Department of Kinesiology San Jose State University Kin 162 – Advanced Fitness Assessment and Exercise Prescription Fall, 2015

Contact Information

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Office Hours:	MW 1045-1215
Class Days/Time:	Lecture TTh 1230-1320; Activity 1330-1420
Classroom:	Lecture and Activity - YuH 233
Prerequisites:	KIN 70 - Introduction to Kinesiology, BIOL 66 - Human Physiology, CHEM 30A - Introductory Chemistry or higher level chemistry course, and a general education mathematics course (Area B4), or equivalents.

Faculty Web Page and MYSJSU Messaging (Optional)

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my faculty web page at http://www.sjsu.edu/people/craig.cisar/courses/kin162/. You are responsible for regularly checking with the messaging system through MySJSU (or other communication system as indicated by the instructor) to learn any updates.

Course Description

In-depth study and analysis of the principles and techniques used in the assessment of physical fitness and health as well as the design of conditioning programs and physical activities.

Undergraduate Degree Program Learning Objectives (PLO)

At the end of a Bachelor of Science degree program in the Department of Kinesiology students should be able to:

1. obtain a critical understanding and the ability to apply theoretical and scientific knowledge from the subdisciplines in kinesiology for personal fitness, healthy lifestyles, sport, and/or therapeutic rehabilitation.

2. effectively communicate the essential theories, scientific applications, and ethical considerations related to kinesiology.
3. apply scholarship and practice of different movement forms to enhance movement competence in kinesiology.
4. recognize and apply sustainable approaches as they relate to kinesiology.
5. identify social justice and equity issues related to kinesiology for various populations.

Course Learning Outcomes

Upon successful completion of this course, students will be able to do the following.

1. Identify and explain the basic principles involved in the development and maintenance of cardiorespiratory fitness, muscular strength and endurance, flexibility, body composition, anaerobic power and capacity, speed, agility, and balance (PLO #1).
2. Design and apply individualized programs to improve cardiorespiratory fitness, muscular strength and endurance, flexibility, body composition, anaerobic power and capacity, speed, agility, and balance (PLO #1 and #3).
3. Explain and utilize the basic components of program design for a variety of sport skills and physical activities (PLO #1and #3).
4. Apply the concept of periodization to training in various sport skills and physical activities (PLO #1 and #2).
5. Perform appropriate techniques for participant screening and health appraisal including risk factors, which may require medical consultation prior to participation in exercise programs (PLO #1 and #2).
6. Perform cardiorespiratory, muscular strength and endurance, flexibility, body composition, anaerobic power and capacity, speed, agility, and balance exercise tests as well as utilize the information obtained from these tests in exercise program design (PLO #1, #2, and #3)..
7. Describe and perform different types of training programs such as programs for cardiorespiratory endurance, interval training, hypertrophy, strength, high force production and/or explosive power, speed and agility, plyometrics, muscular endurance, circuit training, flexibility, and balance (PLO #1).
8. Compare and contrast the impact of various modes of exercise on body composition and their use in weight control programs (PLO #1).
9. Sensitively identify and explain age, sex, and other individual differences, which should be taken into consideration when designing exercise programs to improve cardiorespiratory fitness, flexibility, body composition, muscular strength and endurance, anaerobic power and capacity, speed, agility, and balance (PLO #5).
10. Identify and demonstrate the proper biomechanics and techniques of training which are necessary to optimize training results and minimize the risk of musculoskeletal injuries (PLO #1 and #3).
11. Describe controversial exercises and appropriate exercise precautions (PLO #1).
12. Identify and explain the issues and principles underlying exercise compliance and motivation as well as other basic concepts related to exercise psychology (PLO #1).
13. Compare, contrast, and critically analyze fitness programs, exercise equipment, and training facilities (PLO #1 and #4).
14. Identify and explain the affects of environmental extremes on performance and exercise prescription (PLO #1).

15. Develop a comprehensive conditioning program based on needs analysis and fitness assessment (PLO #1 and #2).
16. Demonstrate effective communication skills necessary for fitness assessment and evaluation, exercise prescription, and program leadership (PLO #2).

Required Textbook and Course Reader

1. Cisar, C.J., Christensen, C.L., & Cisar, R.B. (2013). Advanced fitness assessment and exercise prescription notebook. San Jose, CA: Maple Press.
2. Coburn, J.W., & Malek, M.H. (Eds.) (2012). NSCA's essentials of personal training (2nd ed.). Champaign, IL: Human Kinetics.

Course Requirements and Assignments

1. SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found at http://www.sjsu.edu/senate/docs/S12-3pdf.
2. The first examination will be given in October and the second examination will be given at the end of the semester. The examinations will consist of objective questions (i.e., multiple choice, true-false, and matching questions). **EXAMINATIONS WILL BE GIVEN AT THE SCHEDULED TIME ONLY AND NO MAKE-UP EXAMINATIONS WILL BE GIVEN,** except for documented serious and compelling reasons.
2. Fitness screening and testing will be conducted during the course. Students will complete assessments and evaluations of health screening and exercise readiness, muscular strength and endurance, cardiorespiratory fitness, flexibility, anaerobic power and capacity, speed, agility, and balance. The fitness assessments and evaluations will be briefly summarized in a report, which will be submitted for grading on a credit/no credit basis. Reports will not be accepted late. The performance test protocols and evaluation standards are in the course reader textbook, and/or other supplemental course materials.
3. Students will be required to complete a class project during the semester that involves the development of a comprehensive 12-week conditioning program. Each student will develop a conditioning program for herself/himself based on a needs analysis from screening and assessment of muscular strength and endurance, cardiorespiratory fitness, flexibility, body composition, anaerobic power and capacity, speed, agility and balance. The program will be developed for one of these assessed components and will be graded on the following criteria: grammar and spelling, needs analysis completed, programs goals outlined, comprehensive 12-week mesocycle (i.e., types of training, identified microcycles, variations between microcycles, variations between microcycles, detailed workouts, and scientific principles used), and nutritional and/or weight control guidelines. Instructions for the class project are included in the course reader and/or other supplemental course materials. The class project is due on or before November 24, 2015. **CLASS PROJECTS WILL NOT BE ACCEPTED LATE,** except for documented serious and compelling reasons.

4. Students are expected to complete the in-class workouts as indicated in the tentative course schedule. The workouts need to be completed during the class period and they cannot be completed outside of class. Missed workouts cannot be made-up.

Grading Policy

Grades will be based solely on accumulated points from the examinations and application paper with total points allocated in the following manner.

	Points
Two Lecture Examinations - 30 Points Each (PLO #1, #3, #4, and #5)	60
Two Lab Examinations - 20 Points Each (PLO #1, #3, #4, and #5)	40
Subtotal	100
Laboratory Participation and Assignments (PLO #1, #2, #4, and #5)	5
Total	105

Final grades will be assigned according to the following allocation of total points.

A+	98-105	B+	88-89	C+	78-79	D+	68-69	F	≤ 59
A	92-97	B	82-87	C	72-77	D	62-67		
A-	90-91	B-	80-81	C-	70-71	D-	60-61		

Classroom Protocol

As previously stated students are expected to attend and participate the lecture and activity sections in which they are enrolled. The lecture and laboratory sessions will begin promptly at the scheduled time. Please limit cell phone use to class activities and emergency use only during class time. Cell phone use will not be allowed during exams and calculators cannot be shared during exams.

University Policies

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/**.** Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor's permission to record the course.

- "Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material."
    - Students have the permission of the instructor to make audio or video recordings of the lecture and laboratory presentations during the course.
    - During active participation in the laboratory sessions, permission from those students participating in the activity should be obtained from the participating students before they are video recorded.
- "Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent."

Academic integrity

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf 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 and Ethical Development. The Student Conduct and Ethical Development website is available 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 the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Integrity Policy S07-2 requires approval of instructors.

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 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

In 2013, the Disability Resource Center changed its name to be known as the Accessible Education Center, to incorporate a philosophy of accessible education for students with disabilities. The new name change reflects the broad scope of attention and support to SJSU students with disabilities and the University's continued advocacy and commitment to increasing accessibility and inclusivity on campus.

