the Writing Skills Test (WST)
Upper division standing (60 units)
Completion of Core General Education
For students beginning continuous enrollment Fall 2005 or later, completion of, or co-registration in, a 100W course is required.
Courses used to satisfy Areas R, S, and V must be taken from three separate SJSU departments, or other distinct academic units.

GE - SJSU Studies Area R – Earth & Environment

Faculty Web Pages
Copies of the course syllabus and major assignment sheets may be found on Canvas and the respective faculty web sites.
Ms. Moreno’s materials are at: http://www.sjsu.edu/people/karen.moreno/
Ms. Bloom’s materials are at: http://www.sjsu.edu/people/antoinette.bloom/

Course Description and Goals
Use of scientific principles, scientific investigation, and current technological advances to assess the relationship between diet, physical fitness, and disease. Examine scientific literature to evaluate the effects of nutritional intervention on exercise performance. (3 units)
Note: Nutrition majors may not use this course for credit in the major.

GE Area R (Earth & Environment) Goal
Students will cultivate knowledge of the scientific study of the physical universe or its life forms. Students will understand and appreciate the interrelationship of science and human beings to each other.

GE Student Learning Outcomes (SLOs)
Upon successful completion of this course, students will be able to:
1. demonstrate an understanding of the methods and limits of scientific investigation.
2. distinguish science from pseudo-science.
3. apply a scientific approach to answer questions about the earth and environment.

Course-Specific Student Learning Outcomes
Upon successful completion of this course, students will be able to:
1. explain how the principles of fitness and nutrition (such as body composition, energy intake and expenditure, acute and chronic physical changes related to exercise and nutrition) complement each other.
2. identify social, cultural, ethnic, and environmental factors that influence food habits and exercise/activity patterns.
3. examine the biochemical and physiological effects of exercise and various nutritional practices.
4. discuss the physiological relationships of food to health throughout the life span, as well as specific fitness and nutrition considerations during various stages of the life cycle, such as childhood, adolescence, and older age.
5. describe the different exercise guidelines and nutritional requirements related to gender and diverse populations.
6. apply and improve upon the basic skills of reading, writing, mathematics, speaking, critical thinking, and scientific research learned in Core GE courses.
7. describe scientific methodology in the fields of nutritional science and exercise science.
8. critically evaluate the credibility of current nutrition and exercise information using scientific research.
9. critique popular advertisements for a food, food supplement, piece of exercise equipment, or exercise program, differentiating between evidence derived from scientific research (based on the student’s review of literature) and non-scientific evidence.
10. assess the advantages/disadvantages of recent advances in new food formulations and new exercise and fitness testing equipment for the general population.
11. deliver oral presentations and written summaries which explain and expand upon course content, using information from appropriate library research and primary sources of scientific investigation.
12. identify the scientific principles involved in studying pathophysiology in human populations.
13. critically evaluate primary research articles and identify the limitations of scientific investigation in human studies involving nutrition and various modes and levels of physical activity.

Required Texts

Library Liaisons
If you need help using library resources, Emily Chan is the Nutrition, Food Science, & Packaging reference librarian. Contact her directly at emily.chan@sjsu.edu. Silke Higgens is the Kinesiology reference librarian; silke.higgens@sjsu.edu or call (408) 808-2020.

Course Format
This course will include lecture, class discussion, and student presentations. Student participation is both a vital part of the learning process and an important way to enrich the classroom experience. Students are expected to have read the assigned material before class and to be prepared to actively participate, discussing course content, raising issues, providing information from their own experiences, and asking questions during the class. If students miss class, they are responsible for
obtaining lecture notes and handouts from another student before seeing the instructor about the missed content.

At the midpoint of the session, students will remain in their assigned classroom, and instructors will change sections.

**Dropping and Adding**
You are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Refer to the current semester’s catalog policies section at http://info.sjsu.edu/static/catalog/policies.html for add/drop deadlines, policies, procedures, and specific registration information. The late drop policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy.

**Assignments and Grading Policy**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>SLOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>50</td>
<td>4, 5, 6, 7, 8, 15</td>
</tr>
<tr>
<td>Exam 2</td>
<td>50</td>
<td>4, 5, 6, 7, 8, 15</td>
</tr>
<tr>
<td>Exam 3</td>
<td>50</td>
<td>4, 5, 6, 7, 8, 15</td>
</tr>
<tr>
<td>Exam 4</td>
<td>50</td>
<td>4, 5, 6, 7, 8, 15</td>
</tr>
<tr>
<td>Research Analysis of Scientific Literature #1</td>
<td>50</td>
<td>1, 9, 10, 16</td>
</tr>
<tr>
<td>Research Analysis of Scientific Literature #2</td>
<td>50</td>
<td>1, 9, 10, 16</td>
</tr>
<tr>
<td>Critical Evaluation of Consumer Product #1</td>
<td>50</td>
<td>2, 9, 11, 12, 13</td>
</tr>
<tr>
<td>Critical Evaluation of Consumer Product #2</td>
<td>50</td>
<td>2, 9, 11, 12, 13</td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>50</td>
<td>3, 9, 11, 14</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>450</strong></td>
<td></td>
</tr>
</tbody>
</table>

• Examination questions will be based on assigned readings, lectures, class discussions and presentations. Bring a T&E 200 answer sheet, #2 pencil, and calculator to all exams. Examinations will be given only on the dates scheduled. Make-up exams will be given only in cases of serious illness or emergencies, and requests for make-up exams will be evaluated on an individual basis. The student is responsible for notifying the instructor and making arrangements prior to the exam. Unless otherwise arranged, the exam must be completed prior to the next class meeting.

