

**Fall 2008**  
**MAT 155 - Statistical Ideas**  
**Kirkwood Community College – Iowa City Campus**

**Instructor:** John Dawson

**Office:** Room 210, Iowa City Campus

**Phone:** 887-3944

**E-mail:** john.dawson@kirkwood.edu (always the best way to contact me)

**OFFICE HOURS:** MWF 10:00 – 11:00 am.

T 1:00-2:00 pm.

Th 9:00-10:00 am

**I'm always willing to meet with students outside of class. That's what I'm here for! Feel free to drop by to see me or you can always arrange a time to meet with me.**

**Lecture:** 6:00 – 8:50 pm Tuesday, 3 credit hours.

**Lecture Room:** 256 Iowa City Center

**Synonym & Section Number:** 084473 MAT 155-ICF02

**Text:** Statistical Reasoning for Everyday Life – Bennett, Briggs, and Triola, 3<sup>rd</sup> ed.

**Calculator:** You will need a scientific calculator with a two line display such as the TI-30X IIS or TI-30X-IIB for this course.

**Course Materials and Updates are in CE6:** <http://www.kirkwood.edu/elearning/>

**Course Description:**

This course will present the basic concepts of statistics and is intended for students that are not majoring in mathematics or science (some students may use this course as a primer for a higher level statistics course). At the end of this course you should have a better understanding of basic statistics and be more aware of how statistics can impact your everyday life.

**General Education Objectives or General Learning Outcomes**

- Analyze conditions of a given problem and design solutions to it
- Select and develop models appropriate to problems
- Express models numerically, graphically, and symbolically
- Identify, interpret, and manipulate relevant data
- Know terms, facts, principles, and procedures
- Interpret charts and graphs
- Construct charts and graphs
- Demonstrate correct usage of methods and procedures
- Recognize unstated assumptions
- Translate verbal material into mathematical expressions
- Solve mathematical equations
- Develop a personal scheme for classifying and arranging facts, procedures, and problem solving strategies
- Obtain correct mathematical result with or without technological assistance
- Judge the reasonableness of calculated results

**Student Success at Kirkwood:**

The best suggestions for success are: 1) attend class, 2) do homework and reading assignments, 3) take and use notes, and 4) seek out help and ask questions.

**General Attendance Policy:**

I expect you to attend every class. You will be responsible for all of the material covered, so if you miss a class you better get a copy of the notes from one of your peers. In my experience, poor attendance generally means poor performance. Some assignments require your attendance in order to get credit for them – please see the make-up policy below.

**General Learning environment Expectations:**

Please try to be on time and plan on being in class the entire time. Reading should be done ahead of each class so that we can have fruitful discussions about the daily topics. I WILL RANDOMLY CALL ON STUDENTS – be prepared to answer my questions. Please respect those students sitting around you in class – WHEN I AM LECTURING, YOU SHOULD NOT BE TALKING. I will dismiss students from class that are disruptive. Cell phones must be turned off. **NO TEXT MESSAGING.**

**Course Evaluation:**

Course evaluation will be based on homework, workshops, quizzes, and exams. +/- grading will be used. Final grades will be based on the total points obtained at the end of the semester out of the total available points. You can calculate your current grade at any point in the semester by adding up all your scores and divide it by how many points are possible. A grading curve will be applied if **absolutely** necessary and only at the end of the semester.

**Quizzes and Exams:**

Quizzes are designed to be practice for the exams. The questions on the quizzes will be very similar to what will be on the exams. Exams and quizzes will consist of multiple choice and short answer questions. There are about 8 quizzes during the semester. Quizzes will be announced at least one class period in advance. Quizzes could be in the format of partner quizzes, group quizzes, open notes/book quizzes, or take-home quizzes. Exam dates are listed on the syllabus. I will only apply grading curves to the exams at the end of the semester if necessary.

**Homework:**

Homework will be a combination of problems from the book and additional problem sets or activities. I could also give you some online homework assignments through CE6. I will give you several homework problems for each chapter. You should keep these homework problems well organized in a notebook, folder, or 3 ring binder. For the homework problems in the book, I will randomly select problems from the homework to grade you over. You will rewrite your answers along with the work to those questions on separate sheets of paper during class. Homework will generally be due the same days as when we have quizzes, but this may not always be the case.

