ACME math:
how did we get here
and
where might we go

CAUTION!!!!!

- I am speaking only from my perspective related to math, and am not representative of the core ACME committee or English or ELL
- In spite of my involvement in many groups in CT, this presentation is not endorsed by any of them
- I am simply a math minion who just wants to tell a story
- The history is being shared from memory and not meant to be a used as a historical artifact
- The plan I share is not yet endorsed and as such are just proposals
- No one has approved them….because they are just proposals
- No one has rejected them…because they are just proposals
- They are not meant to be considered a done deal…because they are just proposals

How did we get here?

- In 2011, along came STATWAY
  - STATWAY'S primary goal, get students into and through transfer level stats faster, while providing a more robust and critical thinking approach…less plug and chug
  - The Statway project, a Carnegie Foundation byproduct, came with curriculum, tech support, pd, and faculty mentoring
  - While wildly successful at some (maybe all) campuses, the program ultimately died resulting from what I believe was the extreme costs and lack of articulation

Along came PA 12-40

- In 2012 PA1240 was written into LAW.
- The law set a timeline for redesigns for math and English that included:
  - Free pre-term programs for what we now call transitional students
  - Condensing the developmental sequence to one term for our intensive level students
  - Offering co-requisite or embedded courses for students who were closest to but not quite college-level
  - Incorporation of multiple measures in placement and advising
  - Alignment of curriculum to Common Core standards and high schools

How did we do with PA1240?

- We were funded, we researched, and implemented our responses
- Every campus did something different and spent their money differently
- Every campus saw positive gains in achievement, for some it was greater success in developmental completion, for others greater success in college-level completion, and some others, both.

And then came Math Pathways

- A nationally recognized model of delivering math content
- In this model students identify a goal course and take the shortest sequence of courses to get there.
    - The primary consequence, Intermediate Algebra was no longer in most pathways
- Beginning in 2017, a team of 5 CC faculty and 4 CSU faculty met weekly for a year and designed curriculum for students to get to transfer level stats or transfer level general liberal arts math in their first semester. These were co-requisite modeled courses. Only students placing in the transitional level would take a Beginning Algebra course first.

Math Co-requisite Courses

- Co-req courses are by nature support classes.
- As math is sequential, the support is often pre-requisite material, delivered just-in-time
- Topics in the co-req are directly mapped to topics on the college-level
- Students register for two courses (support + college level)
- Faculty paid for two courses

And the pitch was put out

- Our team presented to senior leadership (at the time) in System Office
- We presented to CC math faculty
- We presented to CSU math faculty
- We presented to our own campuses
- The result:

EPIC FAILURE

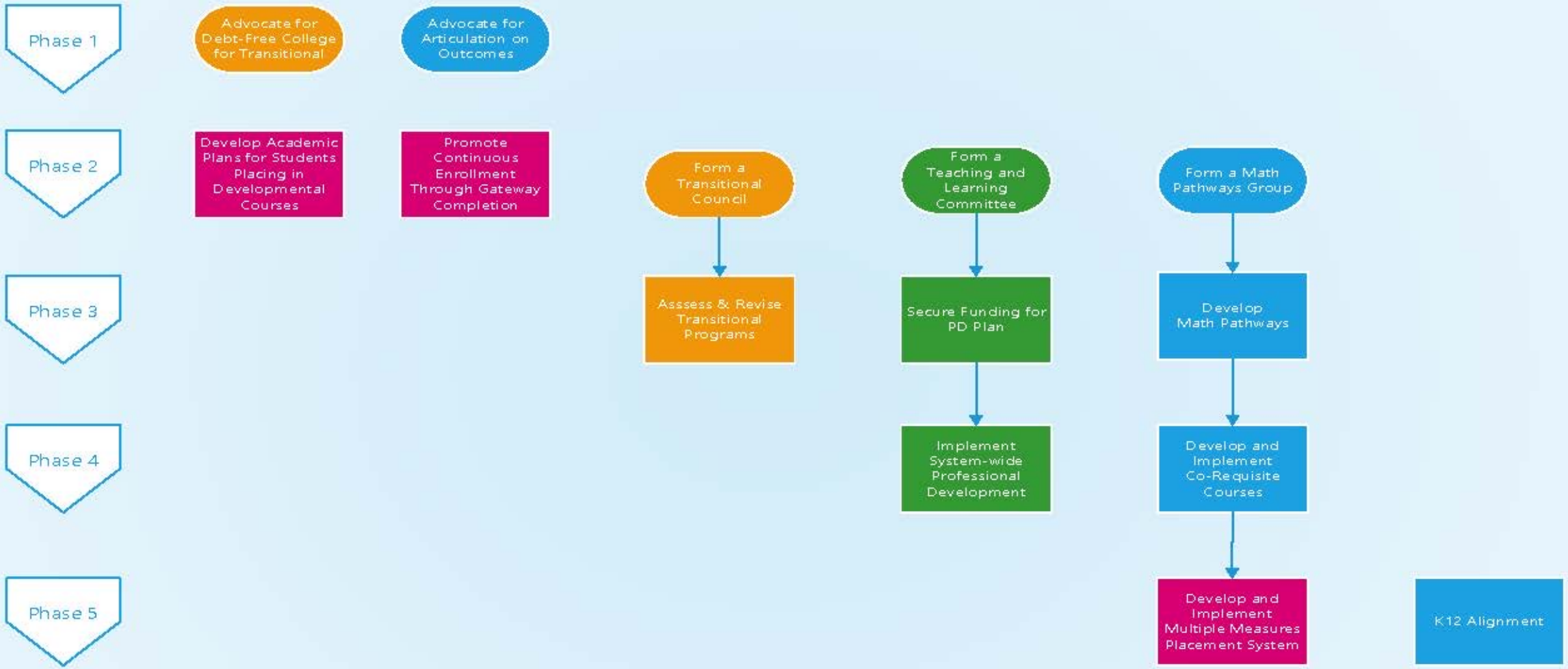
What went wrong:

