MATH 108 – COLLEGE ALGEBRA- 950 (ONLINE)  Fall 2015

Instructor: Kristen Ceballos

Office: Neckers 378

Office Hours: MWF 10-11am, 12-1pm

(tutors available several nights a week – open lab/tutor hours list available in online course)

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REQUIRED ITEMS:

1) **Math 108 Course lectures notes** - These are available only at the University Bookstore in the Student Center. This is a must! Worksheets that are submitted are included in the course notes. They are for sale for about $15-$20 at only the University Bookstore in the student center. If you are not a local student, you can go to the website: [http://www.bkstr.com/CategoryDisplay/10001-9604-10728-1](http://www.bkstr.com/CategoryDisplay/10001-9604-10728-1) to order them and have them shipped to you. This is the only option. Please allow time to receive them by Monday of week 1. The course fee that is applied to your bursar bill is for My Labs Plus access, which also includes a printable e-book. If you would like to purchase the book for this course, I will be sending out information via e-mail as to where you can purchase the physical book. All lectures from the spring semester have been recorded and uploaded to the course. So, you will have access to those as well.

2) This class has a **no calculator** policy. Occasionally MLP will ask for a decimal approximation, but that will never be asked on a test. **It is highly recommended you do not use a calculator when doing homework, since it will only put you at a disadvantage for exams.** For My Labs Plus decimal approximations, you may also choose to use the calculator on the computer or on your cell phone. There is information about using the calculator computer in the lecture notes packet. You should not use the calculator for adding, subtracting, multiplying or dividing integers and fractions so that you get used to doing these operations without one.

OPEN LAB HELP SCHEDULE: If you are a local student, please click on Open lab/tutor hours tab under Course Home in the virtual classroom.

RECENT FINALS: Go to [www.math.siu.edu](http://www.math.siu.edu) then click on Course Information, Recent final exams, Math 108.

Be aware of the University policy regarding the grade of INC. I abide by it.

ASSESSMENT/EVALUATION:

**Grading:** There will be no extra credit given in this course, so be sure to keep track of your grade in Labs Plus throughout the semester. (Click on Gradebook)

**Grade Scale:** (may be lowered in your favor, but that will not be determined until after final exam)

90 – 100% A
80-89.9% B
70-79.9% C
60-69.9% D
below 60% F
Grading:

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ASSIGNMENTS AND LATE POLICIES:

Tests: Local students will take tests in the Testing Center in Woody Hall (for free). Tests must be scheduled at least 48 hours in advance!! If you miss an exam, contact me immediately.

If you are not a local student (do not live within a 30 minute or so drive of SIU) and plan on taking your exams at a location other than SIU, you should find a proctor at the beginning of the semester and your proctor MUST be from a Community College Testing Center or public library. You will not need computer access during your test. Sometimes a fee is involved ($10-$20 per test). If you take it on the SIUC campus, it is free. Go to the following website for more information:

http://testingservices.siu.edu/distanceeducationonlineclasses/index.html

If you are a local student, proctoring on the SIU campus is free. It is your responsibility to schedule a time and get the proctoring form filled out prior to the test date. You do not have to fill out the test proctoring form if you are taking the exam at SIU, you will just go to the website below and choose a time (at LEAST 48 in advance). The website listed below contains the proctoring form and all of the information you need to find a proctor. Please contact them with proctor questions

http://testingservices.siu.edu/distanceeducationonlineclasses/index.html

Online Homework Assignments: Most of the homework will be submitted online. You will see the due date schedule under Course Home and you will find what is due each week under the weekly tabs. You should be able to earn close to 100% on this homework. If you miss a question, you can create a new question to replace it by clicking “similar exercise” up to 3 times. If you submit a homework assignment 1 day late, there will be a 10% late penalty. Otherwise, a grade of “0” will be assigned.
Worksheets: There will be approximately 7 handwritten worksheets. They will be scanned in and submitted to your dropbox. Instructions for submission can be found under the weekly tabs. If a worksheet is 1 day late, a 10% late penalty will be applied. Otherwise, a grade of “0” will be assigned.

Online Quizzes: Do not take the online quizzes until after you have completed the corresponding homework. You will find that many of the quiz problems come from the homework. You will not be given the help features when completing a quiz and you will need to submit it all at once (you cannot check the individual questions like you do on the homework). You can take the quiz up to 2 times and only your best score will be recorded. Quizzes are timed. So, be sure that you have at least 40 minutes of uninterrupted time to take the quiz. NO LATE QUIZZES ARE EXCEPTED.

CATALOG DATA: The algebra of functions (polynomials, rational, exponential, logarithmic), graphing, conic sections, solving equations including systems. Credit is not given for both 108 and 111. Prerequisite: Mathematics 107 or 3 years of college preparatory mathematics including Algebra I, Geometry and Algebra II. New students must present satisfactory placement scores or obtain the permission of the department of mathematics.

COURSE GOALS: To acquaint the student with the fundamental ideas of college algebra. To develop students’ skills in solving equations and inequalities (involving polynomials, rational functions, radicals, absolute values exponential functions and logarithmic functions); graphing functions (especially polynomials, rational functions, logarithmic functions and exponential functions); performing algebraic operations on functions (addition, subtraction, multiplication, division and composition); and applying algebraic techniques to solve problems.

PREREQUISITES: Three years of college preparatory mathematics including Algebra I, Geometry and Algebra II PLUS satisfactory placement score or permission of the department of mathematics.

OBJECTIVES:

Upon completion of Math 108, the student should be able to

- Set up algebraic models (equations or inequalities) for various phenomena, solve, and eliminate solutions which are invalid in the context (including but not limited to linear models.)
- Solve inequalities involving absolute value, represent their solutions as intervals, and graph the solutions.
- Perform algebraic operations on polynomial and rational functions, and factor polynomials (as a tool for solving polynomial and rational equations, not an end in itself.)
- Use synthetic division and polynomial long division as necessary to simplify expressions.
- Solve algebraic equations and inequalities, including expressions involving radicals.
- Determine intervals where polynomial and rational functions are positive and negative.
- Understand the relationship between zeros and linear factors of a polynomial; use the rational root theorem.
- Demonstrate understanding of the function concept and the related concepts of domain and range.
- Quickly recall and sketch the graphs of the functions $f(x) = x^2$, $f(x) = x^3$, $f(x) = \frac{1}{x}$, $f(x) = \frac{1}{x^2}$, $f(x) = |x|$, $f(x) = x^{\frac{1}{2}}$, $f(x) = x^{\frac{1}{3}}$.
- Recognize and use symmetry in graphing equations.
- Recognize and use the effects of shifts, reflections and scaling on a graph.
- Graph polynomial and rational functions showing intercepts and horizontal and vertical asymptotes.
- Compute the composition of two functions; recognize a given function as a composition of other functions.
- Demonstrate an understanding of the concepts of one-to-one functions and inverse of a function.
- Compute the inverse of a function and its domain and range; sketch the graph of the inverse of a given function.
- Quickly recall and sketch the graphs of basic exponential and logarithmic functions.
- Solve exponential equations using one-to-one property of exponential functions and/or using logarithms.
- Use the laws of logarithms to simplify logarithmic expressions and to solve logarithmic equations.
- Convert equations from logarithmic to exponential form and vice versa.

**Emergency Procedures.** Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at [www.bert.siu.edu](http://www.bert.siu.edu), Department of Safety’s website [www.dps.siu.edu](http://www.dps.siu.edu) (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.