Math 101/102/103, Intermediate Algebra Parts I, II, and III, Spring 2018 (ALEKS)

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COURSE OVERVIEW: This sequence of one-credit-hour courses (Math 101, 102, and 103) provides preparation for MATH 121, 129 and STAT 145. Emphasis is on problem solving skills. Though this course is acceptable as credit toward graduation from UNM-Valencia, and provides a math requirement for many Associate Degrees and Certificates, it does *not* satisfy UNM core or group requirements.

Course Student Learning Objectives that apply to all three courses: Upon successful completion of this course, students will be able to:
- Apply solution methods learned to "real-world" problems.
- Analyze solutions and give them contextual meaning.
- Communicate or present mathematical concepts using correct mathematical notation and terminology.
- Correctly use vocabulary related to functions.

MATH 101: Intermediate Algebra Part I

MATH 101.503 – First 8-week course (January 15 through March 9, 2018)			
CRN	**Class Time**	**Days**	**ALEKS Course Code**
47652	4:30 – 5:45 PM	Tue/Thur	JCFWU-FCUNJ

Course Prerequisite: Appropriate placement score, or grade of C or better in Math 100 or Math 022.

MATH 101 Course Description: Math 101 includes equations and inequalities, applications and problem solving with linear equations, development of linear functions, the graph of a line, percent problems, work with geometry concepts such as perimeter and areas of simple geometric shapes. There are *130 topics* in the ALEKS pie for Math 101.

Math 101 Course Student Learning Objectives in regard to skills acquisition:
Upon successful completion of this course, students will be able to:
- Sketch the graphs of linear functions.
- Find equations for linear models and solve.
- Solve systems of two linear equations, use graphs, tables, and equations.
- Solve for a specified variable in a formula.
- Correctly use function notation.
- Be able to determine function values for given domain values, and determine domain values for given function values.
- Interpret slope in relation to variable coefficients and as a rate of change.

MATH 102: Intermediate Algebra Part II

MATH 102.503 – First 8-week course (January 15 through March 9, 2018)			
CRN	Class Time	Days	ALEKS Course Code
47653	4:30 – 5:45 PM	Tue/Thur	4WTKW-E9E6E
MATH 102.513 – Second 8-week course (March 19 through May 11, 2017)			
CRN	Class Time	Days	ALEKS Course Code
59825	4:30 – 5:45 PM	Tue/Thur	TBD

MATH 102 Course Description: Math 102 includes solving and graphing quadratic equations, properties of exponents and scientific notation, simplifying polynomial expressions, factoring polynomials, and more development of functions. Completion of Math 102 with a grade of C or better satisfies the prerequisite for MATH 129 and STAT 145. There are **145 topics** in the ALEKS pie for Math 102.

Math 102 Course Student Learning Objectives in regard to skills acquisition:
Upon successful completion of this course, students will be able to:
- Sketch the graphs of linear and quadratic functions.
- Find equations for quadratic models and solving quadratic equations.
- Solve systems of two linear equations, use graphs, tables, and equations.
- Factor polynomials.
- Correctly use function notation.
- Be able to determine function values for given domain values, and determine domain values for given function values.
- Determine domains for functions.
- Simplify radical and rational expressions.

Course Prerequisite: Grade of C or better in Math 101.

MATH 103: Intermediate Algebra Part III

MATH 103.503 – First 8-week course (January 15 through March 9, 2018)			
CRN	Class Time	Days	ALEKS Course Code
47654	4:30 – 5:45 PM	Tue/Thur	RUMGF-EDHMW
MATH 103.513 – Second 8-week course (March 19 through May 11, 2017)			

CRN	Class Time	Days	ALEKS Course Code
59828	4:30 – 5:45 PM	Mon/Wed	TBD

MATH 103 Course Description: Math 103 includes simplifying radical and rational expressions, solving radical and rational equations, introduction to the exponential and logarithm functions. Completion of Math 103 with a grade of C or better satisfies the prerequisite for MATH 121. There are **184 topics** in the ALEKS pie for Math 103.

