

East Carolina University General Education Assessment Action Plan Progress Report

GENERAL EDUCATION COMPETENCY AREA: MATH

ASSESSMENT CYCLE: 2020-21 to 2023-24

INSTRUCTIONS: The completed Progress Report should be sent to the Dean of the college and copied to Kristen Dreyfus (springerk@ecu.edu) and Ram Khatiwada (khatiwadar18@ecu.edu) by **November 1st, 2023**. For each action planned please mark the status (Complete, In Progress, Not Started, or Not Applicable) and update the Progress on the Unit Response, Responsible Party and Timeline. Please download and complete the report if you cannot fill out the form in Teams online.

a. Pedagogical / Curriculum

Planned Action # 1: Syllabus Revision					
The department is doing a substantial revision for the syllabus for Math 1050, replacing a number of topics. The net effect will be to significantly reduce the amount of probability topics. Item analysis show that these have been less effective in achieving general education goals. Moreover, with Math 1050 no longer serving as a (choice of) prerequisite for Math 2228, the need to include a large amount of probability is no longer there.					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Daphney Mulcahy	AY 2022-23
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 1					
The content revisions were developed summer 2022, introduced in fall 2022, and refined in spring 2023. Counting techniques, odds, binomial probabilities, and the standard normal distribution were removed. Added to the course topics were Polya's four steps for problem solving, estimation, and budgeting.					
Planned Action # 2: Restructuring the Course					
In addition to the syllabus changes, there will be some changes to the structure of the course. In particular, prerequisite modules and exam review modules will be added to help ensure students' mastery of the material.					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Daphney Mulcahy	AY 2022-23
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 2					

The updated ALEKS course structure was introduced in fall 2022. Nine adaptive modules were added - five prerequisite modules and four review modules. The prerequisite modules contain topics not reviewed in the course that students should have a prior understanding of. One of these prerequisite modules is placed at the beginning of the course and the rest are strategically placed before modules students tend to struggle with. The review modules are placed before the tests and contain most topics covered in the previous modules leading up to the test. With the review modules being adaptive, students will only see those topics they have not shown mastery of.

Planned Action # 3: Difficult Topics Revision

For Math 1065, the department is going to move from using the lecture time to review topics students had difficulty with to using it to talk about upcoming material. We will also budget additional time for difficult topics and include additional proctored knowledge checks in an effort to help students perform better on difficult topics.

Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Joseph Bland	AY 2022-23
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Progress on Planned Action # 3

In Fall 2023, we altered our lectures to focus on upcoming work instead of reviewing difficult topics students faced the previous week. In reviewing the topics that students would see in the upcoming week, we tried to focus on the more difficult topics. Additionally, we added proctored class participation quizzes at the end of the lectures where for students to demonstrate understanding/mastery of the material; students received multiple attempts per quiz to demonstrate mastery and were offered the opportunity to ask questions after unsuccessful attempts. These changes are also being applied to the Spring 2024 semester as well.

Planned Action # 4: Offering Math 0001/0045 and Math 1065 on Consecutive 8-Week Blocks

In Spring 2023, in conjunction with the Math Pathways initiative, we plan to run a trial offering Math 0001/0045 and Math 1065 in the first and second 8-week blocks, respectively. The compressed timeframe should not only help with retention of material in the transition from Math 0001/0045 to Math 1065, but also allow students to move on more quickly to their courses having Math 1065 as a prerequisite.

Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Joseph Bland/Susan Howard	AY 2022-23
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Progress on Planned Action # 4

The trial was run in Spring 2023 with Deborah Ferrell as instructor for both 0045 and 1065, enrollment capped at 20. While successful, the small population served, and more pressing issues with College Algebra - in particular, the persistently high post-pandemic DWF rate, which also slows progression to later courses - have shifted priorities away from this type of co-remediation.

b. Student Support Services

Planned Action # 5: Placement Test Implementation					
<p>A critical component of student success for Math 1065 is preparedness. With the requirement of standardized test scores eliminated (at least for now) and issues of effectiveness for unweighted high school GPA placement, the department constructed a placement exam based on the paper-and-pencil placement exams used by the department a number of years ago. The exam is taken on Canvas and the results integrated into Banner for easy use by advisors. Note that the placement exam has three component exams, the first of which is for placement into Math 1065. Students doing well enough on that may take a second exam to place out of Math 1065 into a course having Math 1065 as a prerequisite and (if successful) a third exam to place into Math 2171 (Calculus I).</p> <p>The placement test was developed and implemented in response to the issues arising in Fall 2020 and was first used for the 2021-2022 cohort. We are monitoring the results—looking at how students with different placement scores fared in their classes--in an effort to determine any changes in cutoffs, etc., which may be needed. The first set of data was inconclusive.</p>					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Valerie DeBellis	Summer 2023--ongoing
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 5					
<p>As part of this process, a Banner dashboard was created (with much technical support from ITCS)—finished in summer 2023—to allow a more detailed analysis. This analysis is underway, with some graduate student support.</p>					

c. Faculty Development

Planned Action #6 : Faculty Training					
<p>As noted above, the shift to online for these courses was done shortly before the start of the fall semester. Many faculty members were neither experienced nor trained in DE when navigating the shift. Subsequently, the university returned to requiring DE training for everyone teaching DE courses (at that point, essentially all faculty). This remains in force.</p>					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Chris Jantzen	Completed Spring 2023/ongoing
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 6					

Action is complete for 2022-23: all faculty teaching DE courses in the last AY had the required training. This is also ongoing as faculty teaching this year will also need the required training.

d. Other Areas

Planned Action 7# : Data Collection Improvements					
Recognizing the need for better data for Math 2228, the department will implement changes to collect common data from all sections for institutional assessment.					
Action Implementation Status (Mark One)				Responsible Party	Timeline
Complete	In Progress	Not Started	N/A	Deborah Ferrell	Fall 2023--ongoing
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Progress on Planned Action # 7					
A set of 5 common exam questions was created in spring 2023. IPAR has requested a larger number and we are in the process of adding additional questions.					