Tentative Course Schedule

Date	Day	Lecture Topic/Activity	Assigned Readings
8-20	Th	Course Introduction General Principles of Fitness and Wellness	CM-15 CR-3, 4
8-25	T	Evaluation of Health, Lifestyle, and Exercise Readiness	CM-9, 15 CR-5
8-27	Th	Measurement of Heart Rate, Blood Pressure, and Rating of Perceived Exertion During Exercise General Warm-Up and Cool-Down Guidelines	CM-11, 12, 16 CR-6, 7
9-1	T	Review of Muscle Anatomy and Biomechanics Choice of Resistance Training Exercises Muscular Strength and Endurance Assessment	CM-4, 11, 13, 15 CR-2, 8, 11, 12, 13, 14
9-3	Th	General Review of Exercise Testing and Evaluation Safety Factors Muscular Strength and Endurance Assessment	CM-10, 11, 13 CR-2, 8, 9, 10, 11
9-8	T	Review of Specific Exercise Test Protocols Resistance Training Workout	CM-11 CR-2, 15
9-10	Th	Review of Exercise Physiology Resistance Training Workout	CM-1, 2, 3, 13, 15 CR-2, 15
9-15	T	Resistance Training Program Design Resistance Training Workout	CM-13, 15, 23 CR-2, 16, 17
9-17	Th	Resistance Training Program Design Resistance Training Workout	CM-13, 15, 23 CR-2, 16, 17, 18
9-22	T	Resistance Training Program Design Resistance Training Workout	CM-13, 15, 23 CR-2, 16, 17, 18
9-24	Th	Systems of Resistance Training Resistance Training Workout	CM-13, 15, 23 CR-2, 19, 21
9-29	T	Cardiorespiratory Fitness Assessment	CM-10, 11; CR-9, 20
10-1	Th	Cardiorespiratory Fitness Program Design Endurance and/or Resistance Training Workout	CM-13, 14, 15, 16 CR-2, 21
10-6	T	Cardiorespiratory Fitness Program Design Review for Examination Endurance and/or Resistance Training Workout	CM-13, 14, 15, 16 CR-2, 21
10-8	Th	**Tentative First Lecture Examination**	

Date	Day	Lecture Topic/Activity	Assigned Readings
10-13	T	Flexibility Assessment	CM-11, 12; CR-22
10-15	Th	Flexibility Program Design	CM-11, 12; CR-22
10-20	T	Body Composition Assessment and Program Design for Weight Control	CM-7, 11, 19 CR-23, 24
10-22	Th	Body Composition Program Design for Weight Control Endurance and/or Resistance Training Workout	CM-7, 19 CR-2, 21, 24
10-27	T	Muscle Endurance Programs Resistance Training for Endurance Athletes Endurance and/or Resistance Training Workout	CM-13, 15 CR-2, 21, 25
10-29	Th	Interval Training Programs for Muscle Endurance and Speed Development Power, Speed, Agility, and Balance Assessment	CM-13, 15, 16, 17 CR-2, 25
11-3	T	Power and Speed Programs Power, Speed, and Agility Assessment	CM-13, 15, 17, 23 CR-2, 26
11-5	Th	Plyometric Training Plyometric Workout	CM-17 CR-2, 26
11-10	T	Functional Training – Overview Functional Training Workout	CM-12 CR-27
11-12	Th	Functional and Power Dumbbell Training Functional Training Workout	CM-12 CR-27
11-17	T	Special Populations (Sex and Age Considerations) Contraindicated Hazardous Exercises Power, Speed, Agility, and/or Balance Workout	CM-13, 14, 15, 16, 18, 21 CR-2, 21, 28, 29
11-19	Th	Effects of Nutrition and Performance Enhancing Substances on Performance and Exercise Prescription Power, Speed, Agility, and/or Balance Workout	CM-7, 13, 14, 15, 16, 17 CR-2, 21, 30
11-24	T	**Class Project Due** Environmental Effects on Human Performance Power, Speed, Endurance and/or Resistance Training Workout	 CM-2, 13, 14, 15, 16, 17 CR-2, 21, 31
11-26	Th	**No Class - Thanksgiving**	

Date	Day	Lecture Topic/Activity	Assigned Readings
12-1	T	Exercise Psychology	CM-8, 13, 15, 16
		Endurance and/or Resistance Training Workout	CR-2, 21, 32
12-3	Th	Strength Training and Conditioning Facilities	CM-24, 25
		Legal Issues	CR-2, 21
		Endurance and/or Resistance Training Workout	
12-8	T	Review of Training Adaptations	CM-5, 6; CR-33
		Personal Training	CR-34
		Endurance and/or Resistance Training Workout	CR-2, 21
12-15		**Second Lecture Exam from 12:15 – 14:30**	

Note: CM and number refer to the chapter in the Coburn & Malek textbook and CR and number refer to the section in the course reader.

Evaluation Summary Form for Class Project

Name _____

Purpose	_____
Organization	_____
Grammar and Spelling	_____
Creativity and Clarity of Project	_____
Needs Analysis Completed	_____
Programs Goals Outlined	_____
Comprehensive 12-Week Mesocycle	
Types of Training	_____
Identified Microcycles	_____
Variations between Microcycles	_____
Variations within Microcycles	_____
Detailed Workouts (e.g., choice & order of exercises, intensity & volume of training, rest intervals, warm-up/cool-down guidelines, etc.)	_____
Scientific Principles Used	_____
Nutritional and/or Weight Control Guidelines	_____
Overall Content and Depth	_____

Key: "+" = Above Average, "x" = Average,
"-" = Below Average.

Points Earned	_____
Grade	
≥ 18	A
16-17.9	B
14-15.9	C
12-13.9	D
≤ 11.9	F