**Workshops:**

Several times in the semester you will be given a workshop to start in class and finish as homework. Each workshop will be a little different, but will involve about the same amount of effort. You will be required to work in a group of 2 or 3 people. If you miss class during some of the time set aside for the workshops you will be penalized 5 points on your final score for the particular workshop. It is not fair to your group members if you don't participate completely. Please see class schedule to see when the workshops will occur.

**Make-ups:**

- **Exams:** Make-ups for exams will be allowed for reasonable and verifiable excuses. Examples of reasonable excuses are: medical emergency, family death, illness that requires doctor's care. I will not allow a make-up for any unreasonable excuse. You will be given 2 class periods to make up the exam and you must take the exam in the Test Center. I reserve the right not to allow a student a make-up for an exam if they have already been granted a make-up exam during the semester.
- **Quizzes:** Make-up will **NOT** be allowed for quizzes, but I will **drop** your **lowest 2 scores**. If you take all the quizzes, your lowest 2 scores will be calculated as extra credit.
- **Homework:** You must give me your homework **within one class period** of the due date in order to get credit. After this time period, I will not give you any credit on your homework.
- **Workshops:** I will allow you to make-up the workshop if you miss class, but I will deduct 5 points from your score.

**Grade Breakdown:**

Homework: 10 points each (~ 100 points total)  
 Workshops: 30 points each (90 points total)  
 Quizzes: 10 points each (~ 80 points total)  
 Exams : 100 points each (200 points total)  
 Final Exam: 150 points.

**Note:** Your final grade will be based on the total points you obtain out of the total points possible. This is only an estimate of the number of points possible.

**Total Possible Points (estimated):** 620 pts.

**\*\* If you need help calculating your current grade, especially if you just need to know how many assignments we have had at any point in the semester, let me know. Otherwise, grades will be recorded in CE6 and I will give you an estimate of your grade after each exam.**

**Grade distribution:**

A = 100-93%, A- = 92-90%; B+ = 89-87%; B = 86-83%; B- = 82-80%; C+ = 79-77%;  
 C = 76-73%; C- = 72-70%; D+ = 69-67%; D = 66-63%; D- = 62-60%; F = < 60%.

**Kirkwood's Class Attendance Policy and College Sponsored Activities:**

**Class Attendance Policy:** Learning is central to our work at Kirkwood Community College. Faculty design educational experiences to facilitate learning and students learn by engaging in those experiences. Attendance and engagement in all scheduled classes is regarded as integral to learning and is expected of all students.

Kirkwood faculty members identify expectations for learning and attendance in their course syllabi. Students are accountable for the learning outcomes for each session, including those sessions that have been missed. Assessments of learning that occur during an absence may or may not be made up, depending on the policies of the instructor and the nature of the absence. Absences that result from participation in college sponsored activities\* will be accommodated, subject to the guidelines listed below. For all other absences, authorization of an excuse is the province of the individual faculty member and subject to the standard appeal process.

**College Sponsored Activities:**

Students involved in activities where they are required to represent the college, i.e. college-sponsored activities, must give written notice to the faculty member at least one week in advance of the absence unless last minute schedule changes make this notice impossible. If regular season athletic schedules have been developed, student participants must present written notice of anticipated absences within the first week of the semester. Failure to provide timely written notice may result in loss of this opportunity.

**Faculty** shall accord students the opportunity to independently make up course work or work of equal value, for the day(s) the event was scheduled and to take a scheduled exam at an alternate time. The faculty member shall determine alternate exam times and due dates for missed coursework. These assigned dates may be prior to the date of the absence.

**Organizers** (coaches, faculty and staff) of college sponsored activities shall 1) assist students in planning class schedules to minimize the number of absences; 2) inform students of their responsibilities as described above; and 3) provide written communications to faculty announcing and verifying the need for student class absences. Written notices should be provided at the beginning of the semester if the schedule is known, or as soon as possible after the need for a student absence is determined.

\* College sponsored activities (excluding practices) include such events as athletic competitions, student academic competitions and conferences, musical and drama performances, and class field trips. Questions on whether an activity is a college-sponsored event for purposes of this policy should be directed to the Vice-President of Instruction. If anticipated absences for a semester appear to be extraordinarily numerous or difficult to accommodate, a faculty member may appeal the need for the full accommodation to the VP of Instruction.

**Kirkwood’s View on a Productive Classroom Learning Environment:**

We believe that the best learning takes place in an environment where faculty and students exhibit trust and mutual respect.

