

KINE 4050
Quantitative Analysis in Kinesiology

Dr. Simon Driver.
Tentative Schedule
MR 10-11:50 a.m. (Gateway 132)
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PEB 210A

Catalog Description

A study of measurement theory, instruments used to collect data and procedures for data analysis specific to exercise and sports. The use of computers for data analysis is included. Prerequisite(s): MATH 1100 and CECS 1100 or the equivalent, or consent of instructor.

Please see me immediately if you have not completed the prerequisites for this course.

Unit 1 - Introduction and Descriptive Statistics

First Class Day
Class overview and responsibilities
Introduction to Tests and Measurements (1)
Using Technology in Measurement and Evaluation (2)
Descriptive Statistics and the Normal Distribution (3)
SPSS Assignment to be turned in
Central tendency
Variability

Outside Assignment Thursday 16th of June

Exam # 1 (Tentatively Monday 20th July)

Unit 2 - Descriptive and Inferential Statistics

Descriptive Statistics and the Normal Distribution (3)
Standard Scores & the Z-Table
Correlation and Prediction (4)
Inferential Statistics (5)

Exam #2 (Tentatively Tuesday 28th July)

Unit 3 - Reliability and Validity

Norm-Referenced Measurement (6)
Criterion-Referenced Measurement (7)
Alternative Assessment (8)
Grading: A Summative Evaluation (9)

Exam #3 (Tentatively Wednesday 5th August)

Unit 4 - Test Application, Development, and Interpretation

Measuring Cognitive Objectives with Written Tests (10)
Physical Fitness and Activity Assessment in Adults (11)
Physical Fitness and Activity Assessment in Youth (12)
Assessment of Sport Skills and Motor Abilities (13)
Psychological Measurements in Sport and Exercise (14)

Exam #4 – Thursday 13th August at 10:00 a.m. – 11:30 a.m.

General

Do not plan on missing any classes. We will cover new material EVERY day. It is important that you attend class. **Any student missing more than 4 classes FOR ANY REASON will receive a grade of F in this course.** You are expected to be in class on time at each meeting. You can do best in this class if you attend, take notes, do the homework assignments, prepare for the quizzes, study with your classmates, and speak with me (or TA) if you have questions about your class progress. I am attempting to set you up for success, not failure. If you miss more than 2 classes you will be awarded 5 extra credit points at the end of the semester. Attendance will be taken at the beginning of class. Completion of a quiz will typically be used as attendance verification. Arriving after the class has completed the quiz results in your being counted absent for that day. Leaving class early results in your being marked absent for that class period.

You are expected to read the material prior to coming to class. The numbers in parentheses on this syllabus indicate the chapter numbers to read.

Homework is available on the class WWW site. Additional homework may be assigned for completion and submission to class. I will inform you if a homework assignment is to be submitted to the instructor. I will generally NOT collect homework assignments. I will NOT collect the homework problems available to you on the WWW site. If it will be collected, it will be collected at the BEGINNING OF CLASS at the next class meeting. I will not accept it if you come to class late. It will be helpful if you complete the homework (practice) materials. If your grade is borderline at the end of the semester, I will consider your homework assignments and number of absences.

There will be occasional "quizzes" over the reading materials and/or class discussion. You should be prepared for a quiz EVERY day that you come to class except days on which you take an examination. Some will occur soon (or immediately) after a particular topic is presented in class and others will be announced the day before the quiz. If the quiz is conducted at the start of the class and you are late to class, you will NOT be able to complete the quiz (and you will be counted absent even though you arrive later in the class – it is completion of the quiz that is used to take attendance). Quizzes count as extra credit – see the section on "Course Grades" below.

There may be days when we will not hold class in the classroom – you will be informed ahead of time when these are. You will be expected to go to the class WWW site and conduct work related to the portion of the course that we are completing at that time. Do NOT think of this time as a "walk" but rather an opportunity to forego the drive to the UNT campus, to work on your own or in a group, to complete homework and/or computer assignments, etc. You should think of this time as class time and not "free" time. You may or may not be required to complete an assignment to be turned in following such days. If an assignment is due, you will be so informed prior to that date.

