

San José State University
Departments of Nutrition, Food Science, & Packaging and Kinesiology
NuFS/KIN 163, Physical Fitness & Nutrition
Spring 2013, Sections 11 & 12

| Department | KIN | NUFS |
|--------------------------|---|---|
| Instructor | Michael Sullivan, MA | Renee Ryan, MS, RD |
| Office | SPX 301 | CCB 103 |
| Telephone | Email Preferred | 408-348-6376 |
| E-mail | Michael.sullivan@sjsu.edu | Renee.Ryan@sjsu.edu |
| Faculty Web Page | Use D2L | http://www.sjsu.edu/people/renee.ryan/courses/NuFS163/ |
| Office hours | M,W 7-8:30am | Wed 11am-Noon |
| D2L/Turnitin.com | Using D2L only | Using D2L only |
| Class days/time | SECTIONS 11&12: MW 1:30-2:45pm | |
| Classroom | Sect 11 Classroom: Clark Bld 229 Sect 12 Classroom: Boccardo Business Center 201 | |
| 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 or D2L sites

Copies of the course syllabus and major assignment sheets may be found on the respective faculty web sites.

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. Courses in Areas R, S, and V of SJSU Studies must be taken from three different departments or distinct academic units.

Course Goals and Student Learning Objectives (SLOs)

The Area R (Earth and Environment) General Education learning objectives: Upon successful completion of this course, students should be able to:

1. Demonstrate an understanding of the methods and limits of scientific investigation. The “Critical Analysis of Research Literature” assignment is keyed to this Area R SLO. This assignment requires students to comprehend the objectives/purposes of the study as well as the methods used to examine/study the problem. In addition, it requires students critically evaluate the strengths and weaknesses of the paper (including the research design, methods, and discussion) and to be able to see how the paper fits into the larger scope of literature on a particular topic.
2. Distinguish science from pseudo-science. Writing assignments keyed to this Area R SLO: Interpretation of marketing media based on current scientific evidence.
3. Apply a scientific approach to answer questions about the earth and environment. Assignment keyed to this Area R SLO: Oral presentation of primary research demonstrating the ability to answer questions about current research findings as they apply to fitness and nutrition.

Course Content 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. Describe the different exercise guidelines and nutritional requirements related to gender and diverse populations.
5. Apply and improve upon the basic skills of reading, writing, mathematics, speaking, critical thinking, and scientific research learned in Core GE courses.
6. Describe scientific methodology in the fields of nutritional science and exercise science.
7. Critically evaluate the credibility of current nutrition and exercise information using scientific research.
8. 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.

9. Assess the advantages/disadvantages of recent advances in new food formulations and new exercise and fitness testing equipment for the general population.
10. 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.
11. Identify the scientific principles involved in studying path physiology in human populations.
12. 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

Williams, M. H. (2010). Nutrition for health, fitness, and sport (10th ed.). Boston: McGraw-Hill. ISBN:0078021324 This text will be known as “W” in the proposed schedule. Ebook is available at a substantial savings through McGraw-Hill. Special SJSU loose leaf copy available for purchase at bookstore.

Fahey, T. D., Insel, P. M., & Roth, W. T. (2009). Fit & well (9th ed.). Boston: McGraw-Hill. ISBN: 9780077473952 This text will be known as “FIR” in the proposed schedule.

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. Peggy Cabrera is the Kinesiology reference librarian; peggy.cabrera@sjsu.edu; (408) 808-2034.

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 materials 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 semester, students will remain in their assigned classroom, and instructors will change sections.

SJSU Writing Center

The Writing Center in Clark Hall 126 offers tutoring services to San Jose State students in all courses. Writing Specialists assist in all areas of the writing process, including grammar, organization, paragraph development, coherence, syntax, and documentation styles. For more information, visit the Writing Center website at <http://www.sjsu.edu/writingcenter> or call 924-2308.

Student Technology Resources

Computer labs for student use are available in the new Academic Success Center located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Computers are also available in the Martin Luther King Library.

Learning Assistance Resource Center

The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. The Center's tutors are trained and nationally certified by the College Reading and Learning Association (CRLA). They provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group, individual, and drop-in tutoring are available. Please visit the LARC website for more information (<http://www.sjsu.edu/larc/>).

