

COURSE NUMBER: MATH 1099

COURSE TITLE: Bridge to College Math

CREDITS: 3 (6 Lab)

CLASS HOURS PER WEEK: Varies

PREREQUISITES: Based on placement into DEV 0114, MATH 1050, or MATH 1075

DESCRIPTION OF COURSE

The topics contained in DEV 0114, MATH 1050, and MATH 1075 are delivered in an individually directed online format using technology. Students begin at the appropriate level based on course placement. Students are encouraged to accelerate through as many of these courses as they can within the time limits of the semester. Regular and substantive interaction between students and instructor is required. Students are assessed regularly in the online learning environment in order to determine their level of mastery of the course material. At the end of the course, based on proficiency of the topics in one or more courses, students will earn a grade of "S" for satisfactory progress and gain permission to enter subsequent courses in their plan of study.

COURSE STUDENT LEARNING OUTCOMES

Whole number operations (DEV 0114) Rounding and estimating (DEV 0114) Perimeter and area (DEV 0114) Integer operations (DEV 0114) Order of operations and algebraic expressions (DEV 0114) Solve linear equations (DEV 0114) Fractions and mixed number operations (DEV 0114) Decimal operations (DEV 0114) Applications and problem solving including ratio, proportion, and percent (DEV 0114)
The Real Number system (MATH 1050) Linear equations and inequalities in one variable (MATH 1050) The coordinate plane; Overview of graphing equations in two variables (MATH 1050) Linear equations and inequalities in two variables (MATH 1050) Systems of linear equations and inequalities in two variables (MATH 1050) Exponents and polynomials: Add, Sub, Mult, Div; Scientific notation (MATH 1050) Factoring polynomials and solving polynomial equations (MATH 1050)
Recognize Rational and Radical Expressions (MATH 1075) Recognize Rational, Radical, and Quadratic Equations (MATH 1075) Manipulate Rational and Radical Expressions using Algebra (MATH 1075) Solve Equations Involving Rational and Radical Expressions (MATH 1075) Solve Quadratic Equations using Algebra (MATH 1075) Solve Applied Problems Involving Rational Expressions and Quadratic Equations (MATH 1075)

CALCULATOR

- Where appropriate, a basic scientific calculator and/or a graphing calculator is provided in the *ALEKS* program. Students working in the first DEV 0114 pie may **not** use any other calculator, and hand calculations are required on all DEV 0114 written activities.
- Except as noted above, students may also use any hand-held scientific calculator or graphing calculator that does not have a computer algebra system. The TI Multiview that is used for traditional DEV 0114 sections is an economical option. **A graphing calculator is strongly recommended for students who intend to enroll in a course that requires one** such as MATH 1025, STAT 1350, MATH 1130, or MATH 1149. The Texas Instruments' TI-84 (regular, Plus, Silver, etc.) graphing calculator is strongly recommended, supported, and approved for use during proctored assessments.

Note: Cell phone or computer based calculators (Windows, Desmos) are **not** permitted at any time.

REQUIRED COURSE MATERIALS

ALEKS 360 software

- Access to ALEKS 360 is included automatically when students enroll in this course.

GENERAL INSTRUCTIONAL METHODS

Students who set a goal of completing more than one course module (DEV 0114, MATH 1050, MATH 1075) will receive a pacing guide that will provide weekly benchmarks toward that goal. Course topics will be presented online using technology that allows students to move at an individualized pace. Students complete practice problems that contain a variety of instructional opportunities. Instructional resources include video lectures, online explanations, an eBook, and interactive animations. In addition to the online resources, the instructor will provide individualized instruction through weekly activity comments, and/or by answering student questions as they arise. The *ALEKS* program will periodically assess students to make sure they remember what they have practiced and will reroute students back to any topics they did not master.

STANDARDS AND METHODS FOR EVALUATION

Students will complete online practice problems and take informal "pop-up" knowledge checks (KCs).

Students must demonstrate 100% mastery of ALL topics in their ALEKS course and at least 80% mastery on the Final KC to earn a passing grade of Satisfactory (S) regardless of the progress score.

Students are required to complete all assigned activities and/or meet attendance requirements AND add the required number of topic to their learning pie **OR** work actively in ALEKS for the stated time.

A NOTE ON PROCTORED TESTING

The CSCC Mathematics Department requires proctored testing in all courses, in all modalities. Due to the COVID-19 emergency, that requirement will be limited to the Initial Assessment and the Final KC. All Initial Assessments and Final KCs will be taken on campus or at another approved testing center, by appointment.