I. Call to Order

President Kathryn (Kate) Kozak called the meeting to order at 3:30 pm (EST).

II. Welcome and Introductions

President Kozak welcomed the delegates and announced that Donn King was appointed as Parliamentarian and Timekeeper. President Kozak introduced the members of the 2020 – 2021 Executive Board.

- Kathryn Kozak – President
- Laura Watkins – President-Elect
- James Ham – Past President
- Nancy Rivers – Secretary
- Barbra Steinhurst – Treasurer
- Sophia Georgiakaki – Northeast Vice President
- Dennis Ebersole – Mid-Atlantic Vice President
- Alvina Atkinson – Southeast Vice President
- Dale Johanson – Central Vice President
- April Ström – Southwest Vice President
- Sarah Pauley – Northwest Vice President
- Eddie Tchertchian – West Vice President
III. **Announcement of Quorum**

Secretary Nancy Rivers announced a delegate count of 126 out of 253 delegates and stated that there was a quorum.

IV. **Approval of the Rules of Conduct**

Without objection the Rules of Conduct (page 38 of the Delegate Assembly Packet) were approved.

V. **Approval of the Agenda**

The Agenda included in the Delegate Assembly Packet (pages 3 – 4) was updated as follows:

- Item 6: Change 2020 to 2021. Item should read Motion to approve the 2021 Minutes Review Committee.
- Item 9: H should read Article III. Item should read Motion: Bylaw change for Article III – Eddie Tchertchian.

Without objection the (Updated) Agenda (pages 3 – 4 of the Delegate Assembly Packet) was approved.

VI. **Approval of the 2021 Minutes Review Committee**

**Motion:** That the membership of the Minutes Review committee for the 2021 AMATYC Delegate Assembly be approved as listed in the attachment. (Attachment A)

The committee consists of:

- Sophia Georgiakaki, Northeast Vice-President, Chair
- Jonathan Weisbrod, State Delegate
- Lusi Stephens, Affiliate Delegate
- Marty Kellum, Affiliate President
- Nancy Sattler, AMATYC Past President
- Nancy Rivers, 2020 – 2021 AMATYC Board Secretary, will serve in an **ex officio** capacity.

Without objection the 2021 Minutes Review Committee was approved as presented.
VII. **2020 Delegate Assembly Minutes**

President Kozak reported that the minutes from the 2020 Delegate Assembly (beginning on page 21 of theDelegate Assembly Packet) held virtually were reviewed, revised, and approved by the 2020 Delegate Assembly Minutes Approval Committee, chaired by Sophia Georgiakaki, Vice-President, Northeast.

VIII. **Reports**

A. **President’s Report**

The report was received in the Delegate Assembly packet (pages 41-42).

Additional items to include:

- There were 595 registrants for the in-person component of the conference, including guests. For the virtual component of the conference the total registration was an additional 113.

B. **Treasurer’s Report**

The report was received in the Delegate Assembly packet (pages 43-49).

C. **AMATYC Foundation**

The report was received in the Delegate Assembly packet (pages 50-51).

D. **Strategic Planning**
The 2018 – 2023 Plan was received in the Delegate Assembly packet (pages 52-61).

E. Conference Site Selection

There was no site selection this year due to our agreeing to return to Spokane when last year’s in-person conference was cancelled. We plan to return to Spokane in 2027 (page 62 of the Delegate Assembly packet).

IX. New Business

A. Position Statement on Initial Placement of Students into the Mathematics Curriculum: Rachel Bates

Motion: That the AMATYC Delegate Assembly return the position statement entitled Initial Placement of Students into the Mathematics Curriculum back to committee. (Attachment B)

Motion made by Rachel Bates (Chair), Placement and Assessment Committee.

Question called by Linda Blanco, State Delegate, Illinois, Midwest Region. Seconded by Kathryn Van Wagoner, Affiliate President Delegate, Utah, West Region

Motion to Call the Question approved

Motion defeated
**Motion:** That the AMATYC Delegate Assembly approve the attached position statement entitled *Initial Placement of Students into the Mathematics Curriculum.* (Attachment B)

Motion made by Rachel Bates (Chair), Placement and Assessment Committee

**Motion to Amend:** To amend the motion to say “That the AMATYC Delegate Assembly approve the position statement entitled *Initial Placement of Students into the Mathematics Curriculum* but ask the committee to revisit and provide feedback next year”. (Attachment B)

Motion made by Linda Blanco, State Delegate, Illinois, Midwest Region. Motion was seconded by Kelly Spoon, State Delegate, California, West Region.

Question called by Carolyn Sampson, State Delegate, Florida, Southeast Region. Seconded by Lisa Feinman, Affiliate Delegate, MMATYC, Mid-Atlantic Region.

**Motion to Call the Question approved**

**Motion to amend approved**

Question called by John Bennett, State Delegate, North Carolina, Southeast Region. Seconded by Viki Todd, State Delegate, North Carolina, Southeast Region.