- Leadership didn’t like the co-req being developmental
- CSU’s didn’t like the removal of the Intermediate Algebra pre-req
- CC’s didn’t like the continuation of the Beginning Algebra pre-req
- Call me naïve, but I was dumbfounded, shocked, and truly disappointed, but not defeated.
- As part of our summary report of our efforts, we requested System Office bring in guiding support from thought partners such as the Dana Center or Complete College America

And in 2019 we got what we asked for!

- System Office signed a contract with the Charles A Dana Center to help us dream, design, and deploy math pathways.
- Step 1: figure out what we want and need
- This was a very big step! This took more than an entire year to organize, research, and brainstorm.
- In May of 2019 our team sent to system office our proposal which included 15 key tasks strategically deployed over 5 phases.

ACME Recommendation Flowchart



And almost a year later on 5.20.2021 a response! Not exactly what we asked for

- System office responded with the ACME policy
- This policy includes mandating
  - Placement process called Guided Self Placement (GSP)
  - Called for removal of Intermediate Algebra outside Calculus Pathway
  - Structure of co-req (no grades or attendance requirements)
  - All students take co-req or stand-alone college level
  - Abolishment of stand-alone developmental
  - Transitional supports concurrent with co-req
  - All students register for math and English in first 24 credits
  - An articulation decree (courses must articulate on outcomes)
  - A timeline

Let's check the timeline

Fall 2023: Full implementation of new curriculum and supports

. Spring 2021: Implementation teams formed, including plan to provide leadership and release time commensurate with the work

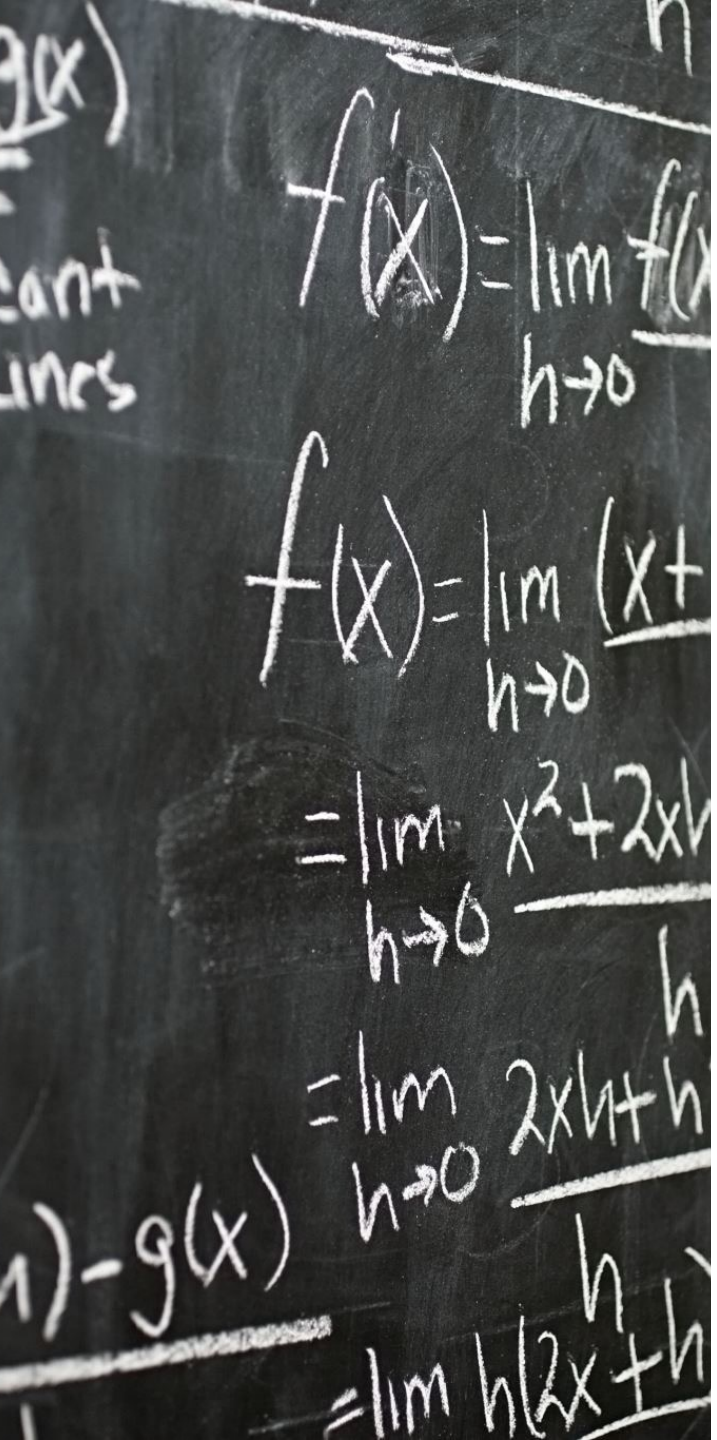
i. Teaching and Learning team to develop PD for faculty and staff to design and deliver the courses and support – delivery ready by fall 2021

