Instructor: Elizabeth Cunningham Email: <u>cunnine@linnbenton.edu</u> Office Hours: MW 6:20-6:40, R 5:20-5:40 or by appointment Class Times: MW 4:30-6:20, R 4:30-5:20 Classroom: Virtual CRN: 22470

Course: This course explores relations and linear, quadratic, exponential, polynomial, rational and logarithmic functions. Includes theory of equations, matrices and determinants. Prerequisite: C or better in MTH 95, Intermediate Algebra, or equivalent. Upon completion of the course, the student will be able to:

- 1. Interpret graphical information, such as identifying types of functions, translations, inverses, intercepts, and asymptotes.
- 2. Solve a variety of symbolic equations and inequalities, such as rational, absolute value, exponential, radical, logarithmic, and linear systems.
- 3. Construct appropriate models for real world problems, such as fitting an algebraic function model to a set of data, and system of linear equations.

Required for Class:

- ALEKS 360 11-week Paid Access Code. This code will give you access to the ebook and the adaptive course software. Through ALEKS you will have the option to order a loose-leaf version of the textbook (*College Algebra, 2nd Ed* by Miller & Gerken) for an additional \$25. However a paper version of the book is not required.
- Regular Internet and Computer Access with video and microphone capabilities
- Scientific Calculator and access to a graphing calculator such as Desmos (free for computer or tablet use). A scientific calculator will be required for exams, but there is no need to buy a graphing calculator. No cell phones will be allowed on exams.
- Notebook. You are strongly encouraged to keep a notebook with all your work from ALEKS.

Course Requirements:

- 25% ALEKS Weekly Homework Objectives and Exam Reviews
- 5% ALEKS Whole Pie Percentage
- 10% Written Assignments
- 40% Midterm Exams 1 and 2
- 20% Final Exam

Course Grades: Final course grades will follow the standard cut-off: A 90%, B 80%, C 70%, D 60% and below 60% earns an F grade. You must earn at least a C grade in Math 111 in order to move on to higher math classes for which Math 111 is a prerequisite.

Your course grades will be kept in the ALEKS gradebook.

Incomplete Grades: An incomplete grade may be issued for a student who is earning a grade of C or better, but who has failed to complete a major requirement such as the final exam. Any student seeking an incomplete must discuss this option with the instructor and sign an agreement prior to the time when grades are issued.

Communication: Email is the best way to communicate with your instructor outside of class. Please check your Linn Benton student email account frequently and use it when emailing me questions or concerns. I cannot respond to a non-student email account. I will respond to email within 24 hours.

Attendance and Participation: Regular attendance is important to your success in the course. As a "virtual" course, we will meet regularly three days a week at the published class times via Zoom, with a few exceptions that will be announced in advance. It is expected that your camera will remain on for most of the class period and that you will engage in group discussions and activities. Many of the written assignments that I collect will be completed during class.

Homework and ALEKS: The course homework and a significant amount of learning will be done in an online adaptive learning environment called ALEKS. You will start with an initial knowledge check that assesses what you already know and what you still need to learn. ALEKS then determines a unique lesson plan for you to learn the material of the course.

Every course topic has a lesson from the ebook. You can access an ebook in ALEKS so you don't have to purchase a paper copy unless you want to. Many of the topics also have videos to help you learn the material, so check the resources for each topic as you work.

Outside of class, you must be prepared to spend at least 10 hours per week working in ALEKS. You must complete the initial knowledge check by Wednesday, September 29 before you arrive at class or you will be dropped from the course. As soon as you finish the Initial Knowledge Check you should start learning topics for the Week 1 ALEKS homework, which is due Sunday night by midnight.

I hear and I forget. I see and I remember. I do and I understand. ~Confucius

Accessing ALEKS:

Go to <u>www.ALEKS.com</u> and sign in or create a new user account. You will need the class code and a personal access code. You can purchase the 11-week access code through the bookstore (online or in person) or follow the instructions on the ALEKS website. If you are waiting on financial aid you can use the free two-week code to get started.

ALEKS Class Code: 3JHU3-VHFEF Free two-week access code: CC90A-54D78-90158-A0D88

Missing ALEKS Deadlines: There are ten ALEKS Homework Objectives with deadlines every Sunday night. Try to work in ALEKS a little bit every day. If you wait until Sunday to start learning the weekly topics, you will likely run out of time. If you do not complete your ALEKS topics by the due date, you will miss points for that weekly assignment. If you happen to miss a few topics, you will move on to the next week's topics each Monday. You may have to complete missed topics if they are prerequisites for the new week's topics. Anytime you complete the weekly objective, ALEKS will then open topics from previous weeks that you may have missed.

It is important that you try to complete 100% of your ALEKS pie, as completion is worth 5% of your overall grade.

Written Assignments: There will be a few written assignments approximately once a week. We will often work in pairs or groups to solve problems during class. You will be asked to turn in some of these assignments through Moodle to be graded. You will either scan and upload your written work as a pdf or take a photo and upload the photo. Any quizzes assigned in Moodle or ALEKS will also count toward your Written Assignment grade. If you miss class you will find your assignments in Moodle. It is always your job to make sure you know what was assigned and when it is due.

Midterm Exams: The two midterm exams will be given in ALEKS using an online proctoring tool called Respondus. You will need to have access to a computer or laptop (no Chromebooks) to take the exams. The dates for these exams are listed on the calendar and will not change. The exam will open on Monday following class and close on Wednesday before class. There are no exam retakes or make-ups. If you miss one midterm exam then your final exam percentage will count as the missing test score.

Final Exam: The final exam will be on campus on Monday, December 6th from 4:30-6:20 pm in BC 204. Please note BC is the Benton Center in Corvallis.

