Information to share at Committee/ANet meetings

1. Please get involved with the Committee/ANets **Community** on my.amatyc.org (log in and show them the page)
   - Join in and/or start discussions
   - Post relevant events and conferences
   - Share content (if only relevant to the group, use the group’s library, but if others could benefit from the content use the All Access Public Library)

2. Head to the IMPACT Live! Pages and join in the discussions and read about the latest developments in math education.

3. Please consider hosting a month on IMPACT Live for 2022 by serving as the featured “Spotlight of the Month”. Hosting a month gives your group an opportunity to promote the awesome things you are doing, share how your community is IMPACTing our profession, and share insights on relevant issues. Spotlight of the Month also provides a way for you to connect with our AMATYC members through the IMPACT Live site as well as via the LiveWire podcasts.

We have organized the year around the IMPACT document’s four pillars of PROWESS and are designated below for your reference. Please let us know which month your group would be interested in hosting and we can reserve it for you.

**Your Community’s Level of Commitment**

1. My community is interested in hosting in 2022. We request to host __________ (month)
2. My community is interested in hosting in 2022. We’d like to possibly host __________ (month), but we do not yet have community consensus and commitment.
3. My community is interested in hosting, but we have not decided what month will fit our needs.

**Schedule for 2022**

- **Engagement (January, February, March)**
  - Jan - **Teaching for PROWESS** - Karen liaison
  - Feb - Julie liaison
  - March - **Math for Liberal Arts** - Evan liaison

- **Ownership (April, May, June)**
  - April - Karen liaison
  - May - Julie liaison
  - June - Evan liaison

- **Student Success (July, August, September)**
  - July - Karen liaison
  - August - Julie liaison
  - Sept - Evan liaison

- **Proficiency (October, November, December)**
○ October - **Mathematics and its Applications for Careers**  
  Karen Liaison

○ November  
  ■ Evan Liaison

○ December

4. Any further questions, contact Karen Gaines at occ@amatyc.org
Mathematics Pathways
Position Statement for the American Mathematical Association of Two-Year Colleges
September, 2021

Mathematics pathways offer students a choice of transferable college-level, credit-bearing mathematics courses aligned to their program of study. These mathematics pathways guide students through any required developmental mathematics courses, making it possible to complete the first college-level, credit-bearing mathematics course in their pathway (henceforth “gateway course”) within one year. There are three principal mathematics pathways that can serve the majority of undergraduate programs of study: a statistics pathway, a quantitative reasoning/literacy pathway, and an algebra-intensive mathematics pathway (American Mathematical Association of Two-Year Colleges [AMATYC], 2018). However, additional mathematics pathways may be required to serve students in elementary education or data science (Saxe & Braddy, 2015; Transforming Postsecondary Education in Mathematics, 2017). Students in career and technical education programs can also benefit from mathematics pathways, including students intended to enter applied baccalaureate programs.

Rationale

Historically, intermediate algebra has been the default prerequisite course for most gateway mathematics courses, with college algebra being the default college-level gateway or general education mathematics requirement. However, an increasing number of programs of study use mathematical topics that differ from those addressed in traditional high school and college algebra courses. Furthermore, although many students in two-year colleges overcome seemingly insurmountable obstacles, the majority attempt just one mathematics course or even none at all in their first two years. Many of these students are placed into multiple, required developmental courses which only a small fraction complete (Bahr, 2010; Mills, 2016). Moreover, students who do complete tend to exhibit low levels of competence in algebra (Stigler, Givvin, & Thompson, 2010). Mathematics pathways represent a structural solution to building equity in college mathematics by providing students with a strong mathematical foundation for their program of study while removing obstacles created unintentionally by mathematics courses (AMATYC, 2018).

Therefore, AMATYC makes the following recommendations for mathematics programs:

- Offer mathematics pathways for students in all programs of study, if possible, particularly the STEM, statistics, and quantitative reasoning pathways.
- Secure institutional funding for faculty and staff professional development to design, scale, and monitor mathematics pathways collaboratively and to improve classroom instruction within different pathways.
● Ensure that college-level, credit-bearing mathematics courses within each pathway
transfer and apply to intended programs of study at regional transfer institutions.

