Eastern West Virginia Community and Technical College
COURSE ASSESSMENT REPORT

Course Title and Number: MTH 103 – Transitional Math Level C	**Academic Term and Year of Assessment Activity (Ex: Fall, 2014)** Spring 2017
Report Submitted By: Andrea Williams	**Number of Students Assessed:** 18
Date Report Submitted: 5/24/2017	**Number of Sections Included:** 3
Course Delivery Format (list all modalities used in sections assessed. Ex: web based, VDL, traditional section, hybrid course, etc.): Traditional section	

Course Role in the Curriculum

Provide a description of the role the course serves in the curriculum (i.e. general education requirement, program technical core, restricted elective, etc.). Note all as appropriate.

MTH 103 is a transitional math course that serves primarily as the prerequisite to MTH 123 – Intermediate Algebra and MTH 225 – Introduction to Statistics, which means any student seeking a transfer degree (Associate of Arts or Associate of Science) is required to take this course (unless he or she places out of it). It is also required of any students wishing to apply to the nursing program. This course does not satisfy the general education requirements of a college-level math course.

Assessment Methods

Provide a description of the assessment process used. Include description of instrument and performance standards in description. Note all methods.

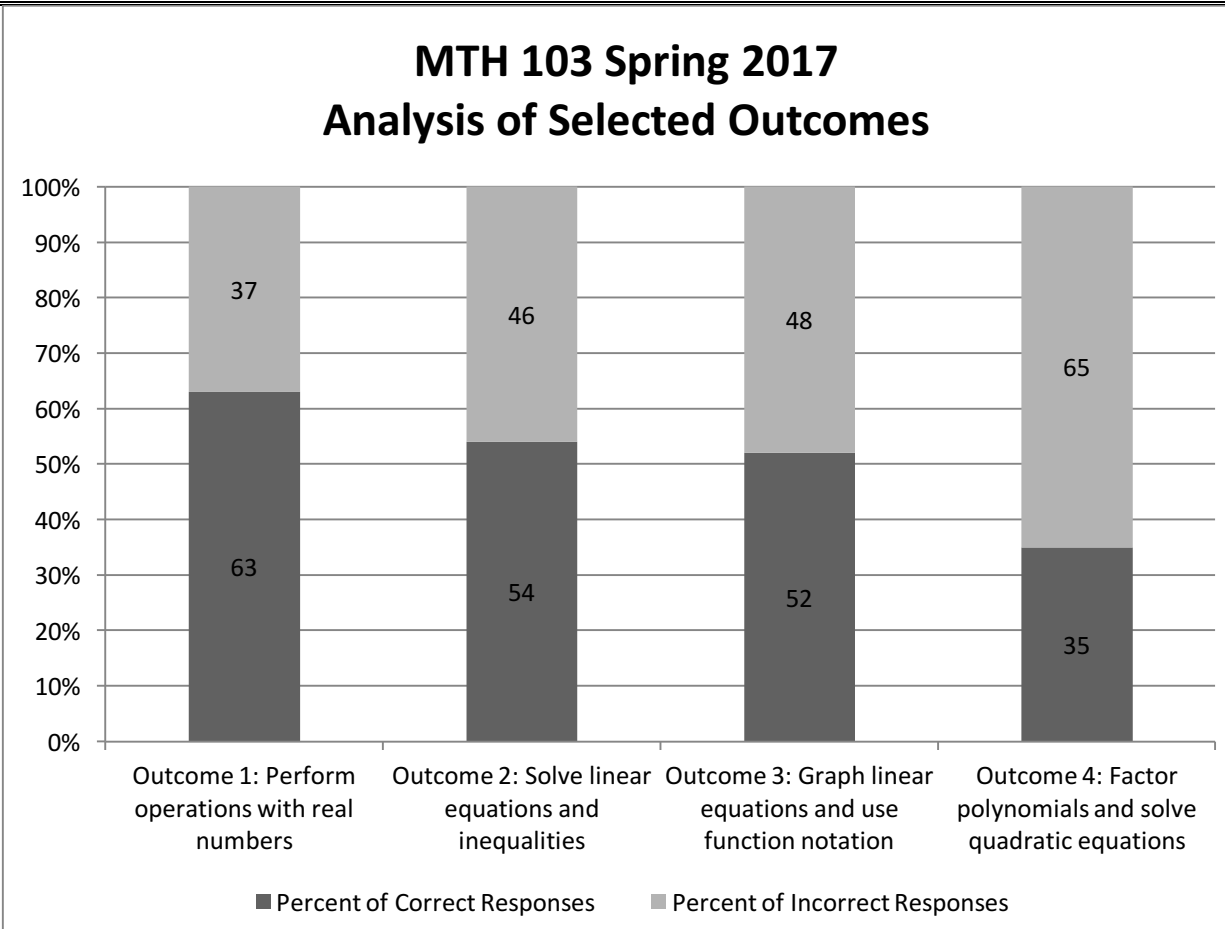
Final exam questions are used as a basis for this assessment. The final was a paper exam. Students were allowed to use a scientific calculator. Students were given partial credit based on the work they showed on their test paper, but for purposes of this analysis, only questions receiving full credit are considered correct.