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](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html> for add/drop deadlines, policies, procedures, and specific registration information. The [late drop policy](http://www.sjsu.edu/aars/policies/latedrops/policy) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy>.

Assignments and Grading Policy

| Assignment | Points (%) | SLOs |
|---|------------|---------------------------|
| Exam 1 | 50 (11) | 3, 4, 6, 8, 9, 11 |
| Exam 2 | 50 (11) | 3, 4, 6, 8, 9, 11 |
| Exam 3 | 50 (11) | 3, 4, 6, 8, 9, 11 |
| Exam 4 | 50 (11) | 3, 4, 6, 8, 9, 11 |
| Critical Analysis of Scientific Literature #1 | 50 (11) | 1, 5, 6, 7, 8, 9 |
| Critical Analysis of Scientific Literature #2 | 50 (11) | 1, 5, 6, 7, 8, 9 |
| Critical Evaluation of Consumer Product #1 | 50 (11) | 2, 5, 6, 7, 8, 10, 11, 12 |
| Critical Evaluation of Consumer Product #2 | 50 (11) | 2, 5, 6, 7, 8, 10, 11, 12 |
| Oral Presentation | 50 (11) | 2, 5, 6, 7, 8, 9, 10, 11 |
| Total Points | 450 (100) | |

- 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 arranging a make-up date **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 work day (M-F), or partial calendar day, that assignments are late. Assignments will not be accepted 1 week past the due date.
- All assignments written outside of class must be typed, double spaced, and submitted to turnitin.com before turning in a hard copy at the start of class on the due date. You will receive a turnitin.com code and password for each half of the course.
- The [SJSU Writing Center](http://www.sjsu.edu/writingcenter/about) (<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.
- Guidelines for the Research Analyses of Scientific Literature, Critical Evaluations of Consumer Products, and Oral Presentation will be discussed in class and available on faculty web sites.
- **4 Papers:** 45%. 3000 words

| | |
|--|---------------------------|
| 2 Critical Evaluations of Consumer Products @ 3-4 pages each | 6-8 pages 1000-1500 words |
| 2 Research Analyses of Scientific Literature @ 3-4 pages each | 6-8 pages 1000-1500 words |
| Total | 12-16 pages |

- **4 Exam:** 45%
- There are two exams that evaluate knowledge of concepts relating to fitness and two exams that evaluate nutrition knowledge. The final exam is not cumulative.

Assignment of Grades

| | | |
|----------------------------|--------------------------|---------------------------|
| 97-100% (435-450 pts) = A+ | 93-96% (417-434) pts = A | 90-92% (403-416 pts) = A- |
| 87-89% (390-402 pts) = B+ | 83-86% (372-389 pts) = B | 80-82% (358-371 pts) = B- |
| 77-79% (345-357 pts) = C+ | 73-76% (327-344 pts) = C | 70-72% (314-326 pts) = C- |
| 67-69% (300-313 pts) = D+ | 63-66% (282-299 pts) = D | 60-62% (268-281 pts) = D- |
| Below 60% (0-267 pts) = F | | |

University Policies

Academic Integrity

The University's Academic Integrity policy is located at <http://www.sjsu.edu/studentconduct/>. Your own commitment to learning, as evidenced by your enrollment at San José State University and the University's integrity policy, requires you to be honest in all your academic course work.

Faculty members are required to report all infractions to the Office of Student Conduct & Ethical Development located at <http://www.sjsu.edu/studentconduct/>.

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://tutorials.sjlibrary.org/tutorial) web site at <http://tutorials.sjlibrary.org/tutorial>. (See the plagiarism tutorial for more information.)

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 the instructor as soon as possible. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the [Disability Resource Center](http://www.drc.sjsu.edu/) (DRC) at <http://www.drc.sjsu.edu/> to establish a record of their disability. The DRC is located in ADM 110 (408-924-6000 [voice] or 408-924-5990 [TDD]).

Resources

These peer-reviewed journals and on-line resources should be used for your written assignments and oral presentation.