Math 103 Course Student Learning Objectives in regard to skills acquisition:
Upon successful completion of this course, students will be able to:
- Sketch the graphs of quadratic, exponential, and logarithmic functions.
- Find equations for quadratic models and solving quadratic equations.
- Factor polynomials.
- Correctly use function notation.
- Be able to determine function values for given domain values, and determine domain values for given function values.
- Determine domains for functions.
- Solve radical and rational equations.
- Rewrite exponential functions in logarithmic form and vice versa.
- Solve exponential and logarithmic equations using equating bases.

Course Prerequisite: Grade of C or better in Math 102.

MATH 106.501 and MATH 193.504 (16-week companion courses)		
CRNs	**Class Time**	**Meeting Days**
M106: 45878	3:00 – 3:50 PM	Tues./Thurs.
M193: 36616	3:00 – 3:50 PM	Tues./Thurs

MATH 106 and Math 193, Sect. 504 Companion Courses: These two courses provide support for students who need additional scheduled time to work with an instructor on the material in this course.

COURSE MATERIALS:
- ALEKS Student Access Code: This code is available for purchase in the bookstore or online at http://www.aleks.com/ Purchase a minimum of 18 weeks. This code will provide you access to all of the online materials for the course that will be required for the course. ***You must register for ALEKS by the end of the 1st week of classes, or within three days of registering for the class if you register late, or you will be dropped from the course.*** You will need high-speed Internet access, the use of a web browser, and the ability to upload free software in order for the ALEKS program to run properly.
- 3-Ring binder (1 inch): In your binder you should have 5 divider tabs. Refer to binder organization chart for requirements and details (see end of syllabus). Throughout the semester, there will be random binder checks – these points apply toward your participation grade.

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- Other: You will also need notebook paper, pencil, and 3 inch by 5 inch note cards. You may use a *scientific* calculator for this course, but this must be a stand-alone calculator, not one on your cell phone or other mobile device.

- **ATTENDANCE POLICY:**

You are expected to
- attend class every regularly scheduled class time
- be <u>on time</u> to each class <u>and to stay the entire class</u>.

If you miss 2 consecutive classes you *may* be dropped from the class. If you know ahead of time that you will be absent or tardy, please inform your instructor by email or phone. You bear full responsibility for the material and procedural information covered in class.

WEIGHTED COURSE AVERAGE:

Attendance	10%
Homework (Topics or Time in ALEKS or documented tutoring, binder)	20%
Projects (these are required for each module)	20%
Quizzes (three quizzes, one at the end of each of the first three modules)	20%
Cumulative Final Exam: must be taken by 12:30 PM Wednesday, December 13, 2017	30%

GRADING SCALE: Grades for this course will be assigned as follows:

Course Average	Course Letter Grade	
		Students will be allowed *one take* on the final exam and must score a 70% or better on the final to receive a passing grade for the course. This applies to all three courses.
90-100%	A	
80-89%	B	
70-79%	C or CR	+ or – grades are assigned at the discretion of the
<70%	NC	instructor

WORK FOR THE COURSE:

<u>Work in ALEKS:</u> This course is computer-based mastery, therefore you are <u>required</u> to make sufficient progress each week or risk being dropped from the course. Your grade includes
- completing the required number of topics OR
- spending a <u>minimum</u> of 10 hours per week in the ALEKS program and/or working with an approved tutor (documented).

This means you will need to spend time on your math outside of class. Please seek help from tutors and instructors as needed. You may earn up to **10 Homework Points** each week for progress and time worked in ALEKS. This is based on how you did compared to your weekly goal. If you exceed your goal for the week, you can earn extra credit points. However, no more than 10% of your final course grade can be earned from extra credit.

<u>Binder:</u> You are required to have your binder in class every day. There will be random binder checks – these points apply toward your **Homework grade.**

<u>Procedure for Documenting ALEKS Work in your binder:</u>

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- Take notes while working in ALEKS. Each separate day of notes needs to be labeled with the date and the pie piece/topic being covered.
- Work practice problems in an <u>orderly manner</u>.
- <u>Copy the question</u> on which you are working, and demonstrate your method of solution.
- Once you have a record of your work, input your answer in ALEKS.

ALEKS Notes and Practice Work can either be done on loose leaf paper and kept behind Tab 2 of Binder, OR be done in a separate notebook (spiral or pad) and filed behind Tab 2 in Binder.

Follow the same procedure for any ALEKS Knowledge Checks. (Date the assessment, number each question, copy and solve the question, then enter answer into the computer.) Work related to ALEKS Knowledge Checks (Initial and others) need to be filed behind Tab 4 of your binder.

<u>Projects:</u> You will be required to demonstrate mastery on at least one project (up to a maximum of 5 projects) for this course. If you score less than 90% on any of the required projects for you will need to conduct an error analysis of the incorrect work and correct the parts of the project that you missed. Projects count up to **20 Project Points each**.

<u>Written quizzes:</u>
Written quizzes will be given throughout the term. You are ***required*** to demonstrate mastery on these quizzes. If you score less than 90% on a quiz for you will need to conduct an error analysis of the incorrect work and correct the problems that you missed. Then you will need to retake the quiz. Quizzes count up **to 10 Points each**. You may use a 3x5 note card for notes and formulas on quizzes and on the final exam.

<u>Error analysis and correction:</u>
If you score less than 90% on a quiz or project, you will:
- conduct an error analysis of the problems you missed and make corrections to those problems.
- Your error analysis and corrections need to be made on a <u>separate</u> sheet of paper. The correction paper is vertically divided in half. Put the number of the problem you missed and then rework the problem on the LEFT side of the paper, and write an explanation of what was done incorrectly on the RIGHT side for that particular problem.
- Once you have completed your error analysis and corrections, you will retake the quiz but the corrections for the project will be enough to earn back the points you missed.

<u>Other requirements:</u>
You will need access to UNM Learn. This is another program used for communicate in this class. Also, all of the required projects for this course will be posted in Learn. You will use your UNM NetID to log into Learn. You may access it directly via http://learn.unm.edu .

IMPORTANT DATES (all deadlines are by 5:00 PM Mountain Time):
The class you initially registered for is a first 8-week course, so the following deadlines apply.

Martin Luther King Holiday	Monday, January 15, 2018
Last day to add or change grading mode on LOBOWeb:	Friday, January 19, 2018
Last date to drop without a grade:	Friday, January 26, 2018
Last date to drop without Dean's Permission:	Friday, February 23, 2018

Last date to change grading mode with form   Friday, March 9, 2018
Last date to drop with Dean's permission   Friday, March 9, 2018
Spring Break: March12 – 16, 2018

SUPPORT SERVICES: Math Center tutors are available in the Learning Commons M-Th from 8:00 to 5:00, and Fridays 8:00 to 1:00 (925-8907). There are also open computer labs on campus for students' use. The Valencia Campus Library provides a quiet atmosphere for study and is an excellent resource for supplementary materials.

CONDUCT EXPECTATIONS: Students are expected to conduct themselves in a polite, courteous, professional, and collegial manner.
- Cell phones must be set on silent. Please step into the hall if you need to take a call during class.
- ABSOLUTELY NO FOOD is allowed in the computer labs. Drinks are only allowed if they are in sealed containers with tightly fitting lids that will not spill.
- During a quiz or exam, cell phones must be turned ***off*** and be out of sight. No personal electronic devices are allowed. A calculator is allowed if appropriate (some quizzes or portions of the final exam will have a restriction on calculator use). If you leave for any reason during a quiz or exam, your paper will be collected and you will not be allowed to continue working on that exam or quiz.

TITLE IX: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered responsible employees. This designation requires that any report made to a faculty member, TA, or GA regarding sexual misconduct or gender discrimination must be reported to the Office of Equal Opportunity and the Title IX Coordinator. For more information on the campus policy regarding sexual misconduct, see: https://policy.unm.edu/universitypolicies/2000/2740.html

DISABILITY STATEMENT: If you have a documented disability, please provide me with a copy of your letter from Equal Access Services <u>as soon as possible</u> to ensure that accommodations are provided in a timely manner. The Equal Access Office can be reached at 925-8510.

UNM'S POLICY ON ACADEMIC HONESTY: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests or assignments, claiming credit for work not done or done by others; hindering the academic work of other students; and misrepresenting academic or professional qualifications within or outside the University.