Multiple questions are included in each outcome for analysis. A minimum satisfactory percent of correct responses for each outcome is 75%. Those failing to meet the standard are reviewed on an outcome-by-outcome basis.

Assessment Results

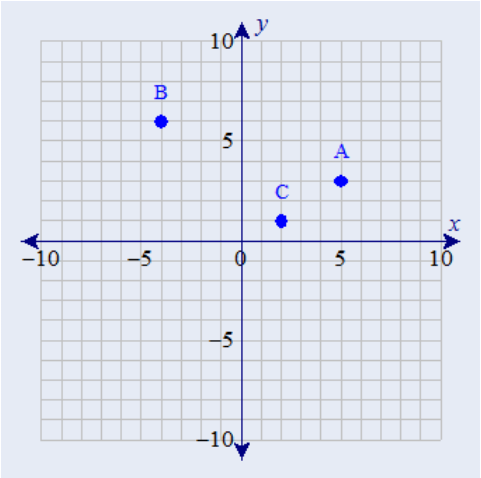
Provide a summary of results including tables/charts. Incorporate information from previous assessments as appropriate. Append additional pages if necessary. If appending, include notation in box to "See attached".

Four outcomes were analyzed, and none out of the four met the 75% correct criterion. More details about the outcomes and the assessed questions are included in the Action Plan.



Course Level Assessment Summary of Outcomes, Indicators and Results **Course Title and Number: MTH 103 – Transitional Math Level C** **Number of students in assessment sample = 18** **Number of Sections in Assessment = 3** **Add additional rows to table if necessary**				
Learning Outcomes (Insert learning outcomes assessed during this cycle)	**Indicator (Insert indicators used for each outcome: exam question, scoring rubric, etc. Be specific)**	**Percent of Correct Responses**	**Percent of Incorrect Responses**	**Performance Standard Met (75%)* (yes or no)**
Outcome 1: Perform operations with real numbers	**3.** Find the value of the following expression using the rules for order of operations. $-17 + (3)^2 \div (-2 + 1) \cdot 3$ **20.** Evaluate the expression at $x = -3$,	63%	37%	No

	$y = 3$ and simplify your answer. $5x^2 + y^2 - 6$ **26.** Insert <, >, or = to make a true statement. $\|-4\|$ _____ $-\|4\|$			
Outcome 2: Solve linear equations and inequalities	**1.** Solve the following inequality: $-2z - 1 \geq 3$ **5.** The total cost of a jacket and a tie was $59.32. If the price of the jacket was $1.04 less than the tie, what was the price of the jacket? Write your answer to the nearest cent. **9.** Solve the equation $3x - 6y = -2$ for y. **23.** Solve the following linear equation. $3(4z - 8) = 6z - 48$	54%	46%	No
Outcome 3: Graph linear equations and use function notation	**2.** Consider the function: $f(x) = 8x + 7$ Find the value of $f(-2)$. **4.** Find the equation (in slope-intercept form) of the line with the given slope that passes through the point with the given coordinates. slope: -4, ordered pair: $(-3, 5)$ **12.** Find the x-intercept and y-intercept for the given equation. Then use that information to graph the line. $-8x - 3y = -24$	52%	48%	No

	21. Identify the coordinates of the points A, B, and C on the graph.  **22.** Consider the equation: $y = 2x - 3$ Complete the table below so that each ordered pair will satisfy the equation. x | y 1 | ☐ ☐ | 1 **27.** Find the equation of line connecting the given points, A and B. Write your answer in slope-intercept form. $A(4,-7), B(1,2)$ **29.** Consider the linear equation: $y = \frac{3}{2}x - 4$ Determine the slope and y-intercept of the equation above. Then use that information to graph the line.			
Outcome	**10.** Solve the following quadratic equation	35%	65%	No

