

**Montana State University**  
**Department of Health and Human Development**  
**Course Syllabus**

**HDPE 320**  
**Anatomical Kinesiology**

**Fall 2004**

**Meets: 401 Reid Hall T / Th 8:00 - 9:15 pm**

**Instructor:** Mike Hahn, Ph.D.

**Office:** 103A Romney

**Office Hours:** T 1:00-2:00; W 1:00-3:00; Th 10:00-11:00

**Phone:** 994-7154

**E-Mail:** [mhahn@montana.edu](mailto:mhahn@montana.edu) (best way to reach me)

**Text:** Oatis: Kinesiology: The mechanics and pathomechanics of human movement  
Thompson & Floyd: Manual of structural kinesiology

**Course Description:**

This course provides an introduction to the principles of biomechanics, and develops a practical understanding of the anatomical structures critical to upper and lower extremity motion in humans.

**Course Objectives:**

Upon completion of this course, each student should be able to:

- 1) Use precise, well-defined terminology to describe motion.
- 2) Understand linear and angular descriptors of human motion (kinematics).
- 3) Understand the relationship between linear and angular characteristics of motion.
- 4) Understand the basic causes of human movement (kinetics).
- 5) Qualitatively analyze movements in clinical and sport applications.

**Grading Criteria:**

Laboratory	30%
Assignments	15%
Exam 1	15%
Exam 2	20%
Final Exam	20%

Course grade will be on the following scale:

<b>A</b>	90-100%
<b>B</b>	80-89%
<b>C</b>	70-79%
<b>D</b>	60-69%
<b>F</b>	<60%

- Class assignments will be given throughout the course. Your required attendance ensures your knowledge of their content and due dates.
- Late assignments will be penalized by **one** letter grade.
- Make-up tests will **only** be allowed if **pre-approved** by instructor.

**Course Schedule:** \*\* Any necessary adjustments to this schedule will be announced in class.

Week	Date	Lecture Topic	Lab	Readings
1	Aug. 30-Sept. 3	Introduction Biomechanical Principles	<b>No Labs</b>	Ch. 1
2	Sept. 6-10	Material Properties <b>No Class on Thursday</b>	<b>No Labs</b>	Ch. 2
3	Sept. 13-17	Mechanics of Bone Mechanics of Muscle	<u>Lab #1:</u> Shoulder	Ch. 3 Ch. 4
4	Sept. 20-24	Mechanics of Soft Tissue Mechanics of Joints	<u>Lab #2:</u> Elbow	Ch. 5 Ch. 6
5	Sept. 27-Oct. 1	General Descriptions of Motion Review	<u>Lab #3:</u> Hand/Wrist	Ch. 7
6 **	Oct. 4-8	<b><u>Exam #1 (Oct. 5<sup>th</sup>)</u></b> <b>Shoulder</b> Intro.	<b>No Lab</b> <u>(exam week)</u>	Ch. 8
7	Oct. 11-15	<b>Shoulder</b> - Structure/Function - Mechanics/Pathomechanics	<u>Lab #4:</u> Upper Extremity Quiz	Ch. 9
8	Oct. 18-22	<b>Elbow</b> Intro. - Structure/Function	<u>Lab #5:</u> Hip	Ch. 11
9	Oct. 25-29	<b>Elbow</b> - Mechanics/Pathomechanics <b>Hand/Wrist</b> Intro.	<u>Lab #6:</u> Knee	Ch. 12 Ch. 14
10	Nov. 1-5	<b><u>Election Day (11/2)</u></b> <b>Hand/Wrist</b> - Structure/Function	<u>Lab #7:</u> Foot/Ankle	Ch. 14
11	Nov. 8-12	<b>Hand/Wrist</b> - Mechanics/Pathomechanics <b><u>Veterans Day (11/11)</u></b>	<u>Lab #8:</u> Lower Extremity Quiz	Ch. 15
12 **	Nov. 15-19	<b><u>Exam #2 (Nov. 16<sup>th</sup>)</u></b> <b>Hip</b> Intro. - Structure/Function	<b>No Labs</b> <u>(exam week)</u>	Ch. 38
13	Nov. 22-26	<b>Hip</b> - Mechanics/Pathomechanics <b><u>Thanksgiving Break</u></b>	<b>No Labs</b>	Ch. 39
14	Nov. 29-Dec. 3	<b>Knee</b> Intro. - Structure/Function - Mechanics/Pathomechanics	<u>Term Projects</u>	Ch. 41 Ch. 42
15	Dec. 6-10	<b>Foot/Ankle</b> Intro. - Structure/Function - Mechanics/Pathomechanics	<u>Term Projects</u>	Ch. 44 Ch. 45
Finals	Dec. 13-17	<b><u>Final Exam.</u></b> Dec 17 <sup>th</sup> , 2:00 – 3:50		