DEPARTMENT OF PHYSICAL EDUCATION AND KINESIOLOGY

COURSE OUTLINE – Fall 2021

PE1090 (A2): Statistics, Measurement and Evaluation – 3 (3-0-1) 60 Hours for 15 Weeks

Grande Prairie Regional College respectfully acknowledges that we are located on Treaty 8 territory, the traditional homeland and gathering place for many diverse Indigenous peoples. We are honoured to be on the ancestral lands of the Cree, Dene/Beaver and Métis, whose histories, languages, and cultures continue to influence our vibrant community. We are grateful to have the opportunity to work, learn, and live on this land.

INSTRUCTOR:	Lorelle Warr	**PHONE:**	780-539-2978
OFFICE:	K215	**E-MAIL:**	lwarr@gprc.ab.ca
OFFICE HOURS:	By appointment or drop in.		

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 (available free online):

Goss-Sampson, M. A. (2020). Statistical analysis in JASP: A guide for students. http://static.jasp-stats.org/Manuals/Statistical_Analysis_in_JASP_-_A_Students_Guide_v0.12.pdf

OpenStax. (2013). *Introductory statistics.* www.openstax.org/details/introductory-statistics

DELIVERY MODE(S): Lecture, experiential learning opportunities, small group discussion, and use of statistical software for calculation and analysis (i.e. JASP and/or SPSS).

COURSE OBJECTIVES:

Upon successful completion of this course, students will be able to:

1. Recognize the important structure of basic statistical concepts.
2. Demonstrate the use of selected statistical techniques: standard z-scores, t-statistics, and correlation coefficients.
3. 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. Enter and interpret data results using appropriate statistical technology (i.e. SPSS or JASP) with links to statistical theory.

LEARNING OUTCOMES:
Through completion of this course, students will have the opportunity to:

1. Explore concepts in tests and measures, and the use of technology for statistical calculations.
2. Utilize datasets (small and large) in order to support statistical principles being examined and applied in class.
3. Outline descriptive statistics and normal distribution.
4. Examine, in depth, the calculation, application, and interpretation of selected statistical techniques.
5. Explore hypothesis testing.
6. Summarize concepts and key terms for reliability and validity for students.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page http://www.transferalberta.ca.

** 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	Oct 7	20%
Data Project	Oct 25 & Dec 8	20%
Labs	See Lab Schedule	6 labs x 5% = 30%
Final Exam	TBD	30%
	Total	100%

GRADING CRITERIA: (The following criteria may be changed to suite the particular course/instructor)

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

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:

	Tuesday (Lecture)	Thursday (Lecture)	Friday (L1 Lab)
Sept 1-3		Course Introduction	No lab
Sept 6-10	How to set up JASP Descriptive statistics	Descriptive statistics	Lab 1
Sept 13-17	Probability	Probability	Lab 1
Sept 20-24	Normal distribution	Normal distribution	Lab 2
Sept 27-Oct 1	Introduction to hypothesis testing	Introduction to hypothesis testing	Lab 2
Oct 4-8	Review	**Midterm**	Open Lab
Oct 11-15	Fall Break – No Classes		
Oct 18-22	Hypothesis testing	Go over project Library session	Lab 3
Oct 25-29	Hypothesis testing	Hypothesis testing	Lab 3
Nov 1-5	Correlation	Correlation	Lab 4
Nov 8-12	Correlation	Remembrance Day – No Class	Lab 5
Nov 15-19	ANOVA	ANOVA	Lab 6
Nov 22-26	ANOVA	**Data project draft due, 11:30am**	Lab 6
Nov 29-Dec 3	Peer review	Applying statistics	Open Lab
Dec 6-9	TBD	Review **Data project due, 11:30am**	

This schedule is subject to change based on how we progress as a class. Changes will be announced in class and on myClass.

STUDENT RESPONSIBILITIES:

- 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. If a student misses more than 5 classes, they may not be allowed to take the midterm and/or the final exam.
- Lab attendance is mandatory. Failure to attend lab will result in a 0 for the missed lab unless the instructor has given prior permission. Labs must be submitted online by the posted due date & time and will be deducted 10% for each day late, including weekends. Students will be allowed one lab re-submission for a lab of their choice. This must be submitted online by the start of the final exam.
- Late projects will be deducted 10% for each day late, including weekends.
- If you have a significant issue or concern (e.g., illness or family emergency), contact the instructor as soon as possible.

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 Calendar at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at https://www.gprc.ab.ca/about/administration/policies

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

POLICY ON THE RECORDING OF TEACHING ACTIVITIES:

Students may not record classroom activities (such as lectures, group activities, 3rd party presentations, etc.) without the advance written permission of the instructor. This policy is set to protect the privacy and reputation of students, to uphold the copyrights of the instructor and other content creators, and to facilitate free and open discussion of ideas. The classroom is meant to be a psychologically safe environment, where students are free to explore and think through new and controversial ideas without fear of public repercussions. Recording lectures can undermine this goal. If permission to record an activity is granted, the recorded material can only be used for the student's own private use and is not to be posted online or otherwise distributed. Students will be notified in advance by the instructor when someone has been granted permission to record a classroom activity. Students will also be given the option of being excused from actively participating in recorded activities. In the case of student presentations, the recording student must show proof that the presenting student(s) have agreed to be recorded before the instructor will grant permission.

COPYRIGHT NOTIFICATION:

Any course material created by your instructor is his/her intellectual property and is provided to you based upon your registration for this class. As such, the material is for your private use only. It is not to be distributed, publicly exhibited, or sold without the permission of the instructor. Third party materials (such as assigned readings) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.