Showing up late, leaving early, or stepping out of class to use your cellular phone is distracting to the other students in class. Cellular phones and other electronic devices can be distracting if used inappropriately. During regularly scheduled classes turn cell phones to vibrate or off. You are not to have earphones of any type in during class. All electronic devices are to be turned off prior to entering the classroom. You may, of course audio record the lectures or have your computer on for taking notes. Students found to have computers on for purposes other than THIS class will be asked to leave the room and counted absent for that day. During quizzes, tests, or other examination activities cell phones and other electronic devices must be turned off and placed out of sight. Failure to do so may result in you: (a) being asked to leave the classroom; and/or (b) receiving a "zero" on the activity (quiz, test, etc.).

Your instructor may be traveling occasionally during the semester. You may have a guest lecturer, a WWW-based activity, and/or assignment during these times. Do not think of these times as a "walk". You are expected to complete work. You are to follow the class expectations even if your course instructor is not personally in the room.

If you are on a traveling squad of any type, you are to submit your travel schedule to the instructor by the third class meeting (July 16th).

Class participation

All students are expected to arrive on time, have reviewed the class WWW site, have read material prior to coming to class, and be prepared to participate in class activities. Students are NOT to read the newspaper, conduct other work, sleep, or otherwise be non-participating in class. Such student actions are unprofessional and disrespectful to fellow classmates and to the instructor. Such actions disturb your classmates and/or the professor. Students who behave in any of these inappropriate manners will be asked to leave the classroom and will be counted absent for that period.

Class Outlines

Class Outlines and homework problems are available on the WWW at the class www site (www.coe.unt.edu/morrow). You will need a Key Code to enter the site. The Key Code is provided to you when you purchase the textbook. You should go to the WWW and locate the outlines and have them printed and bring them with you to class. The outlines taken from the WWW will be correlated with the visual presentations made in class.

Examinations

I will make you aware of the exact examination dates for the first three examinations **AT TWO DAYS IN ADVANCE OF THE EXAMINATION**. No make-up examinations will be given (unless there are EXTREME circumstances). Any make-up examination will generally **NOT** be multiple choice in nature.

All regularly scheduled examinations are multiple choice. Read the directions before starting the examination. You will be permitted to have 1 hour and 15 minutes to complete each of the first three examinations. Ninety (90) minutes are permitted for examination #4.

You may use a ONE-PAGE CHEAT SHEET for each examination. You may TYPE anything you want on both sides of a sheet of paper (8.5 x 11 inches). When you turn in your test, you must also turn in your cheat sheet. I will return it to you at the next class meeting. You are not to share or copy cheat sheets. Your cheat sheet **MUST** be computer generated. Cheat sheets not meeting the guidelines will be not be returned and will be destroyed.

You may use a calculator on each examination. You may **NOT** share calculators with others in the class. You may **not** have your cell phone on or out during tests nor are you permitted to use the cell phone calculator on tests.

You are to do **ALL of your work in the test booklet and mark your answer on the answer sheet provided for you.**

You are expected to be present for each examination. Take care of all of your personal matters prior to starting the test (e.g., going to the bathroom, getting water, having tissue available, pencils, etc.). Do **NOT** ask for an exception to take an examination at some other time. If you arrive late for the start of an examination and any student has already completed the examination, you will **NOT** be permitted to take the examination and your grade will be zero on that examination. If you arrive late for an examination, you have only until the allotted end time to complete the examination.

Permission to take an examination at a time other than the scheduled time will **ALMOST NEVER** be granted. Failure to take the examination at the scheduled time will result in a zero for that examination. Excuses such as oversleeping, car problems, etc. are **ALMOST NEVER** granted. You need to plan ahead and be ready to take the examination as scheduled. Should you miss an examination and be granted the opportunity to take a make-up examination, you will take an examination much like the students in class but multiple choice items may be changed to short answer essay or completion. Any make-up examination will be conducted at the instructor's convenience and not necessarily the student's most convenient time. Consider the fact that there are many students in class and all might have different "convenient" times.

Best advice – take the examination as scheduled.

You are encouraged to meet with the instructor to review your examination after it has been taken. Your actual copy of the examination will only be available until the **CLASS DAY** following any examination. Your answer sheet will be available throughout the semester and you can compare that with the test key but your personal copy of the examination will be destroyed after the **SECOND** Friday following the examination.