4: Factor polynomials and solve quadratic equations	by using the square root method. $(x + 3)^2 = 49$ **17.** Factor the polynomial. If the polynomial cannot be factored, write *not factorable*. $16x^2 - 1$ **25.** Factor the trinomial. If the trinomial cannot be factored, write *not factorable*. $2x^2 - 6x - 56$ **31.** Solve the following equation by factoring. $y^2 + 11y + 24 = 0$ **32.** Completely factor the trinomial or write if it is "not factorable". $6d^2 + 5d - 1$ **33.** Solve the following quadratic equation using the quadratic formula. $y^2 - 8y + 1 = 0$			

* Please note if using a different minimum performance standard.

Conclusions **Provide a brief summary of conclusions derived based on analysis of data. Append additional pages if necessary. If appending, include notation in box to "See attached".**
While pass rates have improved since the inception of this course in Fall 2015 (see Attachment A), the level of difficulty, amount of material, and pace of the course still prove to be a challenge for many students. Specific areas that need addressed are discussed in the Action Plan below.

Previous Assessment Reports and Results **Date of Previous Assessment: N/A** **List of Outcomes Not Met:** **Summary of Actions Taken to Address Unmet Learning Outcomes: Append additional pages if necessary. If appending, include notation in box to "See attached".**

Action Plan and Date for Reassessment **Identify action plan for improvement or maintaining current performance levels including**

outcomes identified for re-assessment, curriculum revision, LOT proposal, new or revised course activities to reinforce learning outcomes, etc. Append additional pages if necessary. If appending, include notation in box to "See attached".

The primary issue that students had with Outcome 1 was order of operations. When selecting homework problems for the upcoming semester, it will be ensured that the students see a variety of these problems throughout the course including several on the final exam review.

For Outcome 2, the question with the lowest number of correct responses was solving a formula for a specified variable, but most mistakes were minor sign or reducing errors; only a handful students did not know how to approach the problem.

Knowing when to use the point-slope equation was the biggest issue with Outcome 3. This continues to be an issue even through Intermediate Algebra and College Algebra, so the students need more exposure to and more practice with these problems at this level. Students are fine proceeding once they realize they need to use the point-slope equation, so instructors need to place more emphasis on recognizing when the equation is needed.

For Outcome 4, each question was answered correctly by at most 50% of the students. All of the unit-level objectives under this outcome are relatively easy for the students to comprehend; the issue seems to be retention. More review time needs to be spent on this outcome at the end of the semester and a number of these problems included on the final exam review.

One instructor implemented an extra help session this semester, coming in a half hour early for each class to provide one-on-one homework help, test review, and assignment feedback. Unfortunately, the students that most needed this extra time were the least likely to utilize it; conversely, the students who attended the help session regularly would likely have been successful in the course anyway. Although it certainly would not be detrimental to continue this practice for the instructors who wish to do so, it will unlikely become a permanent supplement to MTH 103. Rather, instructors can continue to promote the use of tutor.com and tutoring through Adult Basic Education for students needing extra help.

One change planned for Fall 2017 which will hopefully improve performance in MTH 103 is a change in instructional materials. In particular, the new learning software is deemed to be more user-friendly for both students and instructors than the current program. For example, the new software will allow the instructor to provide a final exam review with better feedback than the current one.

It is also important to note that major changes are forthcoming to developmental mathematics education due to state requirements. MTH 103 will probably only be offered for another year and therefore is unlikely to be formally assessed again, but the proposals above will be implemented for as long as it is offered with the goal of at least maintaining if not improving the current retention and pass rate levels.

Assessment Committee Recommendation/Approval
(To be posted by Assessment Committee Chair)

xApproved as presented
□ Approved with recommendations for future reports (Explanation Required)
□ Resubmission Required. Reason for Resubmission:

Date: 09-08-17

Attachment A: Raw and Completers' Pass Rates for MTH 103 (Fall 2015 – Spring 2017)

	Raw	Completing
Fall 2015	38.7	61.2
Spring 2016	32.3	78.5
Summer 2016	71.4	83.3
Fall 2016	51.6	66.6
Spring 2017	62.5	83.3