GPRC

DEPARTMENT OF PHYSICAL EDUCATION AND KINESIOLOGY
COURSE OUTLINE – WINTER 2019
PE1090 (A3 & B3): Statistics, Measurement and Evaluation – 3 (3-0-1) 60 Hours

CLASS INSTRUCTOR:	Julia Dutove	PHONE:	780-539-2974
OFFICE:	K217	E-MAIL:	jdutove@gprc.ab.ca
OFFICE HOURS:	By appointment		

LAB INSTRUCTOR:	Lorelle Warr	PHONE:	780-539-2978
OFFICE:	K216	E-MAIL:	lwarr@gprc.ab.ca
OFFICE HOURS:	By appointment		

CALENDAR DESCRIPTION: This course will introduce students to the concepts of validity and reliability as they 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 information.

PREREQUISITE(S)/COREQUISITE: None

REQUIRED TEXT/RESOURCE MATERIALS:
Pallant, J. (2016). *SPSS survival manual* (6th ed.). Berkshire, England: McGraw-Hill.

Additional readings posted on Moodle

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 will introduce concepts and key terms for reliability and validity for students.

TRANSFERABILITY:
UA, UA Augustana Faculty, AU, UC, UL, MRU, GMU
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 14
Group Project	25%	Tuesday April 9
Labs	25%	See Lab Schedule
Final Exam	30%	During Finals: April 15-27

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 (E306)
Labs
Section A3: Friday, 11:30am-12:20pm (A312)
Section B3: Wednesday, 1:00-1:50pm (A307)
Note: These are tentative schedules and may change based on our progress as a class.

Lecture Schedule:

Date	Class Topic	Readings
Week 1 Jan 3	Course introduction	Syllabus
Week 2 Jan 8 & 10	Descriptive statistics	Pallant Chapter 6 Terrell (2012) Chapter 2
Week 3 Jan 15 & 17	Variability and z-scores	Gravetter & Wallnau (2017) Chapter 4 Gravetter & Wallnau (2017) Chapter 5
Week 4 Jan 22 & 24	Graphs Reliability and validity	Pallant Chapters 2, 3, 7 Vincent & Weir (2012) Chapter 1
Week 5 Jan 29 & 31	Introduction to research	Pallant Chapter 1 Terrell (2012) Chapter 1
Week 6 Feb 5 & 7	Correlation	Pallant Chapter 11 Brase & Brase (2016) Chapter 4
Week 7 Feb 12 & 14	Review **February 14: Midterm**	
Week 8 Feb 19 & 21	**No classes – Winter Break**	
Week 9 Feb 26 & 28	Hypothesis testing and t-tests	Pallant Chapter 17 Mann (2016) Chapter 9 Gravetter & Wallnau (2017): Chapter 10-11
Week 10 Mar 5 & 7	T-tests **March 5: Deadline to withdraw**	
Week 11 Mar 12 & 14	Non-parametric tests Data collection	Pallant Chapter 16
Week 12 Mar 19 & 21	ANOVA	Pallant Chapter 18 Mann (2016) Chapter 12
Week 13 Mar 26 & 28	Data analysis	Baumgartner & Hensley (2013) Chapter 14 Thomas et al. (2015) Chapter 11
Week 14 Apr 2 & 4	Non-parametric tests	Pallant Chapter 16
Week 15 Apr 9 & 11	**April 9: Present Project Posters** Review	

Pallant Chapters are the course textbook
All other readings are posted on Moodle (see Reference section for full reference details)

Lab Schedule:

Date	Wednesday Lab	Friday Lab
Week 1 Jan 5		No lab this week
Week 2 Jan 10 & 12	Lab 1	Lab 1
Week 3 Jan 17 & 19	Lab 1	Lab 1
Week 4 Jan 24 & 26	Lab 2 *Lab 1 due*	Lab 2 *Lab 1 due*
Week 5 Jan 31 & Feb 2	Lab 2	Lab 2
Week 6 Feb 7 & 9	Lab 3 *Lab 2 due*	Lab 3 *Lab 2 due*
Week 7 Feb 14 & 16	Open lab *Lab 3 due*	Open lab *Lab 3 due*
Week 8 Feb 21 & 23	Winter Break: No labs	Winter Break: No labs
Week 9 Feb 28 & Mar 2	Lab 4	Lab 4
Week 10 Mar 7 & 9	Lab 4	Lab 4
Week 11 Mar 14 & 16	Lab 4	Lab 4
Week 12 Mar 21 & 23	Lab 5 *Lab 4 due*	Lab 5 *Lab 4 due*
Week 13 Mar 28 & 30	Lab 5	Lab 5
Week 14 Apr 4 & 6	Lab 5	Lab 5
Week 15 Apr 11 & 13	Open lab *Lab 5 due*	Open lab *Lab 5 due*

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, with the exception of open lab dates, which are available for any student to attend.
- 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:

Labs:
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 follow the guidelines posted on Moodle. Students must be present in lab to be allowed to hand in the lab assignment unless the absence is excused.
Students will be allowed one lab re-submission for a lab of their choice. This must be handed in by the start of the final exam.

Group Project:
Students will work in small groups to identify a research question, test their hypothesis, and report the results as a poster. Presentations will take place the last week of classes to share each 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.