

WAYNE STATE UNIVERSITY
COLLEGE OF EDUCATION

DIVISION: Kinesiology, Health and Sport Studies
www.kinesiology.wayne.edu

PROGRAM AREA: Exercise and Sport Science

COURSE: KIN 6320 - Fitness Assessment and Exercise Prescription

COURSE REFERENCE NUMBER: 21922

COURSE CREDIT: 3 Credit Hours

PREREQUISITE: An appropriate university level exercise physiology course (e.g., KIN 3570, KIN 5580, KIN 6310)

TERM/YEAR: Winter 2014

COURSE LOCATION: Room 0360 APHS Building
Room 1225 APHS Building (Exercise Physiology Laboratory)

TIME: Tuesday: 5:30pm-8:15pm

INSTRUCTOR: Hermann-J. Engels, Ph.D., FACSM

OFFICE LOCATION: 2337 APHS Bldg.

OFFICE EMAIL: Engels@wayne.edu

OFFICE PHONE: (313) 577-5896

OFFICE HOURS: Tuesdays 8:30am-10:30am & 3:00pm-5:00pm
Thursdays 8:30am-10:30am
and by appointment

COURSE DESCRIPTION: Physiological principles of physical fitness, including the assessment of physical fitness status and exercise prescription guidelines.

COURSE OUTCOMES: At the conclusion of the course the student will be able to:

1. Demonstrate an understanding of the normal risks associated with exercise testing and participation, including basic emergency and common health screening procedures.
2. Demonstrate an ability to take a 12-lead resting ECG and to accurately measure heart rate and blood pressure at rest and during exercise according to established guidelines.
3. Demonstrate an understanding of the quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness.
4. Demonstrate practical knowledge and administrative proficiency in the use of selected clinical and/or laboratory approaches designed to assess cardiorespiratory fitness, body composition, and other functional aspects (e.g., flexibility, neuromotor) in healthy adults.
5. Correctly interpret/critique information that is commonly obtained from standard fitness evaluation and other exercise related tests (e.g., body composition assessment) and discuss both the advantages and limitations underlying the use of each approach.
6. Design, implement, and evaluate individualized and group exercise sessions/programs designed to enhance selected facets of fitness, such as aerobic fitness, muscular strength and endurance, flexibility, body composition, etc. using scientifically based principles of exercise prescription.
7. Demonstrate an understanding of the normal physiological responses to acute exercise and describe the adaptations that occur at rest, during submaximal and maximal exercise following chronic exercise.
8. Differentiate between exercise prescriptions aimed primarily for health improvement versus maximizing physical fitness and athletic ability.
9. Perform standard metabolic calculations commonly used for fitness assessment and exercise prescription purposes.
10. Demonstrate an ability to prepare and administer a targeted educational presentation (using PowerPoint) on an assigned course related topic.
11. Show an advanced level of insight into the available literature on fitness assessment and exercise prescription.

REQUIRED TEXT:

- ACSM's Guidelines for Exercise Testing and Prescription. Baltimore, MD: Lippincott, Williams & Wilkins, 9th edition, 2014.

OTHER RECOMMENDED TEXTS:

- Heyward, V. H. *Advanced Fitness Assessment and Exercise Prescription*: Champaign, IL: Human Kinetics, (most recent edition).
- A contemporary general exercise physiology textbook.

COURSE POLICIES:

This course uses a blend of instructional methods consisting of lecture, lecture-discussion, and lab-based, practical clinical learning experiences (e.g., learning how to perform selected body composition and fitness assessment procedures). Students are expected to attend class regularly.

Course Assignments:

Students will be given regular assignments (readings, etc.) throughout the course of the semester and are expected to complete them as indicated.

Academic Dishonesty, Plagiarism and Cheating:

Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (<http://www.doso.wayne.edu/student-conduct-services.html>). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- Cheating: Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student's test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- Fabrication: Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
- Plagiarism: To take and use another's words or ideas as one's own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- Other forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student's access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

Enrollment / Withdrawal Policy:

In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. A WF grade will be awarded if the student is failing the course (based on work due to date) at the time the withdrawal is requested. A WN will be awarded if no materials have been submitted, and so there is no basis for a grade. The faculty member must approve the withdrawal request before it becomes final, and students should continue to attend class until they receive notification via email that the withdrawal has been approved.