• Written assignments are due at the beginning of the class session on the due date. Assignments handed in after class has begun, unless otherwise specified, will be considered late. There is a 5 point penalty for each calendar day (not class day), or partial calendar day, that assignments are late. They will not be accepted 1 week past the due date.

• All assignments written outside of class must be typed, double spaced, and submitted to Canvas (for Ms. Moreno’s section) and Turnitin (for Ms. Bloom’s section) before turning in a hard copy at the start of class on the due date. Papers not properly submitted to Canvas or Turnitin will not be accepted.

• The SJSU Writing Center (http://www.sjsu.edu/writingcenter/about) is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing
specialists from each of the seven SJSU colleges. The staff can assist students at all levels to become better writers.

- Writing in general education courses is assessed for grammar, content, clarity, conciseness, and coherence. APA format will be used for all written assignments.
- Guidelines for the Research Analyses of Scientific Literature, Critical Evaluations of Consumer Products, and Oral Presentation will be discussed in class and available on Canvas.

### Assignment of Grades

<table>
<thead>
<tr>
<th>97-100% (435-450 pts) = A+</th>
<th>93-96% (417-434 pts) = A-</th>
<th>87-89% (390-402 pts) = B+</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-92% (403-416 pts) = A-</td>
<td>83-86% (372-389 pts) = B-</td>
<td></td>
</tr>
<tr>
<td>77-79% (345-357 pts) = C+</td>
<td>73-76% (327-344 pts) = C-</td>
<td></td>
</tr>
<tr>
<td>67-69% (300-313 pts) = D+</td>
<td>63-66% (282-299 pts) = D-</td>
<td></td>
</tr>
<tr>
<td>Below 60% (0-267 pts) = F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Summary of Required Writing

Total writing will include a minimum of 3000 words:

<table>
<thead>
<tr>
<th>In-class writing may include video and/or class lesson summaries and exam essay questions</th>
<th>4-6 pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Critical Evaluations of Consumer Products @ 2-3 pages each</td>
<td>4-6 pages</td>
</tr>
<tr>
<td>2 Research Analyses of Scientific Literature @ 2-3 pages each</td>
<td>4-6 pages</td>
</tr>
<tr>
<td>Total</td>
<td>12-18 pages</td>
</tr>
</tbody>
</table>

### University Policies

#### Academic Integrity

The University’s [Academic Integrity Policy](http://sa.sjsu.edu/judicial_affairs/faculty_and_staff/academic_integrity/index.html) is available at http://sa.sjsu.edu/judicial_affairs/faculty_and_staff/academic_integrity/index.html. Your own commitment to learning, as evidenced by your enrollment at San José State University and the University’s integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of [Student Conduct and Ethical Development](http://www.sa.sjsu.edu/judicial_affairs/index.html).

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or using another person’s ideas without giving proper credit) will result in a score of 0. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors. Information about plagiarism can be obtained at the [MLK library](http://www.sa.sjsu.edu/judicial_affairs/index.html) web
Campus Policy in Compliance with the American Disabilities Act
If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://sjsu.edu/aec/ to establish a record of their disability. The AEC is located in ADM 110 (408-924-6000 [voice] or 408-924-5990 [TTY]).

Resources
These journals and on-line resources should be used for your written assignments and oral presentation. They are well respected, peer-reviewed journals in the areas of nutrition and fitness.

Journals (partial list)
American Journal of Clinical Nutrition
American Journal of Public Health
American Journal of Sports Medicine
International Journal of Sports Medicine
International Journal of Sports Nutrition
Journal of Applied Physiology
Journal of Athletic Training
Journal of the American Dietetic Association
Journal of the American Medical Association
Journal of the Strength and Conditioning Association
Journal of Food Science
Journal of Nutrition
Journal of Health, Physical Education, Recreation, and Dance
Lancet
Medicine and Science in Sports and Exercise
New England Journal of Medicine
Nutrition Reviews
Physician and Sports Medicine
Research Quarterly for Exercise and Sport Science
Sports Medicine
Strength and Conditioning Journal

On-Line Resources (partial list)
American College of Sports Medicine www.acsm.org
American Dietetic Association www.eatright.org
American Medical Association www.ama-assn.org
Centers for Disease Control www.cdc.gov
Food and Drug Administration www.fda.gov
Government Healthfinder www.healthfinder.gov
My Pyramid www.mypyramid.gov
National Institutes of Health www.nih.gov
Physician and Sportsmedicine www.physsportsmed.com
Sports Science Exchange www.gssiweb.com
Sport Science Organization www.sportsci.org
U.S. Food and Drug Administration www.fda.gov
World Health Organization www.who.int
Proposed Course Schedule

(Subject to change with fair notice – any changes will be announced in class)

Reading assignments should be completed before the class period in which they will be discussed.

\[ W = \text{Williams, Nutrition for health, fitness, and sport} \]
\[ \text{FIR = Fahey, Insel, & Roth, Fit and well} \]

