Trinity International University
College of Arts and Sciences
School of Human Performance and Wellness
HPW 454X - Measurement, Research, Statistics, & Technology
May Term 2007

Instructor: Josh Thomas, M.S. (x7114)
HPW Office Coordinator: Carol Larson (x6925)
Office Hours: TBD
Time & Place Class Meets: MTWRF 1 – 4pm, Johnson Hall (J122)
Laboratory: To be incorporated in lecture

Course Description: A lecture/laboratory approach to the measurement techniques, instruments, research methodology, and technology used in the field of human performance and wellness/health science. The course focuses on test selection/construction criteria, standardized tests, and techniques employed in the measurement of the cognitive, affective, and psychomotor domains. Common statistical models are used to evaluate the measurement results which are applied in the process of exercise prescription and wellness counseling. Laboratory is included. Prerequisites: HPW 228X (for SWM majors only), HPW 351X, and current Community First Aid and CPR certification (or acceptable equivalent). Laboratory fee. Offered fall semester. Three hours.

Textbook:
Measurement by the Physical Educator, David K. Miller, McGraw-Hill, 5th edition.

Course Objectives:
Upon completion of this course, students will be able to:
Primary Focus
1. Evaluate the effects of conditioning and training on body systems. (IL-CAS 1G)
Assessment/Evidence: written exams, laboratory assignments
2. Know developmentally appropriate assessment strategies and instruments to assess health-related fitness standards. (IL-CAS 2B)
Assessment/Evidence: written exams, laboratory assignments
3. Understand assessment is an integral part of instruction to provide feedback to learners. (IL-CAS 2C)
Assessment/Evidence: written exams, laboratory assignments
4. Assess learner progress in health-related fitness development. (IL-CAS 2E)
Assessment/Evidence: laboratory assignments
5. Select developmentally appropriate assessment strategies and instruments congruent with physical education learning goals. (IL-CAS 6D)
Assessment/Evidence: laboratory assignments
6. Use a variety of formal and informal assessment techniques to assess learner progress. (IL-CAS 6G)
Assessment/Evidence: homework assignments, laboratory assignments
7. Recognize developmentally appropriate assessment strategies and instruments congruent with physical activity learning goals. (IL-CAS 7F)
Assessment/Evidence: class research project
8. Use a variety of formal and informal assessment techniques to assess learner progress. (IL-CAS 7M)
Assessment/Evidence: class project
9. Recognize assessment procedures for program evaluation. (IL-CAS 9C)
Assessment/Evidence: class project, laboratory assignments
10. Follow measurement concepts including validity, reliability and bias. (IL-CAS 10F)
Assessment/Evidence: written exams
11. Identify a variety of assessment procedures for student and instructional evaluation. (IL-CAS 10G)
Assessment/Evidence: written exams
12. Define and explain the purpose and importance of tests, measurement, and evaluation.
13. Differentiate between cognitive, psychomotor, and affective domains as they relate to human performance.
14. Identify the role of computers as it is utilized in exercise science and physical education.
15. Calculate descriptive statistics from data.
16. Illustrate and communicate data.
17. Calculate statistics to determine the relationship between variables.
18. Perform basic inferential statistics to test a hypothesis.

19. Describe the meaning and the relationship between reliability, validity, objectivity and sensitivity with reference to data.
20. Define criterion - referenced tests and explain the advantages and the disadvantages of criterion-referenced measurement.
21. Utilize appropriate methods for determining a final evaluation.
22. Plan, construct, administer and score a written exam.
23. Understand the difference between experimental and descriptive research.
24. Design, conduct, evaluate, and interpret surveys and questionnaires.
25. Understand the basics of qualitative research.

Secondary Focus

1. Establish appropriate criteria and select tools for evaluation of a given program. (IL-CAS 9I)
2. Discusses ethical guidelines for decision making in various physical education settings. (IL-CAS 12C)

Assignments:
It is expected that all assignments will be completed and turned in at the beginning of the class period at which they are due. LATE ASSIGNMENTS WILL BE ACCEPTED, BUT WITH A PENALTY.

Grading Plan:
Exams: 3 x 125 points
Homework and in class exercises: 100 points
Research paper/project: 100 points
575 Points total

Attention Athletic Training Students: Attached is the NATABOC educational competencies that have been assigned and will be covered in this class.

Grading Scale:
A: 90% - 100%
B: 80% - 89%
C: 70% - 79%
D: 60% - 69%
F: Below 60%

Important Dates:

May 18	Exam #1
May 28	Memorial Day - No Class
May 25	Exam #2
May 30	Research Project Due
June 1	Final Exam