

MINUTES
Mendocino College Academic Senate
Thursday, March 15, 2018
Room 1270, 12:30 – 2:00 p.m.

<i>Call to Order</i>	Indermill called the meeting to order at 12:37 pm
<i>Present</i>	Rachel Donham, Nicholas Petti, Taylor Cannon (12:37), Rodney Grisanti , and Catherine Indermill
<i>Absent</i>	Jason Edington, Conan McKay, Doug Browe, Rhea Hollis
<i>Guests</i>	Ginny Buccelli (12:37-1:20), Leslie Banta (1:30), Mac Lojowsky (12:55-1:30), Eileen Cichocki (12:55-1:30), Jim Xerogeanes (12:45-1:30), and Steve Cardimona (1:00-1:30)
<i>Agenda Approval</i>	M/S/C (Petti/Donham) to approve the Agenda of March 15, 2018 without consideration of the minutes from March 1, 2018.
<i>Public Comment</i>	none
<i>Senator's Report</i>	none
<i>Action Items/ Old Business</i>	<p>1. Call for Election Committee: Appoint one senator to serve with president on Election Committee, as per discussion. M/S/C (Grisanti/Cannon) to appoint Edington and Donham to serve on the election committee</p> <p>2. Set Election Date: Approve the following dates for Senate Elections:</p> <ul style="list-style-type: none">• Nominations close April 20, 3:00 PM• Election: Wednesday 4/25, 9am through Thursday 4/26, 5pm <p>M/S/C (Donham, Petti) to close the nomination period on April 30, 2018 at 3:00pm M/S/C (Donham, Petti)to set the election period from April 25, 9:00 am through Friday, April 27 at 12:30pm</p> <p>Discussion: with Donham has volunteered and been appointed to count the ballots but has a conflict at 5:00pm on April 26. Questions included:</p> <ul style="list-style-type: none">• Is there a reason why we always do election for 48 hours?• Could we add Friday am for voting? <p>3. Guided Pathways Work Plan: Update on the work plan and Phase One. (Attachment 1)</p>

M/S/C (Grisanti/Petti) Motion to accept the Guided Pathways Plan per discussion.

Discussion on the document that was sent to the Chancellors office and what information was input into the form and why.

A meeting took place on Monday, to continue to improve the document with brainstorming and constituents input. Polak and Velasco put the ideas into a google document and then inserted into this document to send into the Chancellor's office. Indermill felt that there was good input and discussion. They streamlined the progress reports in Shared Metrics which showed up in Proactive and Integrated Student Supports.

Two other things where on the form from the Chancellor's office that they did not know would be there. They are projection dates and a budget.

Projection dates on when we would work on what. They used brainstorming to determine where to put specific items as to dates.

The four areas are:

1. Cross Functional Inquiry
2. Shared Metrics
4. Inclusive Decision-Making Structures
10. Integrated Technology Infrastructure

Dates also require not only when you will start these but when you will finish these (fiscal year not academic year.)

Also, we need to have a budget. Velasco worked on this and a budget was created to outlay the roughly \$130,000. There is no team yet to determine these allocations.

It was decided that one of the first goals is the Oversight Committee.

Discussion questions:

Is this a yearly budget? No. It bumps up and then bumps down. In year two and three probably will be used on professional development. Indermill will bring the specific amounts to the next Academic Senate Meeting.

*Discussion Items/
New Business*

1. Time Certain: 1:00 PM Sustainability at Mendocino College

Director of Facilities Mac Lojowsky will give a presentation on what the college is currently working on, and where we're heading as an institution, with respect to sustainability.

Lojowsky discussed a number of state bills that must be implemented. SBX7-7 Is a mandate from the state that says we must reduce water use by 20% by 2020.

Lojowsky displayed a water usage chart and the question arose, “Why is our water usage so high?” It is our irrigation stations. Using 2014 and 2016 water audits they have received a \$60,000 grant to purchase computerized irrigation systems. The goal is to reduce water consumption.

AB1826- is a mandate that by 1-1-2019 we must compost all food waste. This included things like boxes that are used for food as these are compostable. Lojowsky displayed a chart of the waste and showed how only 3% of waste should be thrown away. He discussed that getting different colored bags could help in the separation process.

California Energy- the goal is zero net energy by 2030. The solar panels produce 49% of our electricity. They are working on doing LED light upgrades as well as HVAC sensors and controls. They currently have an intern, provided by the state, who is working on energy efficiency of our buildings on the campus. Using a two week snapshot from late December to early January, a diagram was shown that put Lowery as using the most energy with McMillan and LLRC as the next worst for energy consumption.

