

EPE 413/598 Qualitative Analysis in Sport Biomechanics
Course Syllabus, Spring 2002, SL# 76272 (413), 58527 (598)

Class web page: www.public.asu.edu/~hinrichs/classes/epe413-598/

I. **INSTRUCTOR:** Dr. Rick Hinrichs (PEBE 206, 965-1624, hinrichs@asu.edu)

Office hours: Mon 1:40-3:00 PM, Wed 10:40-11:20 AM, Fri 7:30-8:30 AM
(or by appointment—sign up on my office door)

II. **COURSE DESCRIPTION AND OBJECTIVES**

The purpose of this course is for the student to develop an ability to perform systematic qualitative analyses of selected athletic performances and other human movements. In doing so, the student should acquire observational skills and be able to detect and correct faults in technique that limit human performance. In addition, the student should become increasingly aware of the latest research findings pertaining to the biomechanics of selected sports.

III. **COURSE REQUIREMENTS AND WEIGHTING SCHEME**

	<u>413</u>	<u>598</u>
1. Exam 1	22%	18%
2. Exam 2	22%	18%
3. Final exam	32%	28%
4. Written assignments	14%	20%
5. Final project	10%	16%

The written assignments include qualitative analyses, lab reports, and other written work. Each written assignment will have a specific due date. A 5% deduction will be made each 24-hour period an assignment is turned in late (beginning at the start of class on the due date). The final project will involve an individualized qualitative analysis of a certain motor skill or sports performance of the student's choice. All projects must be approved by the instructor before the midterm exam. Those receiving graduate credit (598) will be expected to go into more detail in the analyses and provide longer written reports than those receiving undergraduate credit (413). In addition, all graduate students in EPE 598 will make an oral presentation of their final projects in front of the class.

IV. **COURSE EVALUATION**

The above weighting scheme will be used to compute an overall average score for each student. The minimum grade requirements for the course are as follows:

“A” - achieve an overall average of 85% - 100% on all work.

“B” - achieve an overall average of 73% - 85% on all work.

“C” - achieve an overall average of 60% - 73% on all work.

“D” - achieve an overall average of 50% - 60% on all work.

V. **TEXTBOOKS**

Hay, J.G. (1993). *The Biomechanics of Sports Techniques* (4th edition), Englewood Cliffs, NJ: Prentice Hall.

Hay, J.G. & Reid, J.G. (1988). *Anatomy, Mechanics, and Human Motion* (2nd edition), Englewood Cliffs, NJ: Prentice Hall [Primarily Chapters 15, 16 and Appendix E].

[Supplemental readings may be assigned. Note the Hay & Reid book is also available on reserve at Noble Science Library under EPE 335 (Hinrichs). See [course outline](#) (over or next page).]

**Qualitative Analysis in Sport Biomechanics
Spring 2002**

Course Outline

<u>Topic</u>	<u>Base Readings</u> [*]
1. Introduction to Qualitative Analysis	Hay & Reid Ch 15, App E
2. Activities Involving Vertical Jumps: Basketball, Volleyball, and High Jump	Hay Ch 9 and pp. 440-452
-----Exam 1 (Approximate timing: Week 6)-----	
3. Running and Long Jump	Hay Ch 15 and 16, Hay & Reid Ch 16
4. Swimming	Hay Ch 7 and 14
-----Exam 2 (Approximate timing: Week 11)-----	
5. Activities Involving Airborne Rotations: Diving and Gymnastics	Hay Ch 12, Hay & Reid Ch 16
6. Activities Involving Throwing: Baseball, Shot Put, Discus	Hay Ch 8 and 17
-----Final Exam (Monday May 6, 7:40-9:30 AM)-----	

^{*} Readings from the textbooks. Additional readings may be assigned.