● Align advising and placement practices to promote mathematics pathways and ensure
accurate placement of students into the initial course(s) in their pathway.

● Promote student completion of the gateway mathematics course within one year by
aligning developmental courses to college-level mathematics courses in the pathway
and ensuring tutoring and instructor office hours are easily available and accessible to
students.

● Respond to campus needs that emerge around mathematics pathways including
determining whether bridges between the pathways are working or even necessary.

● Evaluate mathematics pathways through an equity lens, centering the consideration of
differing outcomes for students marginalized on the basis of race/ethnicity, gender,
and/or other marginalized categories, and equitable student representation and
outcomes in the algebra-intensive mathematics pathway.

Mathematics pathways support students in learning mathematics aligned to their career and
academic goals. Promoting timely completion of gateway mathematics courses and centering
equity in the design and implementation of mathematics pathways ensures that students can
apply their mathematics learning to future coursework.

References

Mathematical Prowess And College Teaching. Memphis, TN: Author.

Bahr, P. R. (2010). Preparing the underprepared: An analysis of racial disparities in

Mathematics: Prominent Reforms and the Need to Address Equity. CCRC Working Paper No.
124. Community College Research Center, Teachers College, Columbia University.

Mills, S. R. (2016). Mathematical course-taking patterns of Hispanic students at public two-year
colleges and how these patterns affect degree attainment and transfer (Doctoral dissertation).
Available from ProQuest Dissertations and Theses database. (UMI No. 10145152)

Saxe, K., & Braddy, L. (2015). A common vision for undergraduate mathematical sciences
programs in 2025. Washington, DC: Mathematical Association of America.

Pathways Joint Subcommittee Meeting
2021 Annual AMATYC Conference
Phoenix, Arizona

M08 Pathways Joint Subcommittee Meeting

01:45 PM to 02:35 PM, 10/29/2021

Agenda

1. **Becoming an ANET Update**
2. **Position Statement Review**
3. **Themed Session 2022 Discussion**
4. **MyAMATYC - Karen Ganes**
5. **Traveling Workshop - Mari Menard**

New ANet description:

The purpose of the Mathematics Pathways ANet is to provide a forum for the exchange of ideas, sharing of resources, and discussion of issues of interest involving mathematics pathways in public, primarily associate-degree granting colleges. The Mathematics Pathways ANet strives to:

- Provide professional development opportunities on promising and varied mathematics pathways.
- Share and examine varied mathematics pathways models and courses.
- Share and discuss research related to curricular mathematics pathways models that promote student success.
- Explore and develop mathematics pathways for students in occupational and technical programs.
- Share and discuss processes that allow students to switch from one mathematics pathway to another.
- Encourage continual communication among members of the Mathematics Pathways ANet.
- Maintain and update position statements on issues related to mathematics pathways.
Old:
The purpose of the Pathways ANet is to provide a forum for the exchange of ideas, sharing of resources, and discussion of issues of interest involving Mathematics Pathways in public, primarily associate-degree granting colleges. The Pathways ANet strives to:

Provide opportunities for professional development on proven practices for curriculum and instruction for Pathway courses.

Share best practices for curriculum and instruction that promote student success teaching Pathway courses.

Examine best practices regarding teaching strategies in Pathway courses.

Encourage continual communication among members of the ANet.

Maintain and update position statements on issues related to Pathway courses.

3. Strategic Priority supported by this motion:

Priority II: Provide and promote professional development opportunities to faculty whose primary focus is mathematics in the first two years of college.

C. Enhance access to high quality professional development for all mathematics faculty.
D. Collaborate with other organizations to provide professional development opportunities.

Priority III: Promote research on the teaching and learning of mathematics and statistics in the first two years of college.

F. Assist faculty, departments, and colleges to institute innovative practices informed by research.
G. Disseminate resources and model practices for research-based teaching and learning.
Priority IV: Improve mathematics and statistics curricula in the first two years of college.
A. Seek to provide a strong and relevant mathematics curricular experience for all students.
B. Design and refine pathways for both STEM (Science, Technology, Engineering, and Mathematics) and non-STEM students.
C. Promote the appropriate instruction and assessment of curricula.
D. E. Facilitate the communication of successful curricular innovations that improve student learning.