Except for the medical withdrawal process, the last day to withdraw from the course will be the end of the 10th full week of classes (i.e., Saturday, March 22, 2014). Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: http://reg.wayne.edu/Withdrawing_From_a_Course.php

Religious Observance Policy:

Because of the extraordinary variety of religious affiliations represented in the University student body and staff, the Wayne State University calendar makes no provision for religious holidays. It is University policy, however, to respect the faith and religious obligations of the individual. Students who find that their classes or examinations involve conflicts with their religious observances are expected to notify their instructors well in advance so that alternative arrangements as suitable as possible may be worked out.

Attention Students with Disabilities:

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The SDS office is located at 1600 Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once you have your accommodations in place, SDS staff will be glad to meet with you privately during office hours to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at WSU. Please be aware that a delay in getting SDS accommodation letters for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to get your accommodation letters as early in the semester as possible.

Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student's accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

Student Services

- The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit www.success.wayne.edu for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).
- The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. To obtain information on tutors, appointments, and the type of help they can provide for you, visit <http://clasweb.clas.wayne.edu/writing>.

“Undergraduate” Compared to “Graduate” Credit:

Wayne State University requires that a distinction in course expectations is made between graduate and undergraduate students enrolled in the course. Therefore, students who are given graduate credit for the course are required to satisfactorily complete an additional instructor-approved assignment. See Dr. Engels regarding the specific assignment details.

EVALUATION/GRADING:

The FINAL COURSE GRADE will be determined from the total points achieved in the following grading areas:

Grading Area	Possible Points	Percent of Total Grade
“Group Fitness Evaluation” / “Case Study Evaluation” Report	75	25%
Exercise Prescription Project: Designing a Training Program	30	10%
Educational Presentation (PowerPoint) Assignment	75	25%
Integrative Written Examination (Closed and Open-Book)	120	40%
<hr/>		
For Graduate Level Students only: Mandatory Instructor-Approved Assignment	“Satisfactory” Grade = 0 point deduction “Not Satisfactory” Grade = 30 points deduction	
<hr/>		
Total	300	100%

Grades will be determined according to the following point system:

283 - 300 points = A	231 - 239 points = C+	201 - 209 points = D+
270 - 282 points = A-	219 - 230 points = C	189 - 200 points = D
261 - 269 points = B+	210 - 218 points = C-	180 - 188 points = D-
249 - 260 points = B		Less than 180 points = F
240 - 248 points = B-		

Note, the WSU grading procedures require that any graduate level student who earns less than a straight “C” grade (i.e., less than 219 points in the point system shown above) must be given a grade of “F.”

CLASS SCHEDULE

DATES	WEEK	TOPIC
1/07-1/14	1-2	Course Overview, Basic Emergency Procedures, Health Screening, Risk Stratification and Pre-Exercise Test Clinical Evaluations, Electrocardiography, Resting ECG and Blood Pressure
1/21-2/04	3-5	Principles and Methods to Assess Cardiorespiratory Fitness: Direct Measurement of VO_{2max} and Common Clinical/Field Tests to Estimate VO_{2max} , Introduction to Metabolic Calculations
2/11-2/25	6-8	Techniques to Assess Body Composition, Muscular Fitness and Flexibility Demonstrations of Hydrostatic Densitometry and/or Air Plethysmography Common Clinical Methods to Assess Body Composition: Anthropometry (skinfold, girth, etc.), Bioelectrical Impedance Analysis
3/4	9	“Mock” Practical Skill Testing with Class Critique “Group Fitness Evaluation” and “Case Study Evaluation Report” assignments are due
3/11		University Spring Break
3/18-4/08	10-13	Principles and Methods of Exercise Prescription Essential Concepts and Review of current ACSM Recommendations Selected Targeted Topics (Student Educational PowerPoint Presentations) Course Integration and Review
4/15	14	Integrative Written Examination (Closed and Open-Book)