If your 1st half of the semester is FITNESS

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>READING ASSIGNMENTS</th>
<th>ASSIGNMENTS DUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 1/27</td>
<td>Course Introduction</td>
<td>Syllabus</td>
<td></td>
</tr>
<tr>
<td>Wed 1/29</td>
<td>Scientific Research &amp; Pseudo-Science</td>
<td>IFIC Article (PDF on Canvas)</td>
<td>Establish oral groups 1,2,3, and 4</td>
</tr>
<tr>
<td>Mon 2/3</td>
<td>Physical Fitness, Health &amp; Wellness</td>
<td>FIR: Chap. 1</td>
<td></td>
</tr>
<tr>
<td>Wed 2/5</td>
<td>Fitness Components, Principles of Fitness</td>
<td>FIR: Chap. 2</td>
<td>Analysis of Lit #1 Due</td>
</tr>
<tr>
<td>Mon 2/10</td>
<td>Energy Systems, Metabolism</td>
<td>FIR: Chap. 3</td>
<td>Ad Approval</td>
</tr>
<tr>
<td>Wed 2/12</td>
<td>Cardiorespiratory Endurance</td>
<td>W: Chap. 3</td>
<td>Consumer Product Paper #1</td>
</tr>
<tr>
<td>Mon 2/17</td>
<td><strong>EXAM 1</strong></td>
<td></td>
<td>Bring T&amp;E 200 (scantron)</td>
</tr>
<tr>
<td>Wed 2/19</td>
<td>Muscular Strength and Endurance</td>
<td>FIR: Chap 4</td>
<td></td>
</tr>
<tr>
<td>Mon 2/24</td>
<td>Muscular Strength and Endurance</td>
<td>FIR: Chap. 4</td>
<td>Oral Presentation Group #1</td>
</tr>
<tr>
<td>Wed 2/26</td>
<td>Flexibility</td>
<td>FIR: Chap. 5</td>
<td>Oral Presentation Group #2</td>
</tr>
<tr>
<td>Mon 3/3</td>
<td>Body Composition</td>
<td>FIR: Chap. 6</td>
<td>Oral presentation Group #3</td>
</tr>
<tr>
<td>Wed 3/5</td>
<td>Body Composition Continued</td>
<td>FIR: Chap. 6</td>
<td>Oral Presentation Group #4</td>
</tr>
<tr>
<td>Mon 3/10</td>
<td>Program Design</td>
<td>FIR: Chap. 7</td>
<td></td>
</tr>
<tr>
<td>Wed 3/12</td>
<td>Stress and Stress Management</td>
<td>FIR: Chap.10</td>
<td></td>
</tr>
<tr>
<td>Mon 3/17</td>
<td><strong>EXAM 2</strong></td>
<td></td>
<td>Bring T&amp;E 200 (scantron)</td>
</tr>
<tr>
<td>Wed 3/19</td>
<td>Introduction to the 6 nutrients, dietary recommendations</td>
<td>W Chapter 1</td>
<td>Confirmation of Groups 5-8</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Chapters/Notes</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------------</td>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td>3/24,26,31</td>
<td>No School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed 4/2</td>
<td>Dietary Reference Intakes, My Plate, Dietary Guidelines</td>
<td>Chapters 1 &amp; 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dietary Reference Intakes, My Plate, Dietary Guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food Label, Vegetarianism – Carbohydrate – function, types</td>
<td>W Chapter 2 cont’d</td>
<td></td>
</tr>
<tr>
<td>Mon 4/7</td>
<td>Carbohydrates – sports performance, carb loading</td>
<td>W Chapter 4 (Consumer Ad Analysis #2)</td>
<td></td>
</tr>
<tr>
<td>Wed 4/9</td>
<td>Lipids – function, types</td>
<td>W Chapter 5</td>
<td></td>
</tr>
<tr>
<td>Mon 4/14</td>
<td>Lipids – guidelines, ergogenics</td>
<td>W Chapter 5 cont’d</td>
<td></td>
</tr>
<tr>
<td>Wed 4/16</td>
<td>Nutrition Exam #1</td>
<td>Nutrition Exam (bring T&amp;E 2000 scantron)</td>
<td></td>
</tr>
<tr>
<td>Mon 4/21</td>
<td>Protein – functions</td>
<td>W Chapter 6</td>
<td></td>
</tr>
<tr>
<td>Wed 4/23</td>
<td>Protein – RDA, needs for athletes, ergogenics</td>
<td>W Chapter 6 cont’d</td>
<td></td>
</tr>
<tr>
<td>Mon 4/28</td>
<td>Weight Maintenance, body composition, BMI, Eating Disorders</td>
<td>W Chapter 10</td>
<td></td>
</tr>
<tr>
<td>Wed 4/30</td>
<td>Weight Loss Principles</td>
<td>W Chapter 11</td>
<td></td>
</tr>
<tr>
<td>Mon 5/5</td>
<td>Oral Presentation – Groups 5 and 6</td>
<td>Research Analysis #2 (Groups 5 and 6)</td>
<td></td>
</tr>
<tr>
<td>Wed 5/7</td>
<td>Oral Presentation – Groups 7 and 8</td>
<td>Research Analysis #2 (Groups 7 and 8)</td>
<td></td>
</tr>
<tr>
<td>Mon 5/12</td>
<td>Catch Up / Review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thurs 5/15</td>
<td>FINAL EXAM 9:45am</td>
<td>FINAL EXAM 9:45am</td>
<td></td>
</tr>
</tbody>
</table>
**Proposed Course Schedule**

(Subject to change with fair notice – any changes will be announced in class)

*Reading assignments should be completed before the class period in which they will be discussed.*

**W = Williams, Nutrition for health, fitness, and sport**

**FIR = Fahey, Insel, & Roth, Fit and well**

If your 1st half of the semester is NUTRITION

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>READING ASSIGNMENTS</th>
<th>ASSIGNMENTS DUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 1/27</td>
<td>Course Overview, Introduction to the 6 Nutrients</td>
<td>Greensheet</td>
<td></td>
</tr>
<tr>
<td>Wed 1/29</td>
<td>Research Terms and in class activity (sample), Ergogenics</td>
<td>W Chapter 1</td>
<td>IFIC article (on faculty page)</td>
</tr>
<tr>
<td>Mon 2/3</td>
<td>Dietary Reference Intakes, My Plate, Dietary Guidelines</td>
<td>W Chapter 1 cont’d, W Chapter 2</td>
<td>Oral Presentation Groups 1-8 selected</td>
</tr>
<tr>
<td>Wed 2/5</td>
<td>DSHEA, Food Label, Vegetarianism – types and sports performance</td>
<td>W Chapter 2 cont’d</td>
<td>Research Analysis of Scientific Lit #1</td>
</tr>
<tr>
<td>Mon 2/10</td>
<td>Carbohydrate – function, types, guidelines</td>
<td>W Chapter 4</td>
<td></td>
</tr>
<tr>
<td>Wed 2/12</td>
<td>Carbohydrates and sports performance, carbohydrate (glycogen) loading Lipids – type, fxn, guidelines</td>
<td>W Chapter 4 (cont’d) W Chapter 5</td>
<td></td>
</tr>
<tr>
<td>Mon 2/17</td>
<td>In-class work</td>
<td>In-class work</td>
<td></td>
</tr>
<tr>
<td>Wed 2/19</td>
<td>Fats and sports performance, lipid ergogenics</td>
<td>W Chapter 5 cont’d</td>
<td>Consumer Ad Analysis #1</td>
</tr>
<tr>
<td>Mon 2/24</td>
<td><strong>Nutrition Exam #1</strong></td>
<td></td>
<td>Nutrition Exam #1 (bring T&amp;E 2000 scantron)</td>
</tr>
<tr>
<td>Wed 2/26</td>
<td>Protein –functions &amp; RDA</td>
<td>W Chapter 6</td>
<td></td>
</tr>
<tr>
<td>Mon 3/3</td>
<td>Protein needs of athletes, protein oriented ergogenics, Weight Maintenance, BMI, Body Composition</td>
<td>W Chapter 6 cont’d</td>
<td>W Chapter 10</td>
</tr>
<tr>
<td>Wed 3/5</td>
<td>Weight Loss Principles</td>
<td>W Chapter 10 and 11</td>
<td></td>
</tr>
<tr>
<td>Mon 3/10</td>
<td>Oral Presentation – Groups 1 and 2</td>
<td></td>
<td>Research Analysis #2 (Groups 1 and 2)</td>
</tr>
<tr>
<td>Wed 3/12</td>
<td>Oral Presentation – Groups 3 and 4</td>
<td></td>
<td>Research Analysis #2 (Groups 3 and 4)</td>
</tr>
<tr>
<td>Mon 3/17</td>
<td><strong>Nutrition Exam #2</strong></td>
<td></td>
<td>Nutrition Exam #2</td>
</tr>
<tr>
<td></td>
<td><strong>End of Nutrition Section</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>FIR:</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------</td>
<td>------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Wed 3/19</td>
<td>Physical Fitness, Health &amp; Wellness</td>
<td>Chap. 1</td>
<td>Establish oral groups 5, 6, 7, and 8</td>
</tr>
<tr>
<td>3/24,26,31</td>
<td>NO CLASS</td>
<td></td>
<td>Spring Break March 24-28th</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cesar Chavez Day 31st</td>
</tr>
<tr>
<td>Wed 4/2</td>
<td>Fitness Components, Principles of Fitness</td>
<td>Chap. 2</td>
<td>Ad Approval</td>
</tr>
<tr>
<td>Mon 4/7</td>
<td>Energy Systems, Metabolism</td>
<td>Chap. 3</td>
<td>Consumer Product Analysis #2</td>
</tr>
<tr>
<td>Wed 4/9</td>
<td>Cardiorespiratory Endurance</td>
<td>Chap. 3</td>
<td></td>
</tr>
<tr>
<td>Mon 4/14</td>
<td>EXAM 1</td>
<td></td>
<td>Bring T&amp;E 200 (scantron)</td>
</tr>
<tr>
<td>Wed 4/16</td>
<td>Muscular Strength and Endurance</td>
<td>Chap. 4</td>
<td></td>
</tr>
<tr>
<td>Mon 4/21</td>
<td>Muscular Strength and Endurance</td>
<td>Chap. 4</td>
<td>Oral Presentation Group #5</td>
</tr>
<tr>
<td>Wed 4/23</td>
<td>Flexibility</td>
<td>Chap. 5</td>
<td>Oral Presentation Group #6</td>
</tr>
<tr>
<td>Mon 4/28</td>
<td>Body Composition</td>
<td>Chap. 6</td>
<td>Oral presentation Group #7</td>
</tr>
<tr>
<td>Wed 4/30</td>
<td>Body Composition continued</td>
<td>Chap. 6</td>
<td>Oral Presentation Group #8</td>
</tr>
<tr>
<td>Mon 5/5</td>
<td>Program Design</td>
<td>Chap. 7</td>
<td></td>
</tr>
<tr>
<td>Wed 5/7</td>
<td>Stress and Stress Management</td>
<td>Chap. 10</td>
<td></td>
</tr>
<tr>
<td>Mon 5/12</td>
<td>Catch up and Review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 15</td>
<td>Final Exam/EXAM 2</td>
<td></td>
<td>9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bring T&amp;E 200 (scantron)</td>
</tr>
</tbody>
</table>
CRITICAL ANALYSIS OF SCIENTIFIC LITERATURE

Directions
You will write two (2) critical analyses of the scientific literature. Each will be a 3 to 4 page critique of a scientific paper. The first one you write will be a critique of a paper that will be given to you by your instructor. The second is a critique of a paper that you will choose yourself, from a suggested list of topics. This article will be the same article used for your class presentation. The article must be turned in with your written assignment. Your instructor will provide you with specific information as to how this article should be turned in.