The final is cumulative and written. You will be asked to write about concepts in addition to solving problems similar to those on ALEKS exams.

Any conflicts or arrangements for alternative exam times or locations must be arranged and discussed with me prior to the Thanksgiving holiday. You must take the final exam to earn a passing grade in the course. If you are sick on the day of the final exam, please do not come to campus. Email me to make arrangements for an alternative exam.

Help: There are many resources available to you if you need help!

- Ask questions during class or office hours.
- Send me an email.
- ALEKS has helpful tutorials, videos and resources.
- Talk with a math instructional assistant in the Learning Center.
- Make an appointment to work with a FREE tutor in the Learning Center.

Cheating: If you cheat on an exam, you will receive a zero grade on your exam, and I will file an incident report with the Student Conduct and Retention Manager. A second episode of cheating will guarantee an F grade for the course and more severe disciplinary action from the school. Copying written assignments from another student is also cheating. Copying will earn no credit on an assignment and will be reported. If you are having so many problems that you feel the only way out is to cheat, then you need to come talk with me. I am here to help you succeed. There are ways to work things out for students who are willing to try.

Anyone With Special Needs or Circumstances? Students who have issues I should be aware of, have emergency medical information that I should know about, need special arrangements in the event of evacuation, or have documented disabilities who may need accommodations, should talk with me as early as possible, no later than the first week of the term. If additional assistance is required the student should contact the Center for Accessibility Resources in RCH 105 or call <u>541-917-4789</u>.

Masks on Campus: While our class is virtual, the final exam will be held on campus, and you may have the need to visit campus during fall term. When on campus, wear a <u>mask or face covering</u> indoors at all times. Your mask or face covering must be properly worn (fully covering nose and mouth and tight-fitting). Mesh masks, face shields, or face covering that incorporates a valve designed to facilitate easy exhalation are not acceptable. If you have a medical condition or a disability that prevents you from wearing a mask or cloth face covering, you must obtain an accommodation from CFAR (Center for Accessibility Resources) to be exempt from this requirement. *State guidelines do not limit* class size. Physical distancing accommodations can be made upon request and cleaning supplies are also available for personal use.

LBCC Comprehensive Statement of Nondiscrimination:

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our <u>Board Policies and Administrative Rules</u>. Title II, IX, & Section 504: Scott Rolen, CC-108, <u>541-917-4425</u>; Lynne Cox, T-107B, <u>541-917-4806</u>, LBCC, Albany, Oregon. To report: <u>linnbenton-advocate.symplicity.com/public report</u>.

Math 111-22470

Weeks	Tentative Schedule and Exam Dates
Week 1 Sept 27 – Oct 3	 Sections 2.3 and 2.4 Functions, Lines and Recall Building Line Equations, Average Rates of Change, Intercepts, Interpretations Come to class on Wednesday with the ALEKS Initial Knowledge check finished or you will be dropped from the class. ALEKS Class Code: 3JHU3-VHFEF Temporary ALEKS Access: CC90A-54D78-90158-A0D88
Week 2 Oct 4 – Oct 10	Sections 1.6, 1.7 and 2.5 Absolute Value Equations and Inequalities, Parallel and Perpendicular Line Equations, Lines of Best Fit Oct 4 th is the last day to drop without a "W"
Week 3 Oct 11 – Oct 17	Sections 2.6, 2.7 and 2.8 Basic Power and Root Functions, Function Translations, Piecewise Functions, Even/Odd Functions, Determine Increasing, Decreasing and Constant Trends in Functions, Symmetry, Working With Functions and Composition
Week 4 Oct 18 – Oct 24	EXAM 1: Review Monday, October 18 Exam opens Mon at 6:30 pm and closes Wed at 4:30 pm Section 3.1 Quadratic Functions, Factoring Spot Check, Quadratic Models and Problem Solving, Extreme Values
Week 5 Oct 25 – Oct 31	Sections 3.2, 3.3 and 3.4 Polynomial Functions, End Behavior, Zeros Real and Complex, Polynomial Long Division, Synthetic Division, Build the Equation of a Polynomial Function
Week 6 Nov 1 – Nov 7	Section 1.1, 1.6, and 3.5 Rational Functions, Graphing Rational Functions and Applications Involving Dist/Rate/Time and Work, Solving Rational Equations, Solve Formulas
Week 7 Nov 8 – Nov 14	Section 4.1, 4.2 and 4.3 Inverse Functions, Graphing Inverse Functions, Building Inverse Functions. Exponential Functions, Logarithmic Functions, and Compound Interest Veteran's Day: November 11 th (NO CLASS) Nov 14 th is the last day to drop with a "W"
Week 8 Nov 15 -Nov 21	Exam 2: Review Monday, November 15 Exam opens Mon at 6:30 pm and closes Wed at 4:30 pm Sections 4.4, 4.5 and 4.6 Exponential and Logarithmic Equations, Solving Equations, Creating Exponential Models, Compound Interest Problem Solving
Week 9 Nov 22 – Nov 28	Sections 1.2 and 5.1 Solving Systems of Equations, Substitution Technique, Elimination Technique, Distance-Rate-Time Problems, Mixture Problems Thanksgiving: November 25 th (NO CLASS)
Week 10 Nov 29 – Dec 5	Section 6.1 and Review for the Final Exam Solving a system of equations using a Matrix and Gauss-Jordan Elimination.
Finals Week Dec 6 – Dec 9	Final Exam: Monday, December 6 from 4:30 pm to 6:20 pm We will take the final exam in BC 204. Please bring a mask, pencil, and scientific calculator (cell phones and graphing calculators will NOT be allowed.) The ALEKS Whole Pie will lock at 4:30 on Dec 6 when the final exam begins.