Attendance and Extra Credit

Attendance will generally be taken at the **BEGINNING** of the class hour, as a result of quiz completion, and/or at other times during the class. If you are absent when attendance is taken, you **ARE ABSENT**. Even if you were in class a few minutes later (or earlier), you will be counted absent if you are not present when attendance is taken. If you need to arrive at a specific class later than normal or leave earlier than normal, please let the instructor know. Arriving late or leaving early is **NOT** to be a general practice. If this is your practice, you will simply be counted absent. We need you in class to participate and engage in class activities. If you are absent less than 3 times in the semester, you will have 5 extra credit points added to the numerator when determining your grade. This results in your attendance counting as "extra credit." Note that absences will often be taken according to who completes a quiz at the beginning of class. Missing the quiz, but showing up later results in your being counted absent. Leaving class early will result in your being counted absent even if you have taken the quiz. See "Course Grades" below for more information.

It is impossible for the instructor to differentiate between “excused and unexcused” absences. Thus, an absence is an absence. Two students might be equally ill and one may go to the physician and the other chooses not to do so. One may have medical insurance and the other not. One student has “child care issues” and another does not. One student has a reliable car and the other depends on a car pool. All of these different issues result in making different and difficult decisions about the adequacy of your excuse. Thus, to be fair to all, the instructor does NOT DIFFERENTIATE AMONG ANY TYPE OF ABSENCES. **Any student missing more than 4 classes FOR ANY REASON will receive a grade of F in this course.**

Do NOT simply stop coming to class without taking formal steps to drop the course. The instructor will drop you passing until the point in the semester where this is no longer possible. Students who simply stop coming to class and do not go through the formal drop procedure will be assigned a grade of “F” at the end of the semester.

Course Grades

The general guidelines for course grades are:

85%	=	lowest A
70%	=	lowest B
50%	=	lowest C

I will simply add the total number of points that you accumulate throughout the course from 1) all tests and 2) all points from quizzes, homework assignments (if assigned), and possible bonus points (e.g., attendance). This total will be divided by the total number of possible points from the 4 tests. In essence, this makes points awarded from the quizzes and homework assignments as "extra credit". That is, the quizzes can help you but they can not hurt you. The above grading guidelines are then used.

Academic Dishonesty

Cheating will not be tolerated in the class. You are not to receive information from another student or give information to another student during a test or quiz. You are to use only your memory, your cheat-sheet, and calculator during examinations. Outside assignments are to be completed ALONE unless otherwise instructed. Work submitted is to be yours alone and unique. Students caught cheating during an examination or quiz will be charged under the University's Code of Student Conduct and Discipline. Among other punishments, students found guilty run the risk of having their score changed to a zero, receiving a grade of "F" for the course, and/or dismissal from the University.

You are not to give other students enrolled in any other section of this class any information about forthcoming tests, quizzes, or homework assignments. You are, of course, encouraged to study and practice together. However, students who are enrolled in a section that has completed a specific quiz or test are not to give any information to other students about the content of such a quiz. Students doing so will be charged under the University's Code of Student Conduct and Discipline and run the risk of earning a score of zero, grade of “F” for the course, or being dismissed from the University. Students will be required to sign a statement verifying that they have not given, nor received, nor will they give any information about the examination to other students. Students unable to sign such a statement will be assigned a zero for the test and charged under the University's Code of Student Conduct and Discipline, as appropriate.

Course Content

Reliability and validity are the MOST IMPORTANT issues in kinesiology, sport, and exercise science. We will relate all of our work to these issues so that you can make valid decisions in kinesiology, exercise and sport science, and athletics.

Course Objectives

Students will demonstrate knowledge and abilities to utilize formative and summative fitness, skill, cognitive, and affective measurement and evaluation techniques appropriate for assessing participants in kinesiology/physical activity programs.

Students will be able to utilize descriptive and inferential statistics to make decisions.

Students will demonstrate abilities to assess individual achievement of psychomotor, cognitive, and affective objectives.

Students will demonstrate understanding of the principles involved in assessment of groups and effective physical activity programs.

Students will demonstrate knowledge and understanding of the statistical procedures used in the measurement and evaluation process.