**Motion to Call the Question approved**
Amended motion approved

B. Position Statement on Corequisite Mathematics Courses: Kathryn Van Wagoner

Motion: That the AMATYC Delegate Assembly approve the attached position statement entitled Corequisite Mathematics Courses. (Attachment C)

Motion made by Kathryn Van Wagoner (Chair), Developmental Mathematics Committee.

Motion approved

C. Position Statement on Mathematics Pathways: Helen Burn

Motion: That the AMATYC Delegate Assembly approve the attached position statement entitled Mathematics Pathways with minor edits as noted. (Attachment D)

Motion made by Helen Burn (Chair), Pathways Subcommittee.

Motion approved

D. Position Statement on Proctored Testing and Controlled Assessments for Courses Taught at a Distance: Jennifer Ackerman

Motion: That the AMATYC Delegate Assembly approve the attached position statement entitled Proctored Testing and Controlled Assessments for Courses Taught at a Distance with minor edits as noted, and have it replace the position statement called Proctored Testing for Courses Taught at a Distance. (Attachment E)
Motion made by Jennifer Ackerman (Chair), Innovative Teaching and Learning Committee.

**Motion to Amend:** Delete the sentence on lines 87-88 that reads "These assessments should comprise a meaningful portion (50% or more) of the course grade".

Motion made by George Alexander, State Delegate, Wisconsin, Midwest Region. Seconded by Vicky Todd, State Delegate, NCMATYC, Southeast Region.

Question called by Jeff Herrin, Affiliate President Delegate, KYMATYC, Midwest Region. Seconded by Linda Blanco, State Affiliate, Illinois, Midwest

**Motion to Call the Question approved**

**Motion to Amend defeated**

**Motion approved**

E. **Position Statement on Course Materials for Teaching and Learning Mathematics:** Jeff Thies

**Motion:** That the AMATYC Delegate Assembly approve the attached position statement entitled *Course Materials for Teaching and Learning Mathematics* with minor edits as noted, which replaces the position statement called *Undergraduate Textbooks* and the resolution called *Resolution Regarding Textbooks*. (Attachment F)

Motion made by Jeff Thies (Chair), Task Force which developed the position statement.

**Motion approved**
F. Position Statement on *Academic Preparation of Faculty Teaching Mathematics in The First Two Years of College*: Christine Mirbaha

**Motion:** That the AMATYC Delegate Assembly approve the attached position statement entitled *Academic Preparation of Faculty Teaching Mathematics in The First Two Years of College* as presented. (Attachment G)

Motion made by Christine Mirbaha (Leader), Division and Department Leadership ANet.

**Motion to Amend:** In lines 59 and 65, insert "supported by a Bachelor’s degree in Mathematics or the equivalent" after "math education" (in both spots).

Made by Leslie Banta, Affiliate Delegate, CMC3, West Region. Seconded by Kelly Spoon, State Delegate, California, West Region.

Question called by Patrick Wilcher, State Delegate, Mississippi, Southeast Region. Seconded by Chris Ward, Affiliate President Delegate, WVMATYC, Mid-Atlantic Region.

**Motion to Call the Question approved**

**Motion to Amend defeated**

Question called by Patrick Wilcher, State Delegate, Mississippi, Southeast Region. Seconded by Dennis Ebersole, Mid-Atlantic vice president.
Motion to Call the Question approved

Motion approved

G. Bylaws Change Article XIII

Motion: That the AMATYC Delegate Assembly approve the attached proposed amendment to Article XIII, Amendment, of the AMATYC Bylaws. (Attachment H)

Motion made by Nancy Rivers, AMATYC Secretary

Motion approved

H. Bylaws Change Article III

Motion: That the AMATYC Delegate Assembly approve the attached proposed amendment to Article III of the AMATYC Bylaws. (Attachment I)

Motion made by Eddie Tchertchian, AMATYC West Vice President

Motion approved

X. Items for Discussion – Open Microphone

- Jeff Herrin, Affiliate President Delegate, KYMATYC, Midwest Region: Commended Pat Riley on the great job he has done on the webinar controls but urged AMATYC to hold the Delegate Assembly in person in Toronto next year.
• George Alexander, State Delegate, Wisconsin, Midwest Region: Suggested the organization consider a position statement on proctoring in the future that is independent of delivery format.

• Ben Aschenbrenner, Affiliate President Delegate, INMATYC, Midwest Region: Urged AMATYC to consider the procedure on the order of the chat, if the Delegate Assembly continues to be held virtually, and the process on Calling the Question.

• Marty Kellum, Affiliate President Delegate, AlaMATYC, Southeast Region: Suggested that it behooves delegates to review parliamentary procedure before a Delegate Assembly and supported the idea of an in-person Delegate Assembly.

• Sophia Georgiakaki, Northeast Vice President: Stated that in an in-person Delegate Assembly those non-delegates in attendance could speak. With the non-members only viewing this Delegate Assembly via YouTube this is not possible.

