

Fall 2008
MAT115 - Mathematics and Society
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 Time: MWF 11-11:50 am, 3 credit hours.

Lecture Room: 256 Iowa City Campus

Synonym & Section Number: 083710 MAT-115-ICF02

Text: Using and Understanding Mathematics: A Quantitative Reasoning Approach, 4th ed. by Bennett and Briggs.

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 introduces selected areas of mathematics in familiar settings and develops students' conceptual and problem solving skills. The course includes a study of mathematical concepts selected from financial management, statistics, probability, business, and growth patterns. Other topics may be included.

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:

I will give you several homework problems for each chapter. Occasionally, I may have you do online homework. These homework problems must be included in a three ring binder, a folder, OR a separate notebook. I will randomly select problems from the homework to grade you over. I will have you 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 or some other major event out of the student's control. 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 miss less than two quizzes, your lowest 1 or 2 scores will be calculated as extra credit.
- Homework: If you miss the homework check, then you must give me your homework **within one class period** 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 (~80 points total)
Workshops: 30 points each (90 points total)
Quizzes: 10 points each (~100 points total)
Exams : 100 points each (200 points total)
Final Exam: 150 points each.

Total Possible Points (estimated): 620 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.

****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)
KCKK-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)

Important Dates:

- Exam Dates: September 15, November 3, and December 8 (Final Exam).
- Workshop Dates: September 10-12, October 29-31, and December 3-5.
- 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.

Date (week of)	Topic	Readings
August 18 (first class Aug. 20)	Introduction – What is Math? Why is it Difficult? Mathematics and the Arts	Chapter 11
August 25	Mathematics and Politics	Chapter 12
September 1	No Class Monday – College Holiday Mathematics and Business	Chapter 13
September 8	Mathematics and Business (cont.) Workshop # 1 (Wed & Fri) / Review for Exam # 1	Chapter 13
September 15	Exam # 1 (Monday) Statistical Reasoning	Chapter 5
September 22	Statistical Reasoning	Chapter 5
September 29	Putting Stats to Work	Chapter 6
October 6	Putting Stats to Work (cont.)	Chapter 6
October 13	Probability	Chapter 7
October 20	Probability (cont.)	Chapter 7
October 27	Catch-up Workshop # 2 / Review for Exam # 2 (Wed & Fri)	
November 3	Exam # 2 (Monday) Financial Mathematics	Chapter 4
November 10	Financial Mathematics (cont.) Exponential Astonishment	Chapter 4 Chapter 8
November 17	Exponential Astonishment (cont.)	Chapter 8
November 24	Mathematical Modeling	Chapter 9
December 1	Mathematical Modeling (cont.) Workshop # 3 / Review for Final (Wed & Fri)	Chapter 9
December 8	Final Exam (Monday 11:00-12:50 pm in our usual room)	

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.