The University of British Columbia
School of Human Kinetics

HKIN 371 – 2007

INTRODUCTION TO STATISTICS

Instructor: Dr. Peter Crocker

Office Hours: Monday/Wednesday – 9:30-10:30 a.m.
Or after class, or by appointment.

Class: Monday, Wednesday, Friday 11:00 – 12:00

Course Description:

This course cover the following themes: descriptive statistics, normal curve, sampling error, sampling, population-sample relationships, hypothesis testing, basic passive-observation design, statistical inference, standard error, confidence intervals, correlations, regression, multiple regression, analysis of variance (ANOVA), Chi-square and other select nonparametric analysis.

Learning Outcomes:

The purpose of this course is to have students develop a conceptual understanding (not mathematical) of statistics in Human Kinetics. However, students do require a working knowledge of pre-algebra and basic algebra (Math 8 & 9)

- Ability to perform and interpret basic statistical procedures.
- Ability to interpret results based on research hypotheses and statistical output.
- Ability to identify statistical assumptions and the incorrect use of statistical methods.
- Ability to match statistical methods with specific research designs.

Required Text:

Vincent, W. J. (2005) Statistics in Kinesiology (3rd edition). Human Kinetics Publishers.

Evaluation:

Midterm 1 (Feb 7)	25%	Chapters 1-6, part of 7
Midterm 2 (Mar 21)	25%	Chapters 7-9
Final Exam (TBA)	50%	Chapters 1-12

Important Information:

If the grade (%) on the final exam exceeds grade of two midterms, then student will receive the grade from the final exam. This evaluation procedure recognizes that learning is nonlinear and not summative.

Students unable to write a midterm (illness or other event) will have percentage transferred to final exam**.** **NO** exceptions.

Exams include readings from the text, lectures, and any additional assigned readings (hand-outs)

Attendance:

UBC Policy is that regular attendance is expected of students in all their classes. Students who neglect their academic work and assignments may be excluded from final examinations. Students who are unavoidably absent because of illness or disability should report to their instructors on return to classes.

Academic Misconduct:

Students are responsible for knowing university regulations on academic misconduct: http://students.ubc.ca/calendar/index.cfm?tree=3,54,111,959

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COURSE CONTENT

Section One – Chapters 1-6, part of 7

Week 1	Process of Measurement, null hypotheses, alternative hypotheses, statistical inference, organization of data
Week 2	Central Tendency Variability
Week 3	The Normal Curve Sampling Error
Week 4	Correlations Pearson Product, Spearman

Section Two – Chapters 7-9

Week 5	Simple Regression (note: midterm 1 Feb. 7)
Week 6	Multiple Regression Hierarchical Regression
Week 7	t-test correlated / uncorrelated Nonparametric two group comparison tests
Week 8	Analysis of Variance

Section Three – Chapters 10-13

Week 10	Analysis of Variance: Repeated Measures (Note: MIDTERM 2 –March 21)
Week 11	Factorial ANOVA Split Plot (Mixed) ANOVA Models
Week 12	Select nonparametric statistics
Week 13	Select Nonparametric statistics / review