• Nicole Lang, State Delegate, Minnesota, Central Region: In light of the bylaws change that just passed, she urged the paying of full dues as it is beneficial to the organization.

• Nancy Resseguie, State Delegate, Nebraska, Central Region: While a Delegate Assembly in person would be good, a virtual Delegate Assembly allows those not able to attend an in-person conference to participate as a delegate.

• Vicki Todd, State Delegate, North Carolina, Southeast Region: Suggested a Hy-Flex Delegate Assembly with an in-person meeting but such that others can participate virtually.

• Christine Mirbaha, State Delegate, Maryland, Mid-Atlantic Region: Urged delegates to future Delegate Assemblies to tap into their constituents so that they represent them and not just their personal stances. In addition, she requested that the Delegate Packet be sent out earlier to allow for the gathering of constituents’ opinions.

• Tim Chappell, State Delegate, Missouri, Central Region: Consider more than a simple majority vote required for passing a position statement.

XI. Announcements

A. Award winners were announced:

The 2020 AMATYC Mathematics Excellence award recipient was:
Rikki Blair

The 2021 Herb Gross Presidential Award recipients were:

George Hurlburt and Judy Williams

The 2021 AMATYC Teaching Excellence Award Winners were:

Jessica Bernards

Fan Chen

Jennifer Travis

B. The members of the 2022 - 2023 Nominating Committee are:

- Chair: President Kathryn (Kate) Kozak
- Barbara Leitherer, Member-at-large
- Pete Wildman, Member-at-large
- Christine Mirbaha, Member-at-large
- Pat Riley, Member-at-large
- Alexander Atwood, Northeast
- Ellen Matheny, Southeast
- Tiane Ellis, Midwest
- Chamila Ranaweera, Central
- Sonia Petch, Southwest
- Sandra Wildfeuer, Northwest
- Ben Moulton, West

C. The 2023 Teaching Excellence committee has been selected:

- Chair: President-elect George Hurlburt
- Bridget Dart, Northeast
- Carol Howald, Mid-Atlantic
- Vicki Todd, Southeast
- Ben Aschenbrenner, Midwest
- Sarah Davenport, Central
- Seth Daugherty, Southwest
- Celeste Petersen, Northwest
• Kari Arnoldsen, West
• Rachel DeAlejandro, Adjunct

D. The members of the 2022 Mathematics Excellence Committee are:

• Chair: Jim Ham, Past President
• Aradhana Kumari, Northeast
• Wes Crumpler, Mid-Atlantic
• John Bennett, Southeast
• Michael McClure, Midwest
• Fenecia Foster, Central
• Shannon Ruth, Southwest
• Lorinda Fattic, Northwest
• Kari Arnoldsen, West

E. The 2022 – 2023 AMATYC Executive Board was announced:

• Laura Watkins – President
• George Hurlburt – President-Elect
• Kathryn Kozak – Past President
• Nancy Rivers – Secretary
• Barbra Steinhurst – Treasurer
• Anders Jasson (AJ) Stachelek – Northeast Vice President
• Dennis Ebersole – Mid-Atlantic Vice President
• Alvina Atkinson – Southeast Vice President
• Brandon Bartley – Midwest Vice President
• Dale Johanson – Central Vice President
• Shannon Ruth – Southwest Vice President
• Sarah Pauley – Northwest Vice President
• Edouard (Eddie) Tchertchian – West Vice President

F. A Special Announcement was made by Kathryn Kozak, President

“The AMATYC Board voted to move the 2026 conference from Orlando due to a new Florida law that violates the diversity clause that AMATYC includes in its contracts with hotels. We are currently looking for a new city to hold our 2026 conference. We will update everyone once the site for the new 2026 conference
is finalized. We are sorry to leave Orlando, but the state of Florida has enacted a law that negatively impacts our faculty and students and is in direct conflict with our organization's values, mission, and our Policy on a Welcoming Environment.”

XII. **Adjournment**

President Kozak recognized and thanked the Local Events Coordinator for the Phoenix Conference, Ana Jimenez, and her local team for all the work they performed for the Phoenix conference. Turi Suski, Judy Williams, and the rest of the conference committee were also thanked for their year-long commitment and great work in bringing this wonderful conference in Phoenix and the virtual component to us this year.

The AMATYC delegates were thanked for their participation in this Delegate Assembly.

The meeting adjourned at 6:24 pm (EST).

Nancy Rivers, Secretary, 2020-2021
Kathryn Kozak, President, 2020-2021
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Attachment A: Minutes Review Committee, 2021 AMATYC Delegate Assembly

The Minutes Review committee for the 2021 AMATYC Delegate Assembly:

The committee consists of:

- Sophia Georgiakaki, Northeast Vice-President, Chair
- Jonathan Weisbrod, State Delegate
- Lusi Stephens, Affiliate Delegate
- Marty Kellum, Affiliate President
- Nancy Sattler, AMATYC Past President
- Nancy Rivers, 2020 – 2021 AMATYC Board Secretary, will serve in an ex officio capacity.
Attachment B: “Initial Placement of Students into the Mathematics Curriculum” position statement

Position Statement of AMERICAN MATHEMATICAL ASSOCIATION OF TWO-YEAR COLLEGES on Initial Placement of Students into the Mathematics Curriculum

Rationale

Appropriate placement into entry-level mathematics courses is a concern for many in higher education. Placement policies must not be used to restrict access to a college education, but rather to ensure that all students who enroll in a mathematics course have the opportunity to achieve success.

Institutional Responsibilities

AMATYC recommends that all colleges develop policies for the initial placement of students into the mathematics curriculum. Placement policies should ensure students are placed in the most appropriate math pathway aligned to their program of study. The placement policy should include multiple measures of college readiness, align to multiple mathematics pathways, and ensure that the vast majority of students can access gateway courses within their first year of enrollment.

Policies for the placement of all college students entering the mathematics curriculum should include recommendations from the mathematics department. These policies should be applied equitably to all students and could incorporate the use of multiple measures. Multiple measures could include the following:

- High school GPA;
- Math specific high school GPA;
- GED scores or equivalence;
Faculty Responsibilities

Review of the placement process should be ongoing. Colleges should continually evaluate placement procedures as content, pedagogy, and technology evolves. Mathematics faculty should be involved in the evaluation process of the institution's placement practices and processes used for initial placement into the mathematics curriculum.

Placement processes are paramount for student success. As such, institutions can design structures to support students in pursuit of their academic path.

Definitions

Gateway course: first credit bearing mathematics course required for an undergraduate degree.

Multiple measures: could be the use of multiple criteria to determine placement or it could include a à la carte placement criteria.

Social and emotional assets: growth mindset, motivation, family and work obligations, special needs, educational, career, personal goals, etc.

References


Placement and Assessment Committee. Adopted by Delegate Assembly Fall 2002 Reaffirmed by the Placement and Assessment Committee, Spring 2013
Next review, March 2018
Attachment C: “Corequisite Mathematics Courses” position statement

AMATYC Position Statement on Corequisite Mathematics Courses

Corequisite models, where underprepared students entering college are placed directly into a college-level course and given additional academic support, are a promising alternative to traditional prerequisite developmental mathematics models. Analysis of completion rates shows students in corequisite mathematics courses are more likely to complete a college-level mathematics course than those who take the traditional developmental mathematics sequence (Logue, 2018). Corequisite models, along with improved placement, pathways aligned with course of study (Ganga & Mazzariello, 2018), and guided pathways (Bailey et al., 2015), are components in a coordinated effort to improve student success.

Therefore, it is the position of the American Mathematical Association of Two-Year Colleges (AMATYC) that institutions of higher education are encouraged to implement corequisite courses that support underprepared students in completing aligned college-level mathematics.

To facilitate this, institutions of higher education and mathematics faculty should:

- Be proactive and implement corequisite mathematics courses when deemed appropriate by instructional faculty in pathways that impact large numbers of students.
- Be aware of any regional or state requirements for corequisite design and coordinate with transfer institutions to ensure transferability.
- Ensure all students are able to enroll in a college-level math course relevant to their area of study, supported by corequisites as appropriate. Recognize that some prerequisite coursework may be appropriate for some students.
- Use effective best practices to design corequisite courses, including:
  - Backward mapping: Identify the necessary knowledge and skills needed in the corequisite course to enable students to achieve the learning objectives of the college-level course.
  - Literature study: Identify corequisite models that have been shown to be successful at similar institutions, considering questions of equitable outcomes, how groups of students enroll in the college-level courses (cohort vs. comingle), and staffing, grading and scheduling the courses. Departments may find different models are needed for courses in different pathways.
o Pedagogical Design: Maximize conceptual understanding using evidence-based strategies that require higher-order thinking and develop students’ PROWESS (AMATYC, 2018).

  o Affective Design: Educate the student holistically, aligning with the principles of developmental education, to incorporate non-cognitive skills such as self-regulation, persistence, growth mindset, supporting students as independent learners, culturally relevant teaching strategies, etc.

  o Data Analysis: Build data analysis regarding success rates, graduation rates and learning outcomes into the implementation plan from the beginning. These data should be disaggregated to determine if different subpopulations experience different outcomes.

- Provide professional development and training for faculty and staff:
  o Support faculty in implementing components of the corequisite model including an active classroom model, supporting non-cognitive skill development, supporting students with a wide variety of prerequisite skills, etc.
  o Train advisors to effectively advise and place students into the new pathways and corequisite courses, particularly to avoid inequitable results from implicit bias by using very clear advising and placement rubrics (Perry et al., 2010).
  o Share experiences and student success data at conferences, in publications, and at member communication portals (such as myAMATYC) so best practices of corequisite mathematics education can be identified and refined.