Pathway to Net Zero Energy- We need to increase renewables and lower our energy usage. They are working on a draft plan for the Board of Governors Energy and Sustainability Policy to meet the goals.

Discussion on should we be incorporating these ideas into classes? Also, student involvement. It was discussed whether bottled water usage versus providing refillable water bottles should be the way to go.

It was noted to bring back the discussion on Sustainability at a future meeting.

2. Electronic Voting: Update on goal to investigate and possible implement a process for electronic voting for Senate Elections.

The senators agreed that we electronic voting for those who want to use it Therefore we need to either include this in the Bylaws or make this an action item on a future agenda. It was agreed to put this on a future agenda for action to include electronic voting in the Bylaws. While those present felt this should be included in the Bylaws, since there were considerable number of senators absent it was agreed to not take this action until more were present to vote. We need to make a motion to include this in the by-laws revisions. We recommend that we make an action item to approve the electronic voting process.

3. Time Certain: 1:30 PM Math and Quantitative Reasoning Task Force Recommendations. Leslie Banta introduced a letter discussing education requirements for law AB705 which will eliminate the requirements for lower level math classes at the Community Colleges. (Attachment 2). A group of math instructors from across the State have developed a counter-proposal to this legislation. This group the California Community Colleges Math and Quantitative Reasoning Task Force Recommendations has prepared a compressive report on their findings and recommendations (Attachment 3)

The recommendations include allowing individual colleges to handle how they implement the law. Discussion included frustration the decisions about curriculum placement is being taken out of the hands of faculty. This law will track students out of stem classes and programs. It was noted that this is a “perverted idea of equity”. This is a matter will be addressed at the Academic Senate of the California Community Plenary Session next month. Banta aske the Academic Senate to take action requesting the President Edington vote to approve the Task Forces recommendation at the meeting. This will be placed on the next Academic Senate agenda for action

Open Forum

None

Attachment 1

Attachment 2

March 10, 2018

To: Academic Senate, Mendocino College

RE: Math and Quantitative Reasoning Task Force Recommendations

As the Treasurer of the California Mathematics Council, Community Colleges, I was asked to serve as the co-chair for the statewide ASCCC Math and Quantitative Reasoning Task Force (MQRTF) that is considering recommendations for mathematics education at the community college level. The task force includes representatives from disciplines such as math, statistics, education, and chemistry. It should be noted that the MQRTF is guided by a commitment to equity in math and quantitative reasoning, with the goal of providing a valuable education that meets the needs of all students, empowering them to be successful in a technologically evolving society. This task force has designed recommendations in response to requirements of AB 705, a recently passed law requiring colleges (or districts) to maximize the probability that students will enter and complete transfer-level math (and English) courses within a one-year time frame, and CSU executive orders 1100/1110 (GE breadth requirements and mathematics placement for first-year students).

At their most recent meeting, the executive committee of the ASCCC acted to send the taskforce recommendations forward to the delegates representing all 114 community colleges (and districts) for endorsement. I would like to encourage the Academic Senate members at Mendocino College to review the recommendations and direct our delegate to endorse them.

The very short version of the point of these recommendations is to:

- come into AB705 compliance
- leave ultimate control in the hands of local faculty for the pathways they want to use to come into this compliance
- provide adequate support for students who need it as they journey towards completion of their transfer level requirements
- provide students with options and encouragement to consider STEM fields, even if they didn't have original intent to do so, as to not increase the current equity gap in STEM majors.

I have attached the recommendations for your convenience. I am available to meet with you to discuss these further, if you wish.

Thank you for your consideration,
Leslie Banta

Attachment 3

Mendocino College - Guided Pathways

Description

COLLEGE: Mendocino College

PLAN TIMEFRAME: Spring 2018-Summer 2019

READ DEADLINES AND THE GUIDED PATHWAYS DOCUMENTATION AND GOALS: Yes

Project Contacts

Point of Contact	Alternate Point of Contact
Debra Polak dpolak@mendocino.edu 707-468-3068	Ulises Velasco uvelasco@mendocino.edu

Approver Contacts

Chancellor/President	President, Academic Senate
J. Arturo Reyes areyes@mendocino.edu	Jason Edington Academic Senate President jedington@mendocino.edu 707-468-1004

