

KIN 334—Functional Anatomy and Kinesiology
Course Syllabus, Fall 2004, SL# 07510

Instructor: Dr. Rick Hinrichs (hinrichs@asu.edu)

Class Meeting Times: TTh 9:15-10:30 AM (PEBE 211)

Office: PEBE 206 **Phone:** 480-965-1624

Office hours:

M 2:00-3:00 PM, **W** 10:00-11:00 AM,
Th 8:00-9:00 AM, or by appointment.
 Please use sign up sheet on my office door.

Class web page: www.public.asu.edu/~hinrichs/classes/kin334

Overview and Objectives:

This course deals with the study of muscles as they are involved in the science of human movement. Since muscles attach to bones through tendons, both skeletal and muscular structures are involved. *It is assumed that the student has already completed a basic human anatomy course (i.e., BIO 201 or equivalent).* At the completion of this course the student should be able to (1) identify on a human skeleton and/or a living subject the most important bones and bony features for the major joints of the body, (2) label the important bones and bony features on a skeletal chart, (3) draw and label major muscles on a skeletal chart, (4) identify and palpate these muscles on a human subject, (5) list and organize the muscles that produce the primary movements for all the major joints of the body, and (6) analyze basic movements in terms of muscle actions. Information will also be presented on how to strengthen and stretch most of these muscles.

Textbooks and Videos:

Required Texts (available in the bookstore):

[H] Hamilton N. & Luttgens, K. (2002). *Kinesiology, Scientific Basis of Human Motion* (10th ed.), Boston, McGraw Hill.

[T]: Thompson, C.W. & Floyd, R.T. (2004). *Manual of Structural Kinesiology* (15th ed.), Boston, McGraw Hill.

Optional Text and Videos (also available in bookstore; check out videos at [Video Resources](#) room in ECA 100):

[M]: Moore, K.L. & Agur, A.M.R. (2002). *Essential Clinical Anatomy*, Philadelphia: Lippincott Williams & Wilkins.

[A]: Acland, R.D. (1996-99). *Video Atlas of Human Anatomy* (Tapes 1-4), Baltimore: Williams & Wilkins.

Topical Outline and Reading Assignments (see abbreviations above)

	H	T	M	A
1. Review of directional terms, planes, axes, and movement descriptions	Ch. 2	Ch. 1	Ch. 1	—
2. Basic muscle mechanics, factors affecting muscle moments about joints	Ch. 3, 13	Ch. 2, 3	Ch. 1	—
3. Muscles surrounding the shoulder girdle	Ch. 5	Ch. 4	Ch. 7	Tape 1
4. Muscles surrounding the shoulder (glenohumeral) joint	Ch. 5	Ch. 5	Ch. 7	Tape 1
5. Muscles surrounding the elbow and radioulnar joints	Ch. 6	Ch. 6	Ch. 7	Tape 1
6. Muscles surrounding the wrist joint and hand	Ch. 6	Ch. 7	Ch. 7	Tape 1
7. Kinesiological/muscle analyses of upper extremity movements and exercises	Ch. 3,5,6, App. H	Ch. 8	—	—
8. Muscles surrounding the hip joint and pelvic girdle	Ch. 7	Ch. 9	Ch. 6	Tape 2
9. Muscles surrounding the knee joint	Ch. 8	Ch. 10	Ch. 6	Tape 2
10. Muscles surrounding the ankle joint and foot	Ch. 8	Ch. 11	Ch. 6	Tape 2
11. Muscles surrounding the trunk and spinal column	Ch. 9	Ch. 12	Ch. 3,5	Tapes 3,4
12. Kinesiological/muscle analyses of lower extremity, trunk, and whole-body movements and exercises	Ch. 3, 7-9, App. H	Ch. 13	—	—

Note: Additional (supplemental) readings and exercises may be assigned. You will be informed of the location of these readings at the time they are assigned. Note: "Dynamic Human" CD-ROM is an excellent study tool, and is included with both H and T textbooks (**new books only**). Hence you should purchase at least one of these books new.

Evaluation:

Exam 1 (Approximately week 6 or 7, after topic 5 above)	24%
Exam 2 (Approximately week 11 or 12, after topic 9 above)	24%
Final Exam (Comprehensive, Thursday Dec 9, 7:40-9:30 AM, no exceptions)	36%
Written Work (Assignments, quizzes, and other misc. work)*	16%

Approximate grade cutoffs for overall weighted average score:

A+: 93%, A: 89%, A-: 86%, B+, 83%, B: 79%, B-: 75%, C+: 71%, C: 64%, D: 53%

* **Policy on late assignments (late penalties):** All written work will have a specific due date. A 5% deduction will be made for each 24 hours (beginning at the *start* of the class period on the due date) that an assignment is turned in late (note that Monday is considered one day later than Friday). *Neither missing class nor arriving late for class on the day an assignment is due prevents you from incurring a late penalty.*