DEPARTMENT OF PHYSICAL EDUCATION AND KINESIOLOGY

COURSE OUTLINE – WINTER 2013

PE2060 - BIOMECHANICS

INSTRUCTOR:	Leigh Goldie	**PHONE:**	780-539-2978
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OFFICE HOURS:	Call or e-mail for appointments		

PREREQUISITE(S)/COREQUISITE: none

REQUIRED TEXT/RESOURCE MATERIALS: McGinnis, P. 2005. Biomechanics of sport and exercise, 2nd ed. Windsor: Human Kinetics.

CALENDAR DESCRIPTION: This course presents a method of qualitative analysis of human movement based on knowledge of biomechanical principles.

CREDIT/CONTACT HOURS: 3 (3-0-1). 3 hours lecture and 1 hour lab.

DELIVERY MODE(S): Classroom lectures and seminars.

OBJECTIVES (OPTIONAL):

1. Identify mechanical principles governing human motion.
2. Identify critical features of selected sport skills.
3. Design and carry out an observation plan.
4. Determine faults in observed performance.

TRANSFERABILITY: PEDS 206(3) – U of Alberta
Jr. KNES (3) – U of Calgary
KNES 3650 (3) – U of Lethbridge

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	**4-point Equivalent**	**Percentage Guidelines**	**Designation**
A^+	**4.0**	**90 – 100**	**EXCELLENT**
A	**4.0**	**85 – 89**	
A^-	**3.7**	**80 – 84**	**FIRST CLASS STANDING**
B^+	**3.3**	**77 – 79**	
B	**3.0**	**73 – 76**	**GOOD**
B^-	**2.7**	**70 – 72**	
C^+	**2.3**	**67 – 69**	**SATISFACTORY**
C	**2.0**	**63 – 66**	
C^-	**1.7**	**60 – 62**	
D^+	**1.3**	**55 – 59**	**MINIMAL PASS**
D	**1.0**	**50 – 54**	
F	**0.0**	**0 – 49**	**FAIL**
WF	**0.0**	**0**	**FAIL, withdrawal after the deadline**

***There might be slight deviations from this system in the conversion of percentage grades to alpha grades depending on the grouping of marks within the class.

EVALUATIONS:

Skill Analysis projects	20%
Lab Assignments	10%
Test # 1 - Mon. Jan. 28	15%
Test # 2 - Wed. Mar. 6	15%
Test # 3 - Mon. Apr. 8	15%
Test # 4 - Final Exam Week	25%
	100%

STUDENT RESPONSIBILITIES: All assignments must be submitted on time. Late assignments will not be accepted. If a student has to miss a class for any reason, it is the responsibility of the student to contact the instructor.

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the Student Conduct section of the College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

**Note: all Academic and Administrative policies are available on the same page.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Chapter 1 – Forces: Maintaining Equilibrium or Changing Motion

Chapter 2 – Linear Kinematics – Describing Objects in Linear Motion

Chapter 3 – Linear Kinetics – Explaining the Causes of Linear Motion

Chapter 4 – Work, Power & Energy: Explaining the causes of Motion without Newton

Chapter 5 – Torques & Moments of Force: Maintaining Equilibrium or Changing Angular Motion

Chapter 6 – Angular Kinematics: Describing Objects in Angular Motion

Chapter 7 – Angular Kinetics: Explaining the Causes of Angular Motion

Chapter 8 – Fluid Mechanics: The Effects of Water and Air

Chapter 13 – Qualitative Biomechanical Analysis to Improve Technique

Chapter 14 – Qualitative Biomechanical Analysis to Improve Training