References


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 for students majoring in science, technology, engineering, and mathematics (STEM) (American Mathematical Association of Two-Year Colleges [AMATYC], 2018). However, additional mathematics pathways may be required to serve students in programs including business, 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 (Bickerstaff, Chavrin, & Raufman, 2018; Ganga & Mazzariello, 2018). 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; Hartzler & Blair, 2019).

Therefore, AMATYC makes the following recommendations for mathematics programs around implementing mathematics pathways at their college based on AMATYC (2018) and research.
on implementing mathematics pathways (Bickerstaff, et al., 2018; Ganga & Mazzariello, 2018; Hartzler & Blair, 2019):

- 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 to make changes based on what is or is not working, 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 for STEM majors.

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


Hartzler, R., & Blair, R. (Eds.) (2019). Emerging issues in mathematics pathways: Case studies, scans of the field, and recommendations. Austin, TX: Charles A. Dana Center at The University of Texas at Austin.


Attachment E: “Proctored Testing and Controlled Assessments for Courses Taught at a Distance” position statement

Position Statement of the AMERICAN MATHEMATICAL ASSOCIATION OF TWO-YEAR COLLEGES

on

Proctored Testing and Controlled Assessments for Courses Taught at a Distance

As courses taught at a distance become more prevalent in the first two years of college, institutions must maintain high standards and use research-based practices to maintain academic integrity (American Mathematical Association of Two-Year Colleges [AMATYC], 2019). Distance Education requires innovative teaching, learning, and assessment methods. While special attention must be directed to the needs and abilities of both students and faculty, controlled assessments, including proctored testing, are paramount to maintaining academic integrity in a distance education environment.

For the purposes of this position statement, we define the following:

Distance Education

Distance education is defined as “Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously” (National Center for Education Statistics [NCES], 2018, para. 67).

Controlled Assessments

A test in a proctored setting or other assessment, such as a class project, presentation, or student interviews, that demonstrates mastery of the course material and verifies student identity and authorship is a controlled assessment.

Proctored Testing

“Proctored tests or examinations are managed by a person [the instructor or designee] or service that administers and monitors assessments other than the instructor. A proctor or proctoring service has the responsibility of verifying the identity of the test
taker, ensuring appropriate test conditions are met, and monitoring the actual tests or exams” (South Alabama University [SAU], 2012, para. 5).

**Non-Proctored Testing**

“Non-proctored tests or examinations are administered without a proctor and allow for students to take exams at a location of their convenience and within a time frame specified by the instructor. Take-home exams are included in this category” (SAU, 2012, para. 3-4).

**Rationale**

In addressing integrity, the Higher Learning Commission (HLC, 2019) states, “An institution offering distance education ... shall have processes through which the institution establishes that the student who registers in the distance education ... courses or programs is the same student who participates in and completes and receives the academic credit” (para. 1; Higher Education Opportunity Act, 2008).

In mathematics courses taught at a distance, all students should be required to complete controlled assessments such as a proctored test or class project, that demonstrate mastery of the course material and verifies student identity and authorship. Controlled assessments are a means to ensure that the student registered for the course is taking the assessment.

Such controlled assessments give credibility to and respect for the grade students earn in their distance learning courses as well as to the distance learning program itself. Some institutions may not accept mathematics classes taught at a distance as transfer credit without documented proctored tests (i.e. University of Arizona [2019]). When colleges stop allowing credit transfers from other colleges without proctored tests, it is a serious indicator of the need for controlled assessment. It is important that guidelines and position statements such as this one are published, and that colleges create regulations that verify student identity.

Decisions about proctored testing and controlled assessments must encompass issues of access and equity as well as the issues of profiling with artificial intelligence. As written in the AMATYC (2020) position statement on diversity, equity and inclusion, it is paramount that educators “ensure that all students receive a fair and equitable educational experience, [in order to do so] the existence of inequities must be realized and acknowledged” (para. 2).

To this purpose AMATYC makes the following recommendations.

**Expectations of Institutions**
1. Provide professional development for faculty on distance education assessment, access, and equity.

2. Work collaboratively with faculty and staff to develop institutional and departmental standards for proctored testing and controlled assessments.

3. Provide for proctored testing with flexibility of method and scheduling for students and the timely return of exams to the instructor. All proctoring options must be accessible and equitable for all students. These options must include the potential for appropriate real-time human intervention (not relying solely on artificial intelligence), monitoring, verified identity, and continuous line of sight with the test taker. Minimally, institutions should provide access to at least one of the following:

   a) An in person, on-campus testing facility

   b) A remote synchronous proctoring solution

   c) Third-party proctoring, pre-approved by the institution and/or faculty, taking into consideration the following

      i. FERPA guideline

      ii. Financial burden for students and institutions

      iii. Connections or reciprocal agreements with other institutions

      iv. Issues of student privacy and profiling with artificial intelligence

      v. Data security and ramifications of data breaches (for students’ personal identification data)

4. Clearly articulate and communicate proctoring guidelines and institutional and departmental standards to faculty and staff.