Students promote trust by preparing honest and thoughtful work, and by expecting evaluation based on performance. Faculty promote trust by setting clear guidelines for assignments and evaluations, honest feedback, and by assigning bias-free grades.

Students show respect by being prepared and attending class on time, by paying attention, contributing to discussions, listening respectfully to others’ points of view, meeting deadlines, and by striving for their best performance. Faculty show respect by their timeliness and preparedness, by taking students seriously, by valuing their goals and aspirations, and by providing honest feedback.

In a productive learning environment, faculty and students work cooperatively, recognize and respect differences, model the values of character and citizenship, and become lifelong learners.

**Plagiarism Policy:**

According to Webster, to plagiarize is to “steal or pass off the ideas or words of another as one’s own... to use created productions without crediting the source... to commit literary theft... to present as new and original an idea or product derived from an existing source.”

Kirkwood Students are responsible for authenticating any assignment submitted to an instructor. If asked, you must be able to produce proof that the assignment you submit is actually your own work. Therefore, we recommend that you engage in a verifiable working process on assignments. Keep copies of all drafts of your work, make photocopies of research materials, write summaries of research materials, hang onto Writing Center receipts, keep logs or journals of your work on assignments or papers, learn to save drafts or versions of assignments under individual file names on computer or diskette, etc.

The inability to authenticate your work, should an instructor request it, is a sufficient ground for failing the assignment.

In addition to requiring a student to authenticate his/her work, Kirkwood Community College instructors may employ various other means of ascertaining authenticity – such as engaging in Internet searches, creating quizzes based on student work, requiring students to explain their work and/or process orally, etc.

**Americans with Disabilities Act:**

Students with disabilities who need accommodations to achieve course objectives should file an accommodation application with Student Services and provide a written plan of accommodation to your instructor prior to the accommodation being provided.

**School Cancellations:**

When Kirkwood classes are cancelled or delayed due to inclement weather, all classes at all locations are cancelled. The announcements will indicate whether the cancellations apply to day or evening classes. The following broadcasters will be notified:

KZIA-FM Z102.9 (Cedar Rapids)  
WMT-AM 600  
KFMW-FM 107.9 (Waterloo)  
KCCK-FM 88.3  
KXIC-AM 800 (Iowa City)  
**KGAN-TV2**  
KCJJ-AM 1630 (Iowa City)  
**KCRG-TV9**  
KSUI-FM 91.7 (Iowa City)  
**KWWL-TV7**  
KUNI-FM 90.9 (Cedar Falls)  
KHAK-FM 98.1  
KDAT-FM 104.5  
KCII (Washington)  
KRNA-FM 94.1 (Iowa City)  
KMRY-AM 1450  
KOKZ-FM 105.7 (Waterloo)

**Note: If we have inclement weather for the final exam, the make-up will be December 15 unless another arrangement can be made with the instructor.**

**Important Dates:**

- Exam Dates: September 30, November 4, and December 9 (Final Exam).
- Workshops Dates: September 23, October 28, December 2.
- November 11: Last day to drop a class from Kirkwood.
- December 5: Last day for complete withdrawal of classes from Kirkwood.

**Course Schedule**

*The schedule of topics might change during the semester, but exam dates will not change.*

<b>Date (Week of)</b>	<b>Topic</b>	<b>Readings</b>
August 19	Introduction to Statistics	Ch. 1
August 26	Measurement in Statistics	Ch. 2
September 2	Visual Display of data	Ch. 3
September 9	Describing Data	Ch. 4
September 16	Describing Data (Cont.)	Ch. 4
September 23	<b>Catch-up / Workshop # 1 / Review for Exam # 1</b>	
September 30	<b>Exam # 1</b> Normal Distribution	Ch. 5
October 7	Normal Distribution Probability	Ch. 5 Ch. 6
October 14	Probability	Ch. 6
October 21	Correlation and Causality	Ch. 7
October 28	<b>Catch-up / Workshop # 2 / Review for Exam # 2</b>	
November 4	<b>Exam # 2</b> Sampling Distributions and Confidence Intervals	Ch. 8
November 11	Sampling Distributions and Confidence Intervals	Ch. 8
November 18	Hypothesis Testing	Ch. 9
November 25	Hypothesis Testing	Ch. 9
December 2	<b>Catch-up / Workshop # 3 / Review for Exam # 3</b>	
December 9	<b>Final Exam</b> <b>(Tuesday 6:00 pm in our usual room)</b>	