Journals (partial list)

| | |
|--|---|
| American Journal of Clinical Nutrition | Journal of Health, Physical Education, Recreation & Dance |
| American Journal of Public Health | Journal of Nutrition |
| American Journal of Sports Medicine | Medicine and Science in Sports and Exercise |
| International Journal of Sports Medicine | New England Journal of Medicine |
| Journal of Athletic Training | Nutrition Reviews |
| Journal of the Academy of Nutrition and Dietetics | Physician and Sports Medicine |
| Journal of the American Medical Association | Research Quarterly for Exercise and Sport Science |
| Journal of the Strength and Conditioning Association | Sports Medicine |
| Journal of Food Science | Strength and Conditioning Journal |

On-Line Resources (partial list)

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|-------------------------------------|--|
| American College of Sports Medicine | www.acsm.org |
| Academy of Nutrition and Dietetics | www.eatright.org |
| American Medical Association | www.ama-assn.org |

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| Australian Institute of Sport | www.ais.org.au/sssm/index.asp |
| Centers for Disease Control | www.cdc.gov |
| Food and Drug Administration | www.fda.gov |
| Government Healthfinder | www.healthfinder.gov |
| International Food Information Council | www.ific.org |
| Medline: www.sjlibrary.org website for access to database | www.ncbi.nlm.nih.gov/pubmed/ |
| MyPlate.gov | www.myplate.gov |
| National Institutes of Health | www.nih.gov |
| New England Journal of Medicine | www.nejm.org |
| 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/en |

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

| DATE | TOPIC | READING ASSIGNMENTS | ASSIGNMENTS DUE |
|-----------------|---|--|--|
| Wed 1/23 | Course Overview & Introduction | Green sheet & Assignment Packet | |
| Mon 1/28 | Scientific Method | IFIC Article- on webpage W: pp. 26-29 <i>Discuss Analysis of Scientific Lit – see article on webpage.</i> <i>Discuss Consumer Product Ad – see add on webpage</i> | |
| Wed 1/30 | Guidelines for Sound Nutrition & Health | W: pp. 12-15, 36-44, 46-55 | |
| Mon 2/4 | Dietary Supplements | W: pp.17-22, 67-69, 296-308 | Sign-ups for Oral Presentation topics and dates |
| Wed 2/6 | Supplements cont.... | | |
| Mon 2/11 | Carbohydrates | W: pp. 121-137, 139-154, 157-162 | Analysis of Scientific Literature #1 DUE |
| Wed 2/13 | Carbohydrates cont. (<i>review for exam, if time</i>) | W: pp. 122-137, 139-154, 157-162 | |
| Mon 2/18 | EXAM 1 | | |
| Wed 2/20 | Fats | W: pp. 171-186, 195-210 | |
| Mon 2/25 | Protein | W: pp. 55-60, 217-234, 256-260 | Consumer Product Analysis #1 DUE |
| Wed 2/27 | Oral Presentations- Groups 1 & 2 | | Analysis of Scientific Literature #2 for those presenting DUE |
| Mon 3/4 | Oral Presentations- Groups 3 & 4 | | Analysis of Scientific Literature #2 for those presenting DUE |
| Wed 3/6 | Weight Control & Energy Balance | W: pp.416-443, 458-466, 470-475 | |
| Mon 3/11 | Weight Control & Energy Balance <i>cont....</i> | W: pp.416-443, 458-466, 470-475 | |

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|----------------------------|---|----------------------------|--|
| | <i>(review from exam, if time)</i> | | |
| Wed 3/13 | EXAM 2 | | |
| | <i>End of Nutrition Section Beginning of Fitness Section</i> | | |
| Mon 3/18 | Topics in Exercise Science, Scientific Research & Pseudo-Science & Analysis of Scientific Research Review | | |
| Wed 3/20 | Physical Fitness, Health & Wellness | FIR: Chap. 1 | |
| 3/25-4/1 | <i>Spring Break- No Lectures</i> | | |
| Wed 4/3 | Fitness Components, Principles of Fitness | FIR: Chap. 2 | |
| Mon 4/8 | Energy Systems | W: Chap. 3 FIR: Chap. 3 | Ad Approval |
| Wed 4/10 | Metabolism | W: Chap. 3 | |
| | Metabolic Calculations | W: Chap. 3 | |
| Mon 4/15 | Exam 3 | | |
| Wed 4/17 | Cardiorespiratory Endurance | FIR: Chap. 3 | |
| Mon 4/22 | Flexibility | FIR: Chap. 5 | |
| Wed 4/24 | Muscular Strength & Endurance | FIR: Chap. 4 | Consumer Product Analysis Paper #2 |
| Mon 4/29 | Muscular Str cont.. | | |
| Wed 5/1 | Body Composition | FIR: Chap. 6 | |
| Mon 5/6 | Program Design | FIR: Chap. 7 | |
| Wed 5/8 | Oral Presentation Groups 5 & 6 | | Analysis Paper #2 For Presentations |
| Mon 5/13 | Oral Presentation Groups 7 & 8 | | Analysis Paper #2 For Presentations |
| Tuesday, May 21 | Final Exam 12:15-2:30pm | | |

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 FITNESS

| DATE | TOPIC | READING ASSIGNMENTS | ASSIGNMENTS DUE |
|-----------------|---|---------------------------------|--|
| Wed 1/23 | Course Introduction | | |
| Mon 1/28 | Scientific Research & Pseudo-Science Analysis of Scientific Research | | |
| Wed 1/30 | Physical Fitness, Health & Wellness | FIR: Chap. 1 | |
| Mon 2/4 | Fitness Components, Principles of Fitness | FIR: Chap. 2 | Analysis of Scientific Research Paper #1 |
| Wed 2/6 | Energy Systems | W: Chap. 3 FIR: Chap.3 | Ad Approval |
| Mon 2/11 | Metabolism & Calculations | W. Chap. 3 | |
| Wed 2/13 | Exam 1 | | |
| Mon 2/18 | Cardiorespiratory Endurance | FIR: Chap. 3 | |
| Wed 2/20 | Flexibility | FIR: Chap. 5 | |
| Mon 2/25 | Muscular Strength & Endurance | FIR: Chap. 4 | Consumer Product Paper #1 |
| Wed 2/27 | Body Composition | FIR: Chap. 6 | |
| Mon 3/4 | Oral Presentations Groups 1 & 2 | | Analysis Paper #2 for those presenting |
| Wed 3/6 | Oral Presentations Groups 3 & 4 | | Analysis Paper #2 for those presenting |
| Mon 3/11 | Program Design | FIR: Chap. 7 | |
| | | | |
| Wed 3/13 | Exam 2 | | |
| | <i>End Fitness Section</i> <i>Beginning Nutrition Section</i> | | |
| Mon 3/18 | Course Overview & Introduction | Green Sheet & Assignment Packet | |

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|------------------------|--|---|--|
| Wed 3/20 | Scientific Method | IFIC Article- on webpage W: pp. 25-28 <i>Discuss Analysis of Scientific Lit for those still to do 2nd assignment</i> <i>Discuss Consumer Product Ad – see add on webpage.</i> | |
| 3/25-4/1 | <i>Spring Break- No Lectures</i> | | |
| Wed 4/3 | Guidelines for Sound Nutrition & Health | W: pp. 12-15, 36-44, 46-55 | |
| Mon 4/8 | Dietary Supplements | W: pp.17-22, 67-69, 296-308 | |
| Wed 4/10 | Supplements <i>cont....</i> | | |
| Mon 4/15 | Carbohydrates | W: pp. 121-137, 139-154, 157-162 | Consumer Product Analysis #2 DUE |
| Wed 4/17 | Carbohydrates cont. <i>(review for exam, if time)</i> | W: pp. 121-137, 139-154, 157-162 | |
| Mon 4/22 | EXAM 3 | | |
| Wed 4/24 | Fats | W: pp. 171-186, 195-210 | |
| Mon 4/29 | Protein | W: pp. 55-60, 217-234, 256-260 | |
| Wed 5/1 | Oral Presentations- Groups 5&6 | | Analysis of Scientific Literature #2 DUE for those presenting |
| Mon 5/6 | Oral Presentations- Groups 7&8 | | Analysis of Scientific Literature #2 DUE for those presenting |
| Wed 5/8 | Weight Control & Energy Balance | W: pp.416-443, 458-466, 470-475 | |
| Mon 5/13 | Weight Control cont. <i>(review for exam if time)</i> | W: pp.416-443, 458-466, 470-475 | |
| Tuesday, May 21 | Final Exam 12:15-2:30pm | | |