

University of Louisiana at Lafayette  
College of Education  
Class Syllabus

Course: KNES 400 Measurement and Evaluation

Schedule: **Section 1**, TR, 1:30-2:45; LAB: 3:00-4:00 TR

**Instructor:** Dr. J.M. Clemons

**Semester:** Fall, 2006

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**Office Location:** Bourgeois Hall 125-B

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**Office Hours:** By appointment

**Course Description:**

KNES 400: Measurement and Evaluation (3,2,4)

Course is designed to give the students an understanding of the basic measurement and evaluation techniques in Physical Education and Exercise Science. Emphasis is placed on appropriate test selection, test construction, test administration and further emphasis on interpretation of test results using fundamental statistical procedures. Health profiles, physical fitness, sports skills and sports knowledge.

**Required Text:**

Morrow, J.R., Allen, J.W., Disch, J.G., Mood, D.P. (2005). Measurement and evaluation in human performance, 3rd. edition, Champagne: Human Kinetics.

***Conceptual Framework: The Responsive Professional***

The conceptual framework of the UL Lafayette College of Education is designed to expand upon the institution's commitment to be a responsive university. Teacher candidates are expected to demonstrate knowledge, skills, and dispositions associated with the four elements of a ***Responsive Professional***. Responsive Professionals demonstrate expertise in knowledge and practice. They are reflective practitioners who respect diversity and demonstrate a commitment to professionalism.

**Course Objectives and Corresponding Unit Outcomes:**

By the end of the course each student should be able to:

1. Provide precise and accurate definitions of measurement and evaluation and to describe the use of measurement and evaluation in Physical Education and Exercise Science. (K2)
2. Differentiate between norm-referenced and criterion-referenced measurement and formative and summative evaluation. (K2)
3. Define, describe and discuss the use of various types of measurement scales (i.e. frequency distributions, percentiles, percentile rank and methods of graphing frequency distributions).(K2)
4. Define and describe procedures for calculating measures of central tendency (mean, median and mode) and measures of variability (range and standard deviation).(K2)
5. Recognize and describe normal and skewed distributions.(K2)
6. Define and calculate z and T scores and provide examples of how they can and should be used.(K2)
7. Define and describe the concept of correlation and be able to calculate a Pearson Product Moment correlation and Spearman Rank Order Correlation and how these statistics are used in answering measurement related questions. (K2)
8. Define and describe different types of validity, reliability and objectivity.(K2)
9. Describe various types of test items for knowledge tests, including true-false, multiple choice, matching, short answer and essay items.(K2)
10. Describe the assumptions underlying construction of a valid knowledge test.(K2)

11. Identify factors affecting the weighing of test components and grade components.(K2)
12. Apply simple item analysis techniques (e.g., difficulty index and index of discrimination) and discuss their interpretation. (K2)
13. Carry out needs assessment in physical education classes. (K2)
14. Discuss the general problems associated with grades in physical education, including the incorporation of psychomotor improvement into physical education grading. (K2)
15. Discuss the development of a battery of skills tests. (K2)
16. Define, describe and effectively measure health and skill related fitness in school and non-school settings. (K2)
17. Utilize fundamental statistical procedures to assist in understanding and explaining cognitive and psychomotor performance(K2, K7, K8, D4, DISP 7, DISP 8).

### **Course Requirements:**

#### **Attendance Policy**

The university allows each faculty member to determine what constitutes excessive absences (excused or unexcused) as long as it is not less than 10% of the total number of class meetings (Undergraduate Bulletin, 2005-2007, Vol. 82, Number 1, April, 2005, page 443-444). Students enrolled in classes that meet two times per week will be allowed **three** absences (excused or unexcused). For this class, excused absences will be defined as: (1) illness [documented by a health professional], (2) serious accident [documented by police report or injury report] (3) required attendance at an authorized university sponsored event [documentation required] (4) or permission from the Instructor **PRIOR** to the class that is to be missed. Make up or extra credit is not allowed for unexcused absences.

If you exceed three absences, no points will be deducted from your grade (i.e., you will receive exactly what you earn for the class based upon the standard grading scale outlined below). If; however, grade adjustments or grade curves are instituted, you will **NOT** be allowed to benefit from such adjustments whether it occurs on a regular exam, final exam or in calculation of final grades. Upward adjustment of test scores is **NOT** an entitlement and will only be applied to those who meet the attendance standards outlined in this syllabus. It makes no sense to statistically enhance grades of students who miss class excessively.

**Punctuality:** Life is not predictable, therefore, it's understandable that on occasion one may be late; however, in doing so, it is likely to result in being marked absent due to the roll being called at the beginning of class. It is your responsibility to advise the Instructor when you come in late rather than attempt to slip in undetected. A revision of the attendance record should be made on the day the tardiness occurs and you should witness the instructor making the correction. Attempting to convince the teacher later in the semester that you were present on a date that you were marked absent is likely to be futile. Being late once will be tolerated; however, there will be a penalty of one unexcused absence thereafter. Please be on time, In a TR. class of 30 students; if each student was late just once a semester, the class would be disrupted every day throughout the entire semester. For this reason, a person who is late twice will be given an unexcused absence and each time thereafter will result in another unexcused

#### **PASS-PORT Artifacts: TBA**

#### **Field Experiences: Outside Project – see attached handout**

#### **Technology Integration: Moodle (can be accessed through Ulink)**

#### **Course Evaluation:**

All written tests will be objective (i.e., combinations of either multiple choice, true/false and matching). Four exams approximately 50 points each are expected, however, additional exams may be scheduled depending upon how much material is covered during the semester. All exams will be taken on

Scantrons. In addition, you will have a Lab Project that will involve work conducted both inside and outside of class that will be weighted equivalent to a written test (approx. 50 pts.) This project requires that you be actively involved with a teacher, coach, fitness professional, physical therapist, athletic trainer, in the administration, analysis and interpretation of cognitive and/or psychomotor tests. These tests should be carefully selected for the setting in which you intend to be working. Instructor approval prior to involvement would be wise.

**Grading Scale:**

90% of total possible points	A
80%	B
70%	C
60%	D
<60%	F

**Professional Associations:**

- American Alliance of Health, Physical Education, Recreation and Dance
- Louisiana Association of Health, Physical Education, Recreation and Dance

**Professional Journals:**

- Measurement in Physical Education and Exercise Science
- Journal of Health, Physical Education, Recreation and Dance
- Research Quarterly for Exercise and Sport

**Related Materials and Resources:**

All course materials and resources are on Moodle.

**Emergency Evacuation Procedures**

A map of this floor is posted near the elevator marking the evacuation route and the Designated Route Area. This is an area where emergency service personnel will go first to look for individuals who need assistance in exiting the building. Student who may need assistance should identify themselves to the teaching faculty.

**Academic Honesty**

The College of Education adheres to the policy on academic honesty as outlined on page 427 in the Undergraduate Bulletin (2003-2005) .

**Students Requiring Special Accommodations**

Students requiring special accommodations must register with the Office of Services for Students with Disabilities and provide official documentation to the instructor in a timely manner.

### Example of Semester Schedule:

Week 1	Introduction to the course and review of course requirements; Reasons for measurement, evaluation and assessment by the physical educator and allied health professionals; The need for Statistics.
Week 2	Statistical terms, measurement scales, normal distribution theory,
Week 3	Measures of central tendency, measures of variability
Week 4	Frequency distributions with interval sizes $\geq 1$ , percentiles, graphing, standard scores.
Week 5	Investigating the Relationship of and Differences in Scores: correlation (inverse and direct): Pearson Product Moment, significance of the correlation, coefficient of determination.
Week 6	Spearman Rank Difference Correlation, Hypothesis testing, testing for significant difference between two independent means.
Week 7-8	Standard error of the Mean; Testing for difference between two dependent means
Week 9-10	What is a Good Test? Norm referenced and criterion referenced measurement, validity, reliability, objectivity, procedures for determining validity and reliability coefficients.
Week 11-12	Construction of Knowledge Tests: Steps in construction of a test (i.e., planning, test administration)
Week 13	Creating test items (multiple choice, true/false, short answer and matching), item analysis (difficulty index and index of discrimination).
Week 14	Assessing and Grading Students: Authentic assessment, grading, use of grades, factors used in grading (affective, cognitive and psychomotor)
Week 15	Criteria for grades, norm referenced grading, criterion referenced grading, weighting grades and reporting grades.