GPRC

DEPARTMENT OF PHYSICAL EDUCATION AND KINESIOLOGY

COURSE OUTLINE – WINTER 2018

PE1090 (A3): Statistics, Measurement and Evaluation – 3 (3-0-1) 60 Hours

INSTRUCTOR:	Julia Dutove	**PHONE:**	780-539-2974
OFFICE:	K220	**E-MAIL:**	jdutove@gprc.ab.ca
OFFICE HOURS:	Monday 1-2:30pm, Tuesday 11:30am-12:30pm, or by appointment		

CALENDAR DESCRIPTION: This course will introduce students to the concepts of validity and reliability as the y apply to quantitative research, measurement and evaluation in physical education, sport, exercise science, and leisure contexts. The course will focus primarily on inferential statistical procedures that are used to organize, summarize, and interpret in formation.

PREREQUISITE(S)/COREQUISITE: None

REQUIRED TEXT/RESOURCE MATERIALS:
Gravetter, F. J. & Wallnau, L. B. (2017). *Statistics for the behavioral sciences* (10th ed.). Boston, MA: Cengage.

DELIVERY MODE(S): This course will be taught using a variety of methods of delivery such as lecture, experiential learning opportunities, small group discussion, and use of statistical software for calculation and analysis (i.e., SPSS).

COURSE OBJECTIVES:
1. The student will be introduced to, and be able, to recognize the important structure of basic statistical concepts.
2. The student will demonstrate the use of selected statistical techniques: standard z-scores, t-statistics, and correlation coefficients.
3. The student will be able to make concrete observations and decisions regarding empirically supported data for current research and testing measures in the field of sport, exercise, and physical education.
4. The student will learn to enter and interpret data results using appropriate statistical technology (i.e., SPSS) with links to statistical theory.

LEARNING OUTCOMES:
1. The instructor will explore concepts in tests and measures and the use of technology for statistical calculations.
2. The instructor will utilize datasets (small and large) in order to support statistical principles being examined and applied in class.
3. The instructor will introduce descriptive statistics and normal distribution.
4. The instructor will examine, in depth, the calculation, application, and interpretation of selected statistical techniques.
5. The instructor will introduce and explore hypothesis testing.
6. The instructor introduce concepts and key terms for reliability and validity for students.

TRANSFERABILITY:
UA, UC, UL, AU, GMU, CU, CUC, KUC.

Please consult the Alberta Transfer Guide for more information
(http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2)

** 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**

EVALUATIONS:

Midterm	20%	Thursday February 15
Group Project	20%	Tuesday April 10 (final project)
Project Presentation	5%	April 10 & 12
Lab Assignments	25%	Due throughout semester
Final Exam	30%	During Finals: April 16-26

GRADING CRITERIA:
Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**. This means **DO NOT GET LESS THAN "C-" IF YOU ARE PLANNING TO TRANSFER TO A UNIVERSITY.**

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:
Lecture
Tuesday & Thursday: 8:30-9:50am (J203)
Labs
Wednesday: 1:00-1:50pm (A312)
Fridays: 11:30am-12:20pm (A313)
Note: These are tentative schedules and may change based on our progress as a class.

Lecture Schedule:

Date	Class Topic	Readings
Week 1 Jan 4	Course Introduction	
Week 2 Jan 9 & 11	Descriptive statistics	Chapters 1-3
Week 3 Jan 16 & 18	Variability and z-scores	Chapter 4-5
Week 4 Jan 23 & 25	Probability	Chapters 6-7
Week 5 Jan 30 & Feb 1	Research questions and writing a hypothesis	Readings on Moodle
Week 6 Feb 6 & 8	Correlation	Chapter 15
Week 7 Feb 13 & 15	Review **February 15: Midterm**	
Week 8 Feb 20 & 22	**No classes – Winter Break**	
Week 9 Feb 27 & Mar 1	Introduction to hypothesis testing	Chapters 8-9
Week 10 Mar 6 & 8	Independent sample t-tests **March 6: Deadline to withdraw**	Chapter 10
Week 11 Mar 13 & 15	Dependent sample t-tests	Chapter 11
Week 12 Mar 20 & 22	Analysis of variance	Chapter 12
Week 13 Mar 27 & 29	Understanding statistics in research	Readings on Moodle
Week 14 Apr 3 & 5	Understanding statistics in research	Readings on Moodle
Week 15 Apr 10 & 12	Presentations **April 10: Final Project due**	

Lab Schedule:

Date	Wednesday Lab	Friday Lab
Week 1 Jan 5		No lab this week
Week 2 Jan 10 & 12	No lab this week	Lab #1: Descriptive statistics
Week 3 Jan 17 & 19	Lab #1: Descriptive statistics	Lab #2: z-scores
Week 4 Jan 24 & 26	Lab #2: z-scores	Lab #3: Probability
Week 5 Jan 31 & Feb 2	Lab #3: Probability	Lab #4: Project proposal
Week 6 Feb 7 & 9	Lab #4: Project proposal	Lab #5: Correlation
Week 7 Feb 14 & 16	Lab #5: Correlation	Lab make-up #1
Week 8 Feb 21 & 23	Winter Break: No labs	Winter Break: No labs
Week 9 Feb 28 & Mar 2	Lab #6: Data collection	Lab #6: Data collection
Week 10 Mar 7 & 9	Lab make-up #1	Lab #7: Independent sample t-test
Week 11 Mar 14 & 16	Lab #7: Independent sample t-test	Lab #8: Dependent sample t-test
Week 12 Mar 21 & 23	Lab #8: Dependent sample t-test	Lab #9: Data analysis
Week 13 Mar 28 & 30	Lab #9: Data analysis	No lab this week
Week 14 Apr 4 & 6	Lab #10: ANOVA	Lab #10: ANOVA
Week 15 Apr 11 & 13	Lab make-up #2	Lab make-up #2

STUDENT RESPONSIBILITIES:
- Students must be present in lab to be allowed to submit the lab. Missed labs cannot be made up unless there is an excused absence and the instructor has given permission to make up the lab. You must attend your registered lab section unless given permission by the instructor to attend an alternate section.
- Labs are due in class, at the beginning of class on the due date. Late labs will be deducted 10% for the first 2 days, 20% for the next 2 days, and will not be accepted after 4 days late. If you have a significant issue or concern (e.g., illness or family emergency), contact the instructor as soon as possible.
- Late projects will not be accepted.
- Regular attendance is a key to success in this and every other course. Please contact the instructor if you have to miss class. It is the student's responsibility to acquire any materials and content missed due to absence.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, 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.

ADDITIONAL INFORMATION:

Lab Assignments:
Labs will be completed in a computer lab using SPSS statistical software. Labs may also include additional questions from the textbook or other sources. Labs must be typed and due dates will be given with the lab handout each week. Students must be present in lab to be allowed to hand in the lab assignment unless the absence is excused.

Group Project and Presentation:
Students will work in small groups to identify a research question, test their hypothesis, and report the results in a formal paper. Presentations will take place the last week of classes to share your study with the class.

Midterm and Final Exam:
Tests will be a combination of multiple choice and short answer questions covering lecture and lab topics. The final exam will cover all material from the semester, with a heavier emphasis on the content covered after the midterm.