ii. CMAC/mathematics faculty team to determine the total number of mathematics pathways – determined in spring and early fall 2021

iii. N mathematics teams, one for each mathematics pathway – all design aspects for each pathway complete by end of spring 2022

vi. Transitional design team – all design aspects completed by end of spring 2022

vii. GSP team – all design aspects completed by end of spring 2022



What is the proposal for now?

- Keep aligned developmental courses for another year.
  - Transitional 6 cr, Intensive 3 cr
- Keep current transitional programming another year
- Roll out co-requisite College Algebra at scale in Fall ‘23 for students placing into the embedded intermediate level (below that would go developmental)
- Remove Intermediate Algebra pre-requisites and offerings at scale
- Implement a quasi-GSP process at scale which includes access to ALEKS PPL (for all or some or none TBD)
- Pilot co-requisite Stats and QR
- Continue development of education pathway and non-transfer courses
- Continue development of transitional strategies and other supports

The biggest change

What is it?

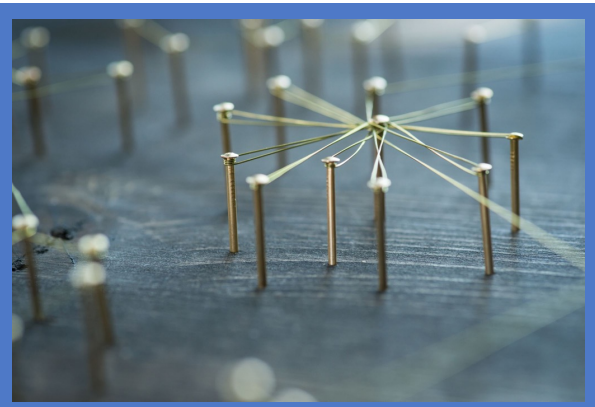
All about GPA!

- But we mean Guided Pathway Advisor.
- Placement and new student onboarding should be holistic
- No high stakes test
- No single metrics
- No inflexible guidelines
- Multiple measures for the win!

Remove silos

- It requires that we capitalize on the 150+ GP advisors in the state. These advisors will be the highly trained experts who can synthesize all the available information to give students advice and in many cases the tools needed to make informed decisions about where they should start.

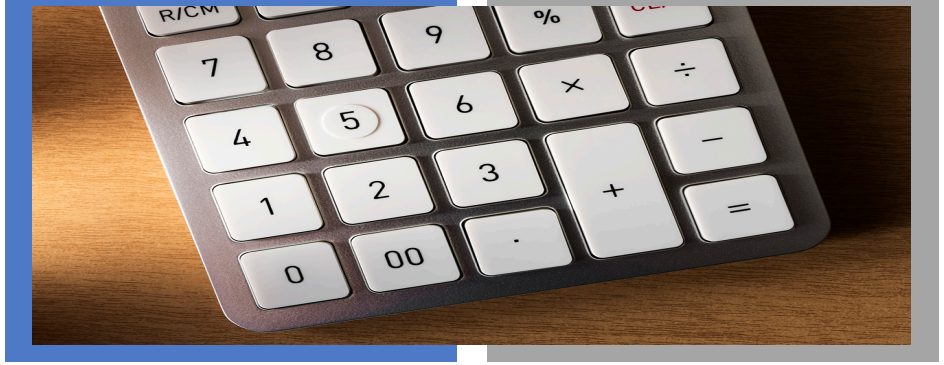
GSP-Snippit



- Students begin the application process
  - Upload proof of high school completion, immunizations, etc.
  - Input their Grade Point Average and select a major
- An email goes out that includes next steps (and maybe access to PPL)
- Make an appointment with the GP Advisor.