5. Inform students of established institutional proctoring guidelines and standards as well as required technology and additional expenses prior to course registration. Whenever possible, also inform students of departmental proctoring guidelines and standards prior to registration (HLC, 2019)

**Expectations of Departments**

1. Establish departmental policies for the percentage of proctored or controlled assessments in the computation of a final course grade. Proctored and controlled assessments include, but are not limited to, tests in a proctored setting and class projects that demonstrate mastery of the course material and verify student identity and authorship. These assessments should comprise a meaningful portion (50% or more) of the course grade.
2. Set clear expectations for verification of student identity and authorship on graded assessments.
3. Inform faculty and staff (advisors, registrar, counselors, etc.) of established departmental proctoring guidelines and standards as well as required technology, ensuring access and equity for all students.

Expectations of Faculty

1. Communicate with students clearly the procedural, technical, and financial requirements for proctored assessments and evaluation criterion for grade determination. This communication must be contained within the course syllabus. Reiterating this information multiple times throughout the semester and in multiple ways is highly recommended.
2. Deliver assessment guidelines to proctors in advance of assessment windows. These guidelines may include time limits, allowed resources, prohibited resources, assessment password and/or instructions for the return of a completed assessment to the faculty.
3. Provide for student access to proctored assessments in an established timeframe.
4. Support student learning through meaningful feedback and grading in a timely manner.
5. Work with any student and the proctoring tool to meet ADA accommodations as authorized by the appropriate institutional agency.

Expectations of Students

1. Exhibit academic integrity and honesty by completing original work on all assessments.
2. Adhere to the steps, policies and procedures given by the instructor for all assessments.
3. Meet the procedural, technical, and financial requirements for proctored assessments. Support may be available through the student’s institution or other resources.
4. Plan for assessments in such a way to consistently meet deadlines, even when unforeseen problems arise.
5. Communicate any necessary personal proctoring information, including any institution approved ADA accommodations, with the instructor within an established timeframe for approval purposes.
6. Use only the approved tools (scratch paper, whiteboard, etc.) as determined and stated by departmental/instructor standards for the purpose of showing student work. Submit work per instructor directions.

Access and Equity

Lack of access for proctored testing is an equity issue. Every effort must be made to ensure that each student in an online class has access to proctored (or controlled) assessments that provide accommodations approved by the appropriate institutional personnel. Issues, such as
reliable internet and access to required equipment (for example, a webcam, headset, microphone), affect student access. Institutions, departments, faculty and students must work together to enable students to meet the procedural or technological requirements for proctored testing. Institutions, departments, and faculty should adhere to best practices in access and equity (See AMATYC’s (2020) Position statement on Diversity, Equity, and Inclusion).

**Standards and Integrity**

Assessments of student learning may take many forms, as discussed in AMATYC’s (2018) IMPACT document. Controlled assessments in distance education are proctored tests and/or verifiable student work such as projects or presentations. Controlled assessments should comprise a meaningful portion (50% or more) of the course grade.

Violations of academic integrity must be addressed according to the institution’s policies and code of student conduct. Only through controlled assessments and ramifications of violations can the integrity of student grades and college programs be assured.

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**References**


American Mathematical Association of Two-Year Colleges (AMATYC). (2019). Position statement of the American Mathematical Association of Two-Year Colleges: Distance education in college mathematics in the first two years. [https://amatyc.org/page/PositionDistanceEd](https://amatyc.org/page/PositionDistanceEd)


Sources


Raritan Valley Community College. “Online Student Identity Verification.” https://www.raritanval.edu/academic-programs/online-courses/online-student-identity-verification-policy#:~:text=Based%20on%20the%20United%20States%20Federal%20Higher%20Education%20course%20or%20program%20and%20receives%20the%20academic%20credit.
Course Materials for Teaching and Learning Mathematics

This position statement establishes principles to guide the selection process of materials used for learning and teaching courses in the mathematical sciences. Examples of such course materials include—but are not limited to—textbooks, e-books, homework and assessment management systems, technology tools, and supplemental materials. As developers of courses in the mathematical sciences, faculty are empowered to provide materials that maximize student proficiency, ownership, engagement, and success. Consequently, the process of selecting course materials should include a thorough review that incorporates three key factors: quality, inclusivity, and affordability. Together with these three factors, faculty should approach the process of materials selection and use in an ethical manner. In keeping with these considerations, AMATYC endorses the following:

Quality

Course materials must be mathematically correct and precise. The content should foster mathematical thinking and problem-solving skills and support course learning objectives, such as quantitative reasoning, critical thinking, explanation, and justification. Narratives in course materials should make clear connections among mathematical topics as they are introduced and developed. Examples and exercises must support the development of procedural fluency, conceptual understanding, and applications. There should be a pedagogically appropriate number and variety of examples and exercises to support both skill and concept development. Exercises should reinforce and extend skills and concepts related to the course objectives and must provide opportunities for students to practice problem-solving and communication skills.

Course materials should include relevant examples, authentic data, and realistic contexts that are meaningful and affirm the cultural diversity of students. Materials should incorporate appropriate mathematical software and other modern technology in ways that support student proficiency, ownership, engagement, and success. Content and technology choices should reflect curricular recommendations and standards set by state and professional organizations. Course materials should support pedagogical practices described in AMATYC’s position statements and standards documents.

Inclusivity

Following the recommendations of AMATYC’s position statement Diversity, Equity and Inclusion in Mathematics, course materials should support faculty members’ efforts to humanize student learning. In particular, such materials should foster a sense of belonging, provide diverse illustrations and examples, and employ accessible and inclusive language. Confronting racial, ethnic, gender, and other inequities in the mathematical sciences warrants the selection of materials that avoid stereotypes in both text and illustrations. Materials should include the
strategic use of multiple representations, mechanisms for vocabulary development, and other supports for English learners. To ensure equity, course materials must be accessible to all students and should employ universal design for learning principles.³

**Affordability and Transparency of Costs**

Affordability should be a critical factor in selecting course materials. In order to bridge the opportunity gap, institutions of higher education, departments, and faculty need to address inequities in access to the courses materials.⁴ Institutions or departments should consider affordable options such as content packaged across terms, free or low-cost materials, and open educational resources. Affordability considerations need to include all costs associated with learning activities required in the course (e.g., graphing calculators, software, device type, Internet bandwidth).

Transparent communication to students should include the materials list, usage expectations (required, recommended), acquisition options (buy, rent, library loan), and the life cycle associated with the materials. Institutions should have practices in place that allow students to review the full cost associated with enrollment in the course before registration is completed.

**Additional Ethical Considerations When Selecting Course Materials**

Selection of course material should be based on merits and characteristics, and on professional judgments and considerations, free of the influence of gratuities, inducements or royalties. AMATYC does not endorse the acceptance of cash or gratuities—including equipment—by instructors, departments, or institutions in exchange for course material adoption. Furthermore, AMATYC does not endorse the buying or selling of desk or examination copies of textbooks.

In conclusion, course materials are essential contributors to students’ learning, motivation, engagement and success. Faculty must prioritize high quality, inclusivity, accessibility and affordability when selecting course materials for teaching and learning in order to ensure a positive and rich impact on students’ academic experiences.

Cited references


Attachment G: “Academic Preparation of Faculty Teaching Mathematics in The First Two Years of College” position statement

THE ACADEMIC PREPARATION OF FACULTY TEACHING MATHEMATICS IN THE FIRST TWO YEARS OF COLLEGE

Position Statement of the American Mathematical Association of Two-Year Colleges (AMATYC)

Statement of Purpose

As a leading professional mathematics organization that represents mathematics instruction in the first two years of college, AMATYC is responsible for promoting the integrity of the profession and the quality of mathematics instruction in the first two years of college. Our goal is to provide guidelines that reflect the wisdom and expertise of post-secondary mathematics educators regarding appropriate preparation for mathematics educators at the two-year college level.

Rationale

Many college students experience mathematics anxiety and core mathematical misconceptions, which can be reinforced or exacerbated through poor mathematics instruction. Properly prepared faculty can positively impact students’ knowledge of, beliefs about, and attitudes toward mathematics.

Appropriate preparation for teaching college-level mathematics can be broader and more inclusive than what have been the traditional requirements for teaching in the first two years of college. Today’s students benefit when faculty can support their cognitive and affective needs. In line with AMATYC’s position statements Diversity, Equity, and Inclusion in Mathematics (AMATYC, 2020) and Mathematics and Global Learning (AMATYC, 2020) the use of collaborative teaching strategies, the ability to teach diverse populations, and the implementation of socially responsive andragogy and global perspectives are skills that should be valued in addition to mathematics knowledge. Most importantly, faculty should have a passion for teaching mathematics. Excellent teachers of mathematics come from various preparation backgrounds as noted in AMATYC’s (2018) IMPACT: Improving Mathematical Prowess and College Teaching document. Institutions and departments are encouraged to be inclusive in selecting faculty, while maintaining standards of excellence.

Definitions
The term *faculty* refers to persons who teach students taking courses considered to be at the level of the first two years of post-secondary mathematics. No particular level within a ranking system is implied.

The term *dual enrollment courses* refers to college-level courses in which students are earning both high school and college credit concurrently.

The phrase *mathematics in the first two years of college* refers to the mathematics content and courses typically offered as part of the first two years of post-secondary education. It does not include developmental or pre-college mathematics.

**Recommendation**

Only properly qualified personnel should be permitted to teach mathematics at the college level. Faculty should possess the appropriate credentials for the level of mathematics they are teaching. Individuals trained in other disciplines should have sufficient mathematical training prior to teaching mathematics courses. To that end, it is recommended that:

- All faculty possess at least the qualifications listed under *Minimal Preparation*.
- All full-time faculty begin their full-time careers with at least the qualifications listed under *Standard Preparation*.

**Guidelines for Formal Preparation**

Mathematics curricula at colleges reflect diverse missions and needs. Because of this diversity, the guidelines for the mathematical preparation of college faculty must be sufficiently robust, and yet provide institutions flexibility in identifying qualified faculty. These guidelines, defined below, are divided into these parts: minimal preparation and standard preparation.

**Minimal Preparation**

It is recommended that preparation include at least 18 semester hours (27 quarter hours) of graduate-level mathematics, mathematics education, applied mathematics, and/or statistics, and/or a related field. Course work in pedagogy/andragogy, and/or teaching experience in mathematics is desirable.

**Standard Preparation**

It is recommended that all full-time mathematics faculty meet the minimum preparation (see above) and possess at least a master’s degree in mathematics, mathematics education, applied mathematics, statistics, and/or a related field. Course work and/or training in mathematics pedagogy/andragogy is recommended. In addition, departments should consider
mathematics teaching experience at the secondary and/or post-secondary level. Prior teaching experience may include supervised teaching such as that obtained as a graduate student.

**Adjunct and Dual Enrollment Faculty**

AMATYC recognizes the value and commitment of adjunct and dual enrollment faculty and recommends that they meet at least the minimal preparation standards outlined above.

For further information, see AMATYC’s *Dual Enrollment* (AMATYC, 2017) and *Best Practices in Employment of Adjunct Faculty* (AMATYC, 2018) position statements.

**Resources**


American Mathematical Association of Two-Year Colleges (AMATYC). (2017). *Position statement: Dual enrollment*. [https://amatyc.org/page/PositionDualEnrollment](https://amatyc.org/page/PositionDualEnrollment)


**NOTE:** This position statement is a revision of *Guidelines for the Academic Preparation of Mathematics Faculty at Two-Year Colleges*, which was adopted by AMATYC in 1993. Approved by the Delegate Assembly, November 15, 2014.
Attachment H: Article XIII of the AMATYC Bylaws

Article XIII Amendment

These bylaws may be amended by the delegates at the Annual Delegate Assembly by a two-thirds (2/3) vote of those delegates voting, provided that written or electronic notification of the proposed text changes and the clear purpose of the amendment has been sent to all delegates at least thirty (30) days prior to the Delegate Assembly and a hearing on the proposed changes is convened no sooner than ten (10) days after this notification and at least a day before the beginning of the Delegate Assembly. Proposed amendments to these bylaws may be presented to the Executive Board by any member, and shall be processed by the Executive Board, for approval by the Delegate Assembly.
Attachment I: Article III of the AMATYC Bylaws

Article III  Membership

Section 1  Membership Categories

Members must complete the proper forms and pay the established dues. Membership in AMATYC shall be restricted to the following:

A. Regular membership: individual, full-voting members, with one or several subcategories determined by the Board, with dues and levels of benefits determined by the board.

B. Associate membership: individual, non-voting members, with one or several subcategories determined by the Board, with dues and levels of benefits determined by the board. Associate members must not also be a full- or part-time teacher, and must be endorsed by a regular member.

C. Institutional membership: a class of non-individual, non-voting memberships associated with any college, university, learning center, publisher, manufacturer, or similar entity that supports the purposes of the association. Dues and levels of benefits determined by the board.

Section 2  Membership Privileges

A. A regular member has the right to vote, hold elected office, be appointed to leadership positions, nominate candidates for office, serve on committees as a voting member, and be appointed as a delegate in the Delegate Assembly.
B. Associate members have the right to nominate candidates for office and serve on committees, but do not have the right to vote, hold elected office, be appointed to leadership positions, or be appointed as a delegate in the Delegate Assembly.

C. Individuals who are eligible for an associate membership may choose to complete the proper forms and pay the established dues to become a regular member to obtain all the privileges of a regular member.

D. The representative of an institutional member has the right to nominate candidates for office, but does not have the right to vote, hold elected office, be appointed to leadership positions, serve on committees as a voting member, or be appointed as a delegate in the Delegate Assembly, unless that individual is also a regular member of the association.

Section 3 Membership Year

The membership year shall consist of twelve months. For new members, the membership beginning date shall be the day the dues are paid.

Section 4 Dues

A. Annual membership dues are paid by all members, except lifetime members.

B. Annual regular AMATYC membership dues are set every two years by applying the Consumer Price Index - Urban Consumers CPI-U for the last two consecutive years that begin with an even-numbered year to the current dues and rounding up to the nearest whole dollar. This adjusted rate is set at the Spring Executive Board Meeting in odd-numbered years, with the change taking place on July 1 of the following even-numbered year.

C. In the event that there is a need for a change other than the calculated rate, as determined in Article III.4.B., the new rate must be brought to the Delegate Assembly prior to the change taking effect for approval.