Kent Core Learning Outcomes Assessment Plan

Course number, title (credit hours): MATH 10771 Basic Math Concepts I Plus (5) and MATH 14001 Basic Math Concepts I (4)

Department/School: Mathematical Sciences

Proposed Kent Core Category:
(please check appropriate box)

- ☐ Composition
- ☒ Mathematics and Critical Reasoning
- ☐ Humanities and Fine Arts
  - ☐ Humanities
  - ☐ Fine Arts
- ☐ Social Sciences
- ☐ Basic Sciences
- ☐ Additional

A sample syllabus must accompany the plan.

I. Kent Core learning objectives	**II. Ohio Transfer Module learning objectives**	**III. What corresponding learning outcomes are included in this course?**	**IV. What method(s) will be used to assess student learning?**	**V. What evidence of this assessment will be presented annually for the five-year Kent Core review of this course?**
Acquire critical thinking and problem solving skills		Explore and apply effective strategies in problem solving. Understand the place-value structure of the base ten number system and be able to represent and compare numbers. Identify properties of each set of numbers and use these properties to solve problems efficiently. Apply number theory concepts (divisibility rules, prime factorizations, GCF, LCM) in problem solving situations. Use mental math and estimation to solve problems.	Homework assignments; Performance on in-class activities; Quizzes and exams Common set of questions assessing student mastery of key concepts on final exam.	Overall student grades will be monitored to track student performance in the course. We will report percentages of students mastering course material in general, i.e. the overall percentage of students scoring C or higher on the final exam. In addition, we will report mastery of individual learning outcomes based on a common set of final exam questions.
Apply principles of effective written and oral communication				
Broaden their imagination and develop their creativity				

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Cultivate their natural curiosity and begin a lifelong pursuit of knowledge				
Develop competencies and values vital to responsible uses of information and technology				
Engage in independent thinking, develop their own voice and vision, and become informed, responsible citizens				
Improve their understanding of issues and behaviors concerning inclusion, community and tolerance				
Increase their awareness of ethical implications of their own and others' actions				
Integrate their major studies into the broader context of a liberal education				

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Strengthen quantitative reasoning skills		Solve problems using effective strategies such as Venn diagrams, using variables, solving a simpler problem, drawing a picture and working backwards. Use and explain the four basic operations within each set of numbers: counting numbers, whole numbers, integers, rational numbers, Real numbers. Analyze decimals, percentages, ratios, fractions, and be able to convert between these representations. Perform calculations, including standard algorithms, non-standard ways commonly created by students. Reason quantitatively using ratio and proportion. Understand the language of sets and be able to work with set operations.	Homework assignments; Performance on in-class activities; Quizzes and exams Common set of questions assessing student mastery of key concepts on final exam.	Overall student grades will be monitored to track student performance in the course. We will report percentages of students mastering course material in general, i.e. the overall percentage of students scoring C or higher on the final exam. In addition, we will report mastery of individual learning outcomes based on a common set of final exam questions

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Understand basic concepts of the academic discipline		Explain and use logic symbols and truth tables to determine validity of arguments. Develop problem solving strategies such as guess and check, draw a picture, look for a pattern, solve a simpler problem, work backwards, solve an equation. Understand place value. Define the number sets within the set of Real numbers (whole numbers, integers, rational numbers, irrational numbers) and be able to operate on each set. Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers. Use models of the four operations to model equations.	Homework assignments; Performance on in-class activities; Quizzes and exams Common set of questions assessing student mastery of key concepts on final exam.	Overall student grades will be monitored to track student performance in the course. We will report percentages of students mastering course material in general, i.e. the overall percentage of students scoring C or higher on the final exam. In addition, we will report mastery of individual learning outcomes based on a common set of final exam questions.

A separate entity, perhaps a subcommittee of the USC, will collect, compile, and analyze the data, returning the analysis of the data to course coordinators and the chair of the USC. Data will be requested during final exam week and the compilation will be completed before the first week of the subsequent semester.

ASSURANCES:

By submitting this proposal, we assure that:

1. The faculty members who teach this course have agreed to the learning outcomes and assessment methods.
2. Assessment results will be reviewed annually by the faculty and submitted to the University Requirements Curriculum Committee.

3. Modifications to the course and/or assessment plan will be based on the annual review.

Department Chair/School Director (or designee) Signature Date