**Math 111 Vikki Maurer** Fall Term 2019

**Instructor:  Vikki Maurer Class Times:**  TR 9-11, F 9-10
**Phone:**  541-917-4370 but email is best **Classroom:** WOH 113
**Email**:  maurerv@linnbenton.edu
**Office:**WOH 119

**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 11-week Paid Access Code
Regular Internet Access
Scientific Calculator and access to Desmos (Graphing calculator not required)
Notebook, Paper, Straight Edge

**Student Hours:** Check my instructor website for weekly hours. If those times don’t work for you then email me or talk to me and we can find another time. You can also drop by and see if I am in my office.

**Course Requirements:**
20%    ALEKS Weekly Homework
 5% ALEKS Whole Pie
15%    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.

**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 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. **The first week you must take the initial knowledge check by Thursday, October 3 when you arrive at class or you will be dropped from the class. Then as soon as you finish the Initial Knowledge Check you should start learning topics for the Week 1 ALEKS homework, which is due on Monday nights by midnight.**

**Missing Class and Late Homework:** If you miss class check my website for the lecture note link. 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 one midterm exam then your final exam percentage will count as the missing test score.

**Written Assignments:**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 student can miss a couple of in-class assignments and it will not hurt the course grade. There will also be written projects that you will complete at home. It is always your job to make sure you know what was assigned and when it is due.

**Final Exam:**  Your cumulative final exam is worth 150 points.  You will be asked not only to demonstrate your mastery of the college algebra 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 with the Dean of Students.  Copying written assignments from another student is cheating also and will be reported. 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.

**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](http://linnbenton.edu/42145BA0-3DCC-11E3-AA36782BCB47BBE7). 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](http://linnbenton-advocate.symplicity.com/public_report).

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| **Weeks** | **Tentative Schedule and Exam Dates** |
| Week 1Sept 30 - Oct 7 | **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.****ALEKS Class Code: V3RRV-PWXXY****Temporary ALEKS Access: 13CB1-D8342-E4FFD-22940** |
| Week 2Oct 8 - Oct 14 | **Sections 1.6, 1.7 and 2.5** Absolute Value Equations and Inequalities, Parallel and Perpendicular Line Equations, Lines of Best Fit |
| Week 3Oct 15 - Oct 21 | **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 4Oct 22 - Oct 28 | **EXAM 1 Tuesday, October 22****Section 3.1** Quadratic Functions, Factoring Spot Check, Quadratic Models and Problem Solving, Extreme Values |
| Week 5Oct 29 - Nov 4 | **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 6Nov 5 - Nov 11 | **Section 1.1, 1.6, and 3.5** Rational Functions and Applications Involving Dist/Rate/Time and Work, Solving Rational Equations, Solve Formulas  |
| Week 7Nov 12 - Nov 18 | **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 8Nov 19 - Nov 25 | **EXAM 2 Tuesday, November 19****Sections 4.4, 4.5 and 4.6** Exponential and Logarithmic Equations, Solving Equations, Creating Exponential Models, Compound Interest |
| Week 9Nov 26 - Dec 2 | **Sections 1.2, 4.5 and 5.1** Solving Systems of Equations, Substitution Technique, Elimination Technique, Distance-Rate-Time Problems, Mixture Problems **No School Thursday, Nov 28 or Friday, Nov 29** |
| Week 10Dec 3 - Dec 9 | **Section 6.1** and Review for the Final Exam |
| Finals WeekDec 9 - Dec 11 | **Final Exam, Tuesday, December 10 from 7:30am to 9:20am****We will take the final exam in our usual classroom.****The ALEKS Whole Pie will lock at midnight on December 10.** |