Math 111 Vikki Maurer Winter Term 2019

Instructor: Vikki Maurer **Class:** T 11-1, R 11-1, F 11-12

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 this Course:

ALEKS 360 Access Code
Regular Internet Access
ANY Graphing Calculator (Free App on your phone, Desmos, etc.)
Notebook, Paper, Straight Edge

ALEKS COURSE CODE: LQ3H6-JPYEF

FREE 2-WEEK ACCESS: 3271C-BC198-C4EAB-F8CE0

Phone: 541-917-4370 but email is best.

Email: maurerv@linnbenton.edu **Office:** WOH 119

Student Hours: Mondays 11:00 to 11:50AM, Wednesdays 11:00 to 11:50AM, and Thursdays 10:00 to 10:50AM Other times by appointment (just send me an email and we can figure out a time that works) or drop by and see if I am in.

Course Requirements:

20% ALEKS Weekly Homework - Note that each week is 2% of your course grade.
5% ALEKS Whole Pie
10% In-Class Assignments, Attendance, and any take home problems or projects
40% Midterm Exams 1 and 2
5% ALEKS Comprehensive Knowledge Check
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.

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.

Homework and YOUR Responsibility: The course homework and most of the course 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. ***Note:*** ALEKS tailors its lesson path to your understanding of the course material. You will have more or less work to do in ALEKS to learn the course material, depending on how much of the course material you still need to learn.

Every course topic has a lesson from the associated book, College Algebra by Julie Miller and Donna Gerken. You can access an ebook in ALEKS so you don't have to purchase a hard copy unless you want to. Many of the topics also have videos to help you learn the material.

You must be prepared to spend at least 10-15 hours per week on this class, many of those hours working in ALEKS. **The first week you must take the initial knowledge check by Thursday, January 10 when you arrive at class or you will be dropped from the class. As soon as you finish the Initial Knowledge Check you should start learning topics for the Week 1 ALEKS homework, which is due on Saturday by midnight.** Note that since this is a 5 credit math class, if you were in a classroom, you would spend 5 hours in class, and 2 hours outside of class for each hour in class. You will want to be working in ALEKS daily or at a minimum 3-4 times a week to complete each weeks' objectives.
Tip: ALEKS' goal is that you understand the course objectives, NOT that you do 20 exercises for that section in the book. (You will have more or less to do depending on whether or not you understand it and can do the math yet.) Recognizing this will help you navigate ALEKS successfully.

Missing Class and Late Homework: If you miss class check my website for the lecture notes and any changes to the schedule. The biggest reason why students fail to complete a math class is because of poor attendance. If you miss several of our classes you will find it very difficult to get caught up. Be in class each day.

Tests: There are two written midterm exams that you will take in class. The dates for these exams are listed on the calendar and will not change. There are no exam retakes or make-ups. If you miss a midterm exam then your final exam percentage will count as the missing test score. There is also an ALEKS proctored knowledge check that you will take in the testing center during week 10.

In-Class Problems: We will often work in pairs or groups to solve problems during class. These in-class problems will be collected. If you are not in class to work on the problem, then you will not earn credit. There is no way to make up these in-class problems. I will drop 2 of these in-class problems at the end of the term. So each students can miss a couple days of class and it will not hurt your grade.

Final Exam: Your cumulative final exam is worth 150 points. You will be asked not only to demonstrate your mastery of the calculus you learned this term, but you will also be writing about concepts.

Help: There are many resources available for you if you need help. Ask questions during class or office hours. ALEKS has helpful tutorials, videos and resources. Search YouTube or mathtv.com for the topic of interest and watch a tutorial. Talk with an instructional assistant in the Learning Center. Sign up for a FREE tutor in the Learning Center.

Cheating: Cheating will not be tolerated. If you choose to cheat on an exam and are caught, you will receive a zero grade on your exam, and I will file an incident report. A second episode of cheating will guarantee you an F grade for the course and more severe disciplinary action from the school. 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 always ways to work things out for students who are willing to try. I can't help you if you don't come see me.

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 541-917-4789.

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 Board Policies and Administrative Rules. Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: linnbenton-advocate.symplicity.com/public report.

DATA RESULTS YOU SHOULD BE AWARE OF:

Students who fail math classes which use ALEKS typically have worked less than 2 hours per week and still had at least 100 topics left to learn at the end of the term.

Weeks	Schedule and Exam Dates
Week 1 Jan 7 - 11	**Sections 2.3 and 2.4** Functions, Lines and Recall Building Line Equations, Average Rates of Change, Intercepts, Interpretations **Come to class on Thursday with the ALEKS Initial Knowledge check finished or you will be dropped from the class.**
Week 2 Jan 14 - 18	**Sections 1.6, 1.7 and 2.5** Absolute Value Equations and Inequalities, Parallel and Perpendicular Line Equations, Lines of Best Fit
Week 3 Jan 21 - 25	**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 Jan 28 - Feb 1	**EXAM 1 Tuesday, January 29** **Section 3.1** Quadratic Functions, Factoring Spot Check, Quadratic Models and Problem Solving, Extreme Values
Week 5 Feb 4 - 8	**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 Feb 11 - 15	**Section 3.5** Rational Functions and Applications Involving Dist/Rate/Time and Work, Solving Rational Equations, Solve Formulas
Week 7 Feb 18 - 22	**Section 4.1, 4.2 and 4.3** Inverse Functions, Graphing Inverse Functions, Building Inverse Functions. Exponential Functions, Logarithmic Functions, Compound Interest and Exponential Models
Week 8 Feb 25 - Mar 1	**EXAM 2 Tuesday, February 26** **Sections 4.4, 4.5 and 4.6** Exponential and Logarithmic Equations, Solving Equations, Creating Exponential Models, Compound Interest
Week 9 Mar 4 - 8	**Sections 5.1** Solving Systems of Equations, Substitution Technique, Elimination Technique, Distance-Rate-Time Problems, Mixture Problems
Week 10 Mar 11 - 15	**Section 6.1** and Review for the Final Exam **ALEKS Proctored Knowledge Check in RCH 111**
Finals Week Mar 18 - 20	**Final Exam, Tuesday, March 19, 12:30 to 2:20pm** **We will take the final exam in our usual classroom.** **The ALEKS Whole Pie will lock at 12:30pm on March 19.**