Math 100 - Preparation for University Level Mathematics (3 credits) UA ALEKS Prep for Calculus score of 25-50% or Prep for College Algebra score of 30-70% required. 
**Description:** The main purpose of this course is to serve as a preparation for MATH 105, MATH 109C, MATH 111, and MATH 112. Work in the course is primarily self-directed, with mandatory weekly interaction with the instructional team. Content includes the following topics: linear, quadratic, polynomial, rational, and absolute value equations and inequalities, algebraic expressions, graphing techniques, factoring techniques, exponents and logarithms. Students who wish to continue to higher level math courses will have the option to work with additional course material in algebra and trigonometry to facilitate this preparation. This course by itself cannot be used to satisfy the foundations math requirement for any degree program.

**Comments:** Some students with only one math requirement will need to take this course in the Spring. This course is available during Summer II for students who need to take a higher level math course in the Fall. This course does not serve as a prerequisite to any UA Math course. Students must place into the next course through the Math 100 final exam. The next course is generally Math 105, 109C, or 112.

Math 105 - Mathematics in Modern Society (3 credits) UA ALEKS Prep for Calculus score of 45-100% or Prep for College Algebra score of 55-100% required.

**Description:** This course will examine how the mathematics learned in high school is applied to real life situations. Topics may include personal finance, statistics, elections, symmetry, and scheduling. Some of the applications may be how the site of the Olympic Games is chosen, why spirals occur in nature, and how statistical data is collected and how it can be used to mislead the public. The course is designed for elementary education majors, fine arts majors, humanities majors, and those social and behavioral science majors whose further courses do not require College Algebra as a prerequisite. The course is designed for elementary education majors, fine arts majors, humanities majors, and those social and behavioral science majors whose further courses do not require College Algebra as a prerequisite.

**Comments:** Majors within the College of Fine Arts, the College of Humanities, and some majors within the College of Social & Behavioral Science and the College of Education can use this course to satisfy their math requirement. This course cannot be used as a prerequisite for any other mathematics courses (except Math 302A for Elementary Education.) If you think you might change your major to one that does not allow Math 105, you should consider Math 109C or 112 instead.

Math 109C - College Algebra with Data Analysis (3 credits) UA ALEKS Prep for Calculus score of 45-100% or Prep for College Algebra score of 55-100% required.

**Description:** College algebra course that emphasizes data analysis. Topics include functions, rates of change, linear functions, exponential & logarithmic functions, and systems of equations. Graphing calculators and spreadsheets will be used. This course may be used as a prerequisite for Math 115A, 113, or 263. It is not intended for students who plan to take Math 122A/B. Credit allowed for only one of the following courses: MATH 109C, MATH 110 or MATH 112.

**Comments:** This course is designed for students in Eller College, Communications, Political Science, Journalism, Sociology, Nursing, Psychology, and those majors that eventually require statistics. Topics are similar to MATH 112 but more emphasis on data analysis. Students who take this course and switch to a major that requires MATH 122A/B should take MATH 120R. Most majors that accept Math 112 (College Algebra) for their math requirement will accept Math 109C. Students who choose a major in the College of Science, College of Engineering, Architecture and some majors within the College of Agriculture & Life Sciences should choose Math 112 instead. Additional questions should be directed to an advisor.

Math 112 - College Algebra and Application (3 credits) UA ALEKS Prep for Calculus score of 45-100% or Prep for College Algebra score of 55-100% required.

**Description:** Topics include properties of functions and graphs, linear and quadratic equations, polynomial functions, exponential and logarithmic functions with applications. Students are expected to have a graphing calculator. Credit allowed for only one of the following: MATH 109C, MATH 110 or MATH 112.

**Comments:** Typically, this course is used to prepare students for additional mathematics courses, but there are students who take this course to satisfy all or part of their requirement. Majors that require Math 105 or 109C will also accept Math 112. Students planning to take Math 122A/B eventually would need to complete both Math 111 and 112 if they placed below the pre-calculus (120R) level.
Math 113 - Elements of Calculus (3 credits) UA ALEKS Prep for Calculus score of 65-100%, Prep for College Algebra score of 88-100%, UA Math 109C/112 required for placement into this course. Generally available in Spring.

**Description:** Introductory topics in differential and integral calculus.

**Comments:** Pre-pharmacy students, some majors within the College of Agriculture, and some majors within the College of Social and Behavioral Science require this course. Because this course is considered a survey of calculus, it cannot be used to satisfy the Math 122B/125 requirement and cannot be used as a prerequisite to additional calculus courses such as Math 122A, 122B, 125, or 129. Students who want to take a course to prepare for Calculus I should consider Math 120R instead.

Math 116 – Calculus Concepts for Business Majors (3 credits) UA ALEKS Prep for Calculus score of 65-100%, Prep for College Algebra score of 88-100%, UA Math 109C, or Math 112 required for placement into this course. Generally available in the Spring since students must also complete MIS 111 or ABE 120 to be eligible for this course.

**Description:** Introductory topics in differential and integral calculus, with particular emphasis on understanding the principal concepts and their applications to business. Graphing calculators will be used as tools for further understanding these concepts. Except as per University policy on repeating a course, credit will not be given for this course if the student has credit in a higher level math course. Such students may be dropped from the course.

**Comments:** This course is for all majors within Eller College and a few in Ag and Life Sciences. Because this course is considered a survey of calculus for business related majors, it cannot be used to satisfy the Math 122B/125 requirement and cannot be used as a prerequisite to additional calculus courses such as Math 122A, 122B, 125, or 129. Students who want to take a course that prepares them for Calculus I should consider Math 120R instead.

Math 120R - Calculus Preparation (4 credits) UA ALEKS Prep for Calculus score of 65-100% required.

**Description:** Reviews algebra and trigonometry; study of functions including polynomial, rational, exponential, logarithmic and trigonometric. Graphing calculators are required in this course.

**Comments:** This course is intended to prepare students for Math 122A/B. Although this course is not specifically listed as a mathematics requirement for any major, majors that only require courses such as Math 105 or Math 112 can accept this course. Students who complete both Math 111 and 112 do not need to take Math 120R in order to move on to Math 122A/B. Students who need a stronger review of these topics should consider taking both Math 111 and 112 instead of Math 120R. A grade of C or higher is required to move on to Math 122A/B.

Phil 110 - Logic and Critical Thinking (3 credits) No math placement required. Generally, not taken by first semester freshmen.

**Description:** Designed to improve ability to reason and think critically; emphasis on evaluating and presenting arguments. Includes a basic introduction to logic and scientific reasoning.

**Comments:** This course cannot be used as a prerequisite for any math courses. Majors that allow Math 105 (Math in Modern Society) will accept Phil 110, except Elementary Education and Journalism majors.