Course Level	HS GPA Score Ranges	
Calculus I	N/A (GPA should still be collected)	**Placement at this level should use alternate measures [SAT, ACT, PPL[1], Q&A/questionnaire, etc.]**
Precalculus	N/A (GPA should still be collected)	**Placement at this level should use alternate measures [SAT, ACT, PPL, Q&A/ questionnaire, etc.]**
College Algebra	N/A until Guided Self-Placement is implemented (GPA should still be collected)	**Placement at this level should use alternate measures [SAT, ACT, PPL, Q&A/questionnaire, etc.]**
Transferable STEM Math with Support: Co-requisite College Algebra	N/A until Guided Self-Placement is implemented (GPA should still be collected)	**Placement at this level should use multiple methods [SAT, ACT, PPL, Q&A/questionnaire, etc.]**
Transferable Non-STEM Math Courses: Statistics and Quantitative Reasoning	≥ 3.1	**Placement at this level should use multiple methods [SAT, ACT, PPL, Q&A/questionnaire, etc.]**
Transferable Non-STEM Math with Support: Co-requisite Statistics or Quantitative Reasoning	≥ 2.8 – 3.09	**Placement at this level should be for program of study for which Statistics or QR is the recommended course**
Non-transferable General Education Math (MAT 1000, 1001, 1002, 1003, 1010, 1011, 1012)	≥ 2.8 – 3.09	**Placement at this level and higher requires successful completion of high school Algebra I**
Transitional/ Intensive (Boot Camp, MAT 0988, 0989)	**< 2.8**	**Placement at this level should use multiple methods [SAT, ACT, PPL, Q&A/questionnaire, etc.]**

At advising:
GPA + GSP = holistic decision



- For students whose GPA, and/or other measures of placement (ALEKS PPL, SAT, ACT, etc.) align to the same placement level, registration into that level should be advised and at-home participation in PPL prep software should be encouraged.
- For students whose GPA, and/or other measures of placement do not align, the GP Advisor should refer to the Q&A guide before making their registration recommendation. Once the registration level has been identified, at-home participation in PPL prep should be strongly encouraged.

What are non-cognitive questions like?

This statement sounds…	very much like me	somewhat like me	not at all like me
I can read and understand math word/story problems and am able to identify the important information.			
I actively participate in class discussions and activities, and regularly complete my assignments on time.			
I am able to interpret the solutions to math problems and can usually tell when an answer isn't reasonable.			
I work persistently to solve math problems, even if the problems are challenging or unfamiliar to me.			
I feel comfortable seeking help from an instructor or tutor when I do not fully understand something.			
I study or do extra work beyond required assignments to strengthen my understanding of the material.			
There are times when I feel excited or curious about new mathematical problems and techniques.			

Why is this better?

- All students have equitable access to have their individual learning needs influence their math placement holistically
- No one metric is fully binding
- Opportunity to validate placement with ALEKS PPL (Placement)
- Opportunity to self-remediate in math ALEKS PPL (Prep)
- Opportunity to recruit for bootcamps
- Dovetails with full deployment of the GSP no later than 2024

What do we need from you?

- LOVE!!!
- And then get with your program colleagues across the state and set a meeting to talk best math for your programs…and invite us if you need help!
- Each program was supposed to amend their program's math for CT State as a whole to a new course (or maybe just the new number) by Oct. 14. We only received about 50/298 programs.
- We hope that you include all the courses that could satisfy your program, but encourage you to make a primary recommendation.
  - Ex: Program A might be a technical program and they pick MATH 1001 or higher but Recommend: MATH 1002
- But mostly more LOVE!!

Who should you call for help?

General Policy:
Deb Rimkus (QVCC)
Andre Freeman(CCC)

Placement:
Amanda Sweeney (GCC) Marina Philips (HCC)

College Algebra Pathway:
Myrta Groeneveld (MCC)

Statistics Pathway:
Andre Freeman (CCC)

QR Pathway:
Deb Rimkus (QVCC)
Aja Shabana (MxCC)

Education Pathway:
Marina Philips (HCC)
Amanda Sweeney (GCC)

Non-Transfer Courses:
Amanda Sweeney (GCC) Crystal Wiggins (NWCC)

Transitional:
Amanda Sweeney (GCC)

Study Skills/Growth Mindset: Kathy Herron (CCC)