After the first assignment, you will receive feedback on spelling, grammar and critical evaluation skills. Please use this feedback when preparing the second critical analysis.

Please see the green sheet for the due dates for the two different analyses. Late papers will receive lower grades, so please be sure to turn your paper in on time.

Each student must do his/her own work; plagiarism will not be tolerated and will result in a failing grade on the assignment and the student being reported to the Office of Student Conduct and Ethical Development. Prior to grading, all papers will be scanned by Turnitin.com. Your instructor will provide additional information regarding use of turnitin.com.

Form and Style Guidelines
Your paper should:
• be written in narrative, paragraph format;
• be written in formal style-3rd person only (do not use 1st or 2nd person, such as “we”, “I” or “you”);
• use “past tense” when describing the research;
• be typed, double spaced, and 3-4 pages in length;
• be in a font size that is Times New Roman 12 point or similar size (easy to read);
• be left justified (do not right justify/align, which centers text) and have 1 inch margins;
• be submitted in a plain file folder with your name in the tab along with a copy of your references in APA format. Include Grading Sheet and Plagiarism Contract as the first page.

Guidelines for Critical Evaluation:
Be sure to consider the suggestions from lecture and the handout “How to Understand and Interpret Food and Health-Related Scientific Studies” for analyzing the articles. Using the following questions as a guide, please critically evaluate each section of the paper. Use the following questions as a guide:
“A” papers (receiving 90% or more of the total points) have the following characteristics:

• carefully follow the content guidelines given by the instructor; answer all questions posed on the critique outline;
• carefully follow the guidelines for format; which includes not exceeding by more than one-half page the maximum double-spaced pages allowed;
• are written in standard English, at an upper division college level, with complete sentences and appropriate paragraphs;
• are free of redundancies, and have, at most, only 2-3 spelling and/or grammatical errors;
• develop each section of the critique in a clear and logical fashion; have smooth transitions from one sentence or idea to another;
• include insightful interpretation that goes beyond the obvious or what the authors disclosed;
• covers all of the major aspects of the assignment without going off track or padding;
• are turned in on the due date and prior to the start of lecture.

“B” papers (receiving 80-89% of the total points) usually differ from an “A” report in one or more of the following ways:

• show less care in following the guidelines
• have a few lapses in good writing;
• have less than full clarity in expression of ideas and interpretations;
• show some tendency to go off track, pad the paper or have redundancies;
• are turned in one day or partial day (after the start of lecture) late.

“C” papers (receiving 70-79% of the total points) usually differ from an “A” paper in more than one of the following ways:

• show minimal care in following guidelines;
• have more than a few lapses in good writing;
• use some ambiguous descriptions in the analysis or interpretation;
• go off track, pad the paper or have redundancy in more than one instance;
• are turned in two days after the due date

Papers less than “C” (receiving less than 70% of the total points) usually differ from an “A” paper in more than one of the following ways:

• Do not follow guidelines;
• Are poorly written;
• Fail to interpret information correctly, or answer statements clearly;
• frequently wander off track, are “padded” with extraneous information, or are redundant;
• are turned in more than two days after the due date.
CRITICAL ANALYSIS OF SCIENTIFIC LITERATURE

Purpose:
This assignment will help you understand how to critically read and analyze research articles.

**Your instructor will make an article available on either their web page or Canvas.

Directions
In a 3-4 page essay, answer all of the following questions based on the article provided:

1. What is the research problem? Another way to think about this is: Why was this research conducted?

2. Describe the hypothesis/hypotheses stated by the author(s)?

3. A. Who were study participants (how many were there? How were they recruited)? B. Describe the inclusion/exclusion criteria.

4. Describe the study design.

5. Briefly give the study results.

6. Did the study results support the authors’ hypothesis/hypotheses? Why or why not?

7. What was/were the limitation(s) and strength(s) discussed by the author(s)? List other strengths and weaknesses you were able to identify that may not have been discussed by the author(s).

8. A. What conclusion(s) did the author(s) make? B. Describe the suggestions about how the research findings can be applied. If no suggestions were given, in 3rd person describe how you think the findings could be applied. Also, describe direction for future research given what is now known, and given what this paper has reported.

Use your own words to discuss the answers using information from the article. Cite in APA format when appropriate. Do not include the questions. Your paper will be turned into turnitin.com to check for plagiarism. Please check with your instructor for further instructions as to how to turn in assignments.
Please attach to first page of assignment, along with grading rubric which follows.

Name _____________________________________

PLAGIARISM CONTRACT

I acknowledge that I have not committed plagiarism in the process of writing this paper. I have cited the appropriate sources and given credit to the authors’ works. I also acknowledge that this paper is my own work and that I have not plagiarized or received answers from fellow classmates or other students.

I understand that plagiarism will result in a ZERO for the paper, and other possible academic sanctions, including a report to the appropriate academic authorities.

Signature _______________________________ Date ____________
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Poor; showed lack of understanding</th>
<th>Average</th>
<th>Very good-excellent Shows high level understanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1 Stated problem clearly</td>
<td>0-1</td>
<td>2-3</td>
<td>4</td>
</tr>
<tr>
<td>Question 2 Described hypothesis/research question/goal clearly</td>
<td>0-2</td>
<td>3-4</td>
<td>5</td>
</tr>
<tr>
<td>Question 3 Participants, inclusion, exclusion criteria</td>
<td>0-1</td>
<td>1.5</td>
<td>2-3</td>
</tr>
<tr>
<td>Question 4 Described study design</td>
<td>0-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>Question 5 Described results clearly</td>
<td>0-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>Question 6 Results relative to hypothesis/research question/goal</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Question 7 Limitations &amp; strengths described</td>
<td>0-1</td>
<td>1.5</td>
<td>2-3</td>
</tr>
<tr>
<td>Question 8 future research; conclusions, applications</td>
<td>0-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 -5% if late (for each calendar day or partial day late)  
Deductions |  
Your Total |   |
GUIDELINES FOR ORAL PRESENTATION

Using assigned specific topics, each group will be required to engage in a cooperative effort whereby each individual in the group will be allowed approximately 5-6 minutes to lead a discussion on their own article (original research) related to the assigned topic. Each individual should try to take a different side of the topic, using a different journal article. Your instructor will assist you in determining topics for your presentation, and the presentation should go beyond the scope of the textbook. Students are encouraged to use current topics in nutrition and exercise or controversial issues. Instructor approval is needed (1 week in advance) regarding the appropriateness of your article.

Preparation: Each student is required to review one original research article (primary reference), but can also use textbooks for additional background and support. Information from this article must be incorporated into the presentation, and all reference(s) must be cited by authors’ last names and year of publication during the presentation. Each student in the group will present a different study dealing with a unique aspect of the overall topic. When possible, a variety of opinions should be presented.

Presentation
6 The presentation should include an evaluation (critique) of the research article, including the purpose of the research, methodology, results, conclusions, limitations, and applications to the “real” world. Compare and contrast studies. Students are encouraged to evaluate studies that provide differing results. Students should be creative and use any or all of the following in their presentations: demonstrations, visual aides (overheads, charts, handouts), and other techniques to inform and interest the class. Place your requests for University audiovisual equipment at least 7 days before your presentation. If using PowerPoint, bring presentation on a memory stick.

7 The instructor, as well as other students will pose questions to the group after the presentation. Discussion of the presentation can help to assess the class knowledge of the presented material. Material in these oral presentations will then be tested in class exams.

8 The group should collaborate on an introduction to the topic, as well as a conclusion that provides a summary and “take home message.”

Paper: Each student will provide a paper (typed) to the instructor prior to the presentation, along with the appropriate grading sheet. This paper serves as “Analysis of Scientific Literature #2” and should follow the same format and instructions used for the first Analysis of Scientific Literature. This paper will be corrected separately from the presentation and returned to students.

EVALUATION OF THE ORAL PRESENTATION WILL BE BASED ON:

• Adherence to time guidelines;
• Organization of presentation/preparedness;
• Clarity and evidence of understanding the material;
• Effectiveness of oral presentation (delivered without excessive reliance on notes);
• Originality of material presented (not copied verbatim from references);
• Adequate review of research articles;
• Ability to critically evaluate scientific research;
• Ability to define/demonstrate practical application of the material;
• Effective use of visual aids/ability to interest audience;
• Appropriateness of nutrition/fitness topic;
• Ability to compare & contrast article with other articles in group/contribution to group summary & conclusions.

This assignment is worth a total of 50 points and grades will be assigned as follows:

1. Up to 25 points for each individual contribution
2. Up to 25 points as a group grade (the group grade will be the average percentage of the sum of the individual grades)
SUGGESTED TOPICS FOR NUTRITION PRESENTATIONS
Please choose from this list or choose your own topic (approved by instructor)

LIPIDS / FAT
Possible sub-topics
• Dietary fat recommendations/needs for children (< 2 yr olds), elderly
• Dietary fat and risk for various cancers
• Omega-3 fatty acid (linolenic acid) and treatment or prevention of diseases
• Fat replacements used in the food industry

PROTEIN SUPPLEMENTS
Possible sub-topics
• Whey protein supplements for weight (muscle) gains
• Glutamine and the immune system and/or muscle recovery in athletes
• Creatine supplementation: effects on strength performance OR effects on endurance performance
• Nitrogen balance studies in determining protein needs for athletes
• Branched-chain amino acids and exercise performance

DRUGS, SUPPLEMENTS & HERBS FOR WEIGHT CONTROL
Possible sub-topics:
• Evaluating hydroxycitrate supplement for weight loss
• Evaluating chromium supplements for weight loss
• Evaluate pyruvate supplements for weight loss
• Evaluate/review the “Phen-Fen” drugs
• Evaluate/review the over-the-counter drug phenylpropanolamine, Alli, etc.
• Evaluate ephedrine (ephedra), EGCG, ginseng or Hoodia and weight loss

DISORDERED EATING ISSUES
Possible sub-topics
• Eating disorders: case studies, adverse complications, therapies, etc.
• Childhood obesity: prevalence, causes, and treatment
• Research in the area of obesity and genetics
• Adult obesity

VITAMINS & MINERALS IN HEALTH
Possible sub-topics
• Vitamin E’s role in reducing risk of heart disease or cancer
• Zinc and the common cold
• Folic acid deficiency and birth defects
• Folic acid, B6, and/or B12’s role in preventing heart disease
• Iron deficiency effects in the young (children)
• Vitamin D status and supplementation in the older population

VITAMINS, MINERALS & HERBS IN EXERCISE PERFORMANCE
Possible sub-topics
• Iron deficiency & anemia in female athletes
• Coenzyme Q10 and exercise performance OR Ginseng supplementation and exercise performance
• Vanadium and body composition
• Antioxidant supplementation (such as vitamin E and vitamin C) and exercise
• Medium-chained triglycerides (MCTs) supplementation and exercise performance/body comp
SUGGESTED TOPICS FOR FITNESS PRESENTATIONS

EXERCISE AND AGING

Possible sub-topics:
• Effects of training on muscle strength and/or muscle mass of older adults, including underlying mechanisms
• Effects of training on cardiovascular function in older adults, including underlying mechanisms
• Effects of exercise on aging and changes in flexibility
• Effects of training on body composition in older adults.
• Exercise and the prevention of falls in older adults, as well as other changes in balance and equilibrium

EXERCISE AND COGNITION

Possible sub-topics:
• Effects of exercise on cognitive functions
• Exercise and brain-derived neurotrophic factors
• Exercise and prevention/treatment of Alzheimer’s and/or dementia

EXERCISE IN DIVERSE ENVIRONMENTS

Possible sub-topics:
• Environmental impact on individuals exercising in the heat
• Environmental impact on individuals exercising at high altitudes
• Environmental impact on individuals exercising in polluted environments
• Environmental impact on individuals exercising in cold environments
• Environmental impact on individuals exercising in water environments

TRAINING CONSIDERATIONS

Possible sub-topics
• Effects of de-training on cardiovascular fitness
• Effects of de-training on muscle fitness
• Does strength training affect cardiovascular function
• Effects of overtraining

PERFORMANCE ENHANCING DRUGS AND EXERCISE

Possible sub-topics
• Effects of creatine on training and performance
• Effects of anabolic steroids on training and performance
• Effects of smoking on training and performance
• Effect of caffeine on sport performance
• Effect of caffeine on endurance or strength performance
• Effect of growth hormones on exercise and sport performance

EXERCISE PRESCRIPTION FOR DIVERSE POPULATIONS

Possible sub-topics
• Effects of training on women during pregnancy OR Effects of training post pregnancy
• Role of physical activity in the prevention or treatment of childhood obesity
• Role of physical activity in children with Type II diabetes
• Exercise considerations for obese populations
• Exercise and prevention or treatment of hypertension
• Exercise and prevention or treatment for diabetic individuals
Please turn in this grade sheet along with your analysis of scientific literature #2 (and the grade sheet for that analysis assignment) plus a copy of the scientific article used (if directed by your instructor). Give all required information to your instructor at the start of your oral presentation.

1. Adherence to time guidelines
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

2. Organization of presentation/preparedness
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

3. Clarity and evidence of understanding the material
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

4. Effectiveness of oral presentation (delivered without excessive note reading)
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

5. Originality of material (not plagiarized from text or reference)
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

6. Adequate review of research articles
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

7. Ability to critically evaluate scientific research
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

8. Ability to define/demonstrate practical application of material
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

9. Effective use of visual aids/ability to interest audience
   - Poor: 0, .5, 1.5, 1.75
   - Excellent: 2

10. Appropriateness of nutrition/fitness article
    - Poor: 0, .5, 1.5, 1.75
    - Excellent: 2

11. Ability to compare & contrast article with other articles in group; include contributing to group summary and conclusions, as well as group introduction
    - Poor: 0-1
    - Below average: 2
    - Average: 3
    - Above average: 4
    - Excellent: 5

Total Points – Individual __________ / 25
Total Points – Group Average __________ / 25
GRAND TOTAL POINTS __________ / 50
CRITICAL EVALUATION OF CONSUMER PRODUCT

Purpose of the Assignment
To evaluate a printed or electronic advertisement in an effort to encourage the student to become a more critical consumer. The advertisement will be evaluated by comparing the claims made in the ad to scientific evidence and research findings.

Assignment Format
Page 1: Critical Evaluation of Consumer Product Grading Sheet
Page 2: Advertisement
   For Nutrition: your instructor will give a copy of the nutrition ad or URL in class. However, the original ad will be shown to the class so that actual colors and reference information can be noted.
   For Kinesiology: you will select your own kinesiology ad. Tape, glue, or staple the original advertisement to an 8.5 by 11 inch sheet of paper. Provide the source of the advertisement, giving title, page, and date of publication. Pick an advertisement that has some substance to it; the less the ad says, the harder it is to critique. Please note: Original advertisements should not come from library sources/magazines!

Pages 3-5/6: Evaluation
This section contains your evaluation of both the ad itself and the product advertised; it should be no longer than 3-4 pages. You should comment on the positive aspects (praise) and the negative aspects (criticism) of the ad. Your analysis should be in paragraph form and critical comments should be well developed. You should make limited use of quotations; references should be paraphrased. Be sure to cite and reference ad. If you use quotes, statements must be in proper form (e.g., use quotation marks and cite page for quoted material). You must cite your references, using APA format, to support your statements. In the text of your paper, author & year should be indicated. When 2 or more authors are cited, “et al.,” may be used as per APA format (however, remember to include all names on Reference Page.) For direct quotes, also include page numbers. See examples below:

According to Maughan et al. (2013), creatine supplementation has been shown to significantly increase total body mass in subjects over a 4-week period.

“Caffeine is a diuretic and also stimulates metabolism” (Williams, 2010, p.184).

When critically evaluating the product, consider the following questions, if appropriate, but do not limit your critique to only these questions:

- Is the use of this product supported by scientific evidence? If so, are there any conflicting results among various studies? Do the subjects’ age, health condition, fitness level, etc. match those for whom the ad is directed? Were there limitations and/or flaws in these studies? Describe the studies, as appropriate, to defend your statements and give evidence for or against the claims made in the ad.

- What, if any, contribution would the consumption of the product make to the nutrient intake, physique, or fitness level of the intended consumer?

- Could some less expensive product be used to obtain the same results?

- What hazards/adverse effects might be associated with the use of this product? Are there any conditions (e.g., medical, age-related) that would contraindicate the use of the product?
When critically evaluating the advertisement, comment on the text, and use of color and graphics. You need to also consider the following questions:

- Who appears to be the intended consumer?
- What techniques are used to draw the attention of the reader? Are they successful or not? Again, consider wording, terminology, graphics and more.
- Is the ad straightforward and factual? Explain.
- Is any important information omitted that should be disclosed to the consumer? What gimmicks are used to sell the product? Were the gimmicks successful?

Page 6 or 7:

References

Title- this is a separate page and should be headed “References” at the top center of the page.

List the source of the advertisement, and alphabetically list the references used to support your evaluation. Do not alphabetize “within” each reference by changing the original order of authors. However, alphabetize your order among the various references, using the last name of the 1st author of each reference.

You may use the course textbooks. However, in addition, you must use at least 3 other reliable (HIGH QUALITY) references to support your analysis. References need to be current (published within the last 10 years) and must be cited in the evaluation. Give the full publication information of each reference used, including all author(s), title of article and journal or title of book, year of publication, volume or edition, and page number(s).

Indention - Although the current Publication Manual advises standard (five spaces, first line) indention for the references list, this is primarily designed to make typesetting easier; the typeset version will have hanging indents (first line flush left, following lines five spaces indent). We recommend for this paper that you use hanging indents for enhanced readability. We have formatted our sample references list with hanging indents.

Capitalization - Capitalize only the first word of book titles and articles and the first word after a colon. However, for name of journals, capitalize first letter of all words.

Punctuation - Use a comma to separate:
  - surnames from initials
  - a journal title from volume number
  - a volume number from page numbers
  - when given, an issue number from page numbers
  - (Ed.) from book title
  - city of publication from state

Spacing - All entries (the entire page) should be double-spaced.

References should be completed in American Psychological Association (APA) format. See examples below.

Journal article:


Book (Other than first edition):


Article or chapter in edited book:

**Electronic Reference** (see note of caution below):


**Quality of References**: Acceptable references include any reliable, professional, nutrition, physical education, sports medicine, or scientific journal or book. Unacceptable references include popular magazines (e.g., *Runner’s World, American Health, Prevention, Muscle and Fitness*) or popular books (*The Zone Diet, Fit for Life, 50 Ways to Stay Fit on a Busy Schedule, Total-Life Exercise Book*). IF YOU ARE UNSURE OF THE RELIABILITY OF A REFERENCE, CHECK WITH YOUR INSTRUCTOR! Refer to the syllabus for a partial list of acceptable periodicals and on-line resources.

You may contact our Reference & Instruction Librarian, *see green sheet for contact information* to make an appointment at the library for help in using the databases and searching for appropriate references.

**Use of WWW pages**: The World Wide Web (WWW) is an unmonitored, refereed source of information. Consequently, information may be accurate or inaccurate, and each page must be judged for accuracy and reliability. Authoritative web pages are written by individuals with appropriate credentials (e.g., Ph.D., R.D., M.D., etc.) and should cite references used to write the page. Pages that are sponsored or maintained by the seller of a product are most often biased toward the product and should be read with this in mind. We highly recommend only journal articles (or articles coming from professional sources) from the internet be used. Again, if you are unsure of the reliability of the source, check with your instructor.

**General Paper Form and Style Guidelines**

Your paper must:

9 be written in narrative, paragraph format, typed and double spaced

10 be written in the 3rd person (do not use first or second person, such as “we”, “I” or “you”)

11 be written in the past tense when describing the research study

12 be in a font size that is New York Times 12 point or similar size (easy to read)

13 be left justified (but do not right justify/align, which centers the text); have 1 inch margins all around

14 have numbered pages

15 submitted in the manner requested by your instructor, including the grading rubric and plagiarism contract.
CRITICAL EVALUATION OF CONSUMER PRODUCT GRADING SHEET (please attach this sheet to the front of your paper)

Format/appearance/organization/complete information APA format

<table>
<thead>
<tr>
<th>Poor</th>
<th>0-1</th>
<th>2</th>
<th>3.5</th>
<th>4</th>
<th>5</th>
<th>Very Good</th>
</tr>
</thead>
</table>

References (number and quality)

| Poor | 0-1 | 2 | 3.5 | 4 | 5 |
|------|-----|---|-----|---|---|---|---|---|---|---|

Use of references in paper (appropriate citations for all references)

| Poor | 0-1 | 2 | 3.5 | 4 | 5 |
|------|-----|---|-----|---|---|---|---|---|---|---|

Quality of writing (syntax, grammar, spelling)

<table>
<thead>
<tr>
<th>Poor</th>
<th>0-5</th>
<th>6</th>
<th>7-8</th>
<th>9</th>
<th>10</th>
<th>Very Good</th>
</tr>
</thead>
</table>

Critical evaluation of advertisement (text, color, graphics)

<table>
<thead>
<tr>
<th>Poor</th>
<th>0-5</th>
<th>6</th>
<th>7-8</th>
<th>9</th>
<th>10</th>
<th>Very Good</th>
</tr>
</thead>
</table>

Critical evaluation of product (how claims of ad relate to scientific evidence)

<table>
<thead>
<tr>
<th>Poor</th>
<th>0-7</th>
<th>8-9</th>
<th>10-11</th>
<th>12-13</th>
<th>14-15</th>
<th>Very Good</th>
</tr>
</thead>
</table>

Subtotal

Deductions:

7 5 points are deducted for each day late, Monday through Friday

8 Deductions

Total possible points = 50

Your Total

PLAGIARISM CONTRACT

I acknowledge that I have not committed plagiarism in the process of writing this paper. I have cited the appropriate sources and given credit to the authors’ works. I also acknowledge that this paper is my own work and that I have not plagiarized or received answers from fellow classmates or other students. I understand that plagiarism will result in a ZERO for the paper, and other possible academic sanctions, including a report to the appropriate academic authorities.

Signature _________________________________ Date ____________