Students will demonstrate understanding of the principles of reliability, objectivity, and validity when making evaluative decisions about individuals and groups.

Students will demonstrate understanding of the principles associated with sound cognitive test development, utilization, and revision.

Students will demonstrate sound decisions when choosing fitness tests for adults and children.

Students will demonstrate understanding of the use of sound psychometric principles when using measurement in the affective domain.

Text

Morrow, J. R., Jr., Jackson, A. W., Disch, J. G., & Mood, D. P. (2005). *Measurement and evaluation in human performance* (3rd ed.). Champaign, IL: Human Kinetics. **You MUST purchase a NEW book for this class as this is the ONLY way that you can gain access to the student resources available for the course.** Bring your book to class **EVERY DAY** because we will be referencing tables, figures, charts, etc. nearly every day in class.

Instructor Office Hours

The instructor will attempt to be available during the posted office hours. However, “Office Hours” does NOT mean that the instructor sits in his office and waits for people to come and see him. Your course instructor is on campus nearly every day by 7:00 a.m. and often does not leave until well after 5:00. However, university and professional responsibilities may result in his not being available at a specific time. If you want to meet with the instructor about something specific, it is best to make an appointment. Given the amount of time that students and the instructor spend on campus, it should not be too difficult to arrange a convenient time for both parties. You are also encouraged to meet with the TA.

ADA Statement

The KHPR Department is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the KHPR Department will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Disability Accommodation (ODA) and to inform me of your need for an accommodation. Requests for accommodation must be given to me no later than the first week of classes for students registered with the ODA as of the beginning of the current semester. If you register with the ODA after the first week of classes, your accommodation requests will be considered after this deadline.

Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNT Policy 18.1.14, at www.unt.edu/oda, and by visiting the ODA in Room 321 of the University Union. You also may call the ODA at 940.565.4323.

Family Educational Rights and Privacy Act (FERPA) Information

Students have the right to expect their grades will be kept confidential. There are a few things, because of the size and/or nature of this class, the instructor must advise you of regarding collection and distribution of test results, quiz scores, homework assignments, roll sheets, projects, etc. During this class it may be necessary for you to pass your assignments forward to the instructor or it may be necessary for the instructor to call your name and then return your completed assignment to you by passing it across the room. The instructor, under the reasonable assumption guidelines, assumes students are collecting only their own materials. Every attempt will be made to keep your information confidential. Neither your course grades nor grades for any assignment will be posted in a way that could result in your being identified by other students or faculty members.

Access to outlines, homework, practice problems, etc. on the WWW

Each day class will be delivered with "slide" presentations based on graphics presentations. Generally, the words (but not all of the graphics or pictures) are available to you prior to coming to class. It is suggested that you do the following before coming to class:

- 1) Read the chapters that we will be discussing in class. Work the MIs, do the various computer assignments, homework assignments, etc., as appropriate.
- 2) Access the WWW and enter the following URL:

www.coe.unt.edu/morrow

- 3) You will be immediately taken to Dr. Morrow's WWW Site. Click on the link under "courses" for "**KINE 4050 - Quantitative Analysis**", then click on "**Go to class WWW site for KINE 4050 Textbook**". You will need a Key Code to enter the textbook resources site. The Key Code is provided when you purchase the textbook.
- 4) I will post a few insightful pieces of information from time to time so it is good for you to check the class Vista site regularly (before and after every class meeting and throughout the week). You are responsible for what is posted on the class Vista site. <https://ecampus.unt.edu/webct/entryPage.dowebct>
- 5) WWW ancillaries from the textbook are presented in PDF format. You should be familiar with printing and/or saving these files. SPSS® and Excel® files are also on the site. You should download these to your PC or a flash-drive. The outline consists of the presentation that will be given in class. It is NOT a word-by-word download of the lectures. Thus, you must take notes and not rely on the outline to be all-sufficient course content. However, you will not have to write everything down that is on the "slides" during the lectures.
- 6) It will be my assumption that you will bring these outlines to class and I will go through the materials as if you have the outlines with you.
- 7) The WWW site has many practice problems, answers, and ancillaries for each chapter. You should use all of these as you complete this course. If you attend class, do the Mastery Items, complete the homework assignments, review the ancillaries, do the computer work, etc., there is no reason to do poorly in this class.