Timeline

KEY ELEMENTS	SPRING 2018 - SUMMER 2019	FALL 2019 - SUMMER 2020	FALL 2020 - SUMMER 2021	FALL 2021 - SUMMER 2022
INQUIRY (1 - 3)				
1. Cross Functional Inquiry	✓			
2. Shared Metrics	✓			
3. Integrated Planning		✓		
DESIGN (4 - 8)				
4. Inclusive Decision-Making Structures	✓	✓		
5. Intersegmental Alignment				✓
6. Guided Major and Career Exploration			✓	
7. Improved Basic Skills		✓		
8. Clear Program Requirements		✓		
IMPLEMENTATION (9 - 14)				
9. Proactive and Integrated Student Supports			✓	
10. Integrated Technology Infrastructure	✓	✓	✓	✓
11. Strategic Professional Development	✓	✓		
12. Aligned Learning Outcomes			✓	
13. Assessing and Documenting Learning			✓	
14. Applied Learning Outcomes				✓

Inquiry

1. CROSS FUNCTIONAL INQUIRY

College constituents (including staff, faculty across disciplines and counselors, administrators, and students) examine research and local data on student success and discuss overarching strategies to improve student success.

College engages in broad, deep and inclusive discussion and inquiry about the Guided Pathways approach, framework and evidence.

CURRENT SCALE OF ADOPTION: Early Adoption

ANTICIPATED CHANGE IN SCALE OF ADOPTION DURING TIMEFRAME: Full Scale

MAJOR ACTIVITIES: • Establish Guided Pathways Oversight Committee • Identify key data points for making the case in support of Guided Pathways • Identify and form preliminary Inquiry groups and work groups
 □ Establish relationship and low between oversight committee and inquiry/work groups • Prepare a data sharing cycle/calendar for wide distribution of data, including at Inservice and throughout committee structure. • College Committees will identify their roles and goals in supporting Guided Pathways work in relation to data. • Map current activities and projects and how they align with initiatives such as Integrated Planning (SSSP, SE, BSI) • Additional activities to support Cross Functional Inquiry are described in Key Element #4.

EXISTING EFFORTS: • Equity data gathered as a part of our work with the Center for Urban Education (CUE) will provide a good foundation for disaggregation practices and for some baseline data concerning equity. • Existing structure for establishing and recording committee descriptions and goals will be leveraged to broaden involvement in Guided Pathways work • The College's recent work in acceleration in English and math provides a strong model for a cycle of data analysis, planning, and action.

MAJOR OUTCOMES: • Guided Pathways Oversight Committee will be established and its role within the existing committee structure will be clearly identified. □ Any changes needed to the college committee structure will be discussed and recommended to accommodate the Guided Pathways framework. • Data elements will be identified and updated on a consistent cycle that is reported to committee and constituent leadership and readily available. • All staff and faculty will be familiar with the Guided Pathways framework, its goals and activities at Mendocino College. • Oversight Committee will be prepared to better leverage current activities and initiatives to support the Guided Pathways Framework.

2. SHARED METRICS

College is using clearly identified benchmarks and student data to track progress on key activities and student academic and employment outcomes. Those benchmarks are shared across key initiatives.

CURRENT SCALE OF ADOPTION: Scaling in Progress

ANTICIPATED CHANGE IN SCALE OF ADOPTION DURING TIMEFRAME: Full Scale

MAJOR ACTIVITIES: • Integrate Key Performance Indicators (KPIs) into our regularly shared metrics. • Use the Committee Chair Committee meetings to discuss data and disseminate appropriately to campus committees. • Develop shared practices among all initiatives for disaggregating data (e.g. AEBG, CTE programs, equity, SSSP, BSI). • Fully integrate data routines into planning processes. • Planning documents, including district plans and department program reviews, are developed and revised in response to shared metrics. • Create cycles and routines across committees and departments to include review of data to aid in the development and revision of plans. • Discuss with faculty and students strategies for building student awareness of shared metrics. • Review student academic progress report processes □ Establish common strategies across initiatives for analysis and follow up of progress reports.

EXISTING EFFORTS: • Utilize and expand on the existing Student Achievement Standards which are updated and shared widely each academic year. • Layer more shared metrics onto the Student Achievement Standards.

MAJOR OUTCOMES: • Planning documents, including district plans and department program reviews, are developed and revised in response to data sharing. • Program Review process will include Guided Pathways shared metrics to reflect on programs and to provide justification for resource requests. • Hold a student services retreat once per semester to communicate department specific information. • Faculty and students are actively engaged in measuring progress • Enhanced metrics are tracked, shared and reviewed with historical trends if data is available. Moving forward, these enhance metrics will be routine. • Areas of progress and gaps among student achievement are communicated and understood broadly. • The Research department will be actively engaged in tracking impact of initiatives and activities. • College planning documents and committees are using this data to inform their decisions for future goals and activities.

3. INTEGRATED PLANNING

College-wide discussions are happening with all stakeholders and support/commitment has been expressed by key stakeholders to utilize the Guided Pathways framework as an overarching structure for the college's main planning and resource allocation processes, leveraging existing initiatives and programs.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

Design

4. INCLUSIVE DECISION-MAKING STRUCTURES

College has identified key leaders that represent diverse campus constituents to steer college-wide communication, input and decisions regarding the Guided Pathways framework.

Constituents have developed transparent cross-functional work-teams to provide the Guided Pathways effort with momentum and regularly provide opportunities for broad college-wide input. In addition, this plan strategically engages college governance bodies college-wide.

CURRENT SCALE OF ADOPTION: Pre-adoption

ANTICIPATED CHANGE IN SCALE OF ADOPTION DURING TIMEFRAME: Scaling in Progress

MAJOR ACTIVITIES: • Create cross functional oversight committee, which includes administrators, faculty, staff and students. Constituent group leaders, including Academic and Classified Senate will be included. Within constituent groups, members will represent key functions at the college, such as instruction, student services, basic skills, transfer, IT, etc. • Develop guiding principles for Guided Pathways work. • The oversight committee will identify and establish work groups and inquiry groups to carry out the reflection and activities associated with the plan. The groups will be populated in relation to the activity. • Students will be engaged in providing feedback in multiple ways: At least two students will be part of the oversight committee; methods for engaging broader feedback will be developed, such as outreach to existing clubs and cohort groups (e.g. MESA and First Year Institute); sessions will be conducted to elicit student feedback on guided pathways plans and activities. • Develop engagement cycle with a mechanism for eliciting feedback for the work of the oversight committee and workgroups.

EXISTING EFFORTS: • Our current committee structure will be utilized to develop the oversight committee as well as to create information flow • The Committee Chair Committee will be re-invigorated to insure that Guided Pathways work will be disseminated throughout the committees. • Constituent group leadership is instrumental in engaging faculty and staff in key roles to benefit the work groups and inquiry groups. • Use the student equity inquiry group model developed in our work with CUE to achieve the inquiry goals established by the oversight committee and the work of the inquiry groups. • Utilize the engagement achieved through the integrated plan and self-assessment development to potentially provide membership momentum for the oversight committee and work groups.

MAJOR OUTCOMES: • Oversight Committee will meet at least once by May, 2018 • Committee will develop summer work schedule and recommend inservice activities and academic year cycle of guided pathways engagement. • By the end of Phase One, preliminary work group and inquiry groups will be formed and working toward their goals. • The steering will be moving this key element to full scale by the end of phase one or early in phase two.

5. INTERSEGMENTAL ALIGNMENT

College engages in systematic coordination with K-12, four-year institutions and industry partners to inform program requirements.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

6. GUIDED MAJOR AND CAREER EXPLORATION

College has structures in place to scale major and career exploration early on in a student's college experience.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

7. IMPROVED BASIC SKILLS

College is implementing evidence-based practices to increase access and success in college and/or transfer-level math and English.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

8. CLEAR PROGRAM REQUIREMENTS

College is clarifying course sequences for programs of study (including key milestones) and creating predictable schedules so that students can know what they need to take, plan course schedules over an extended period of time, and easily see how close they are to completion. College offers courses to meet student demand.

In order to meet these objectives, college is engaging in backwards design with desired core competencies and/or student outcomes in mind (including time-to-goal completion and enhanced access to relevant transfer and career outcomes).

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

Implementation

9. PROACTIVE AND INTEGRATED STUDENT SUPPORTS

College provides academic and non-academic support services in a way that is proactive and aligned with instruction, so that all students are explicitly engaged in these services.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

10. INTEGRATED TECHNOLOGY INFRASTRUCTURE

College has the technology infrastructure to provide tools for students as well as instructional, counseling, and student support faculty and staff to support planning, tracking, and outcomes for Guided Pathways.

CURRENT SCALE OF ADOPTION: Early Adoption

ANTICIPATED CHANGE IN SCALE OF ADOPTION DURING TIMEFRAME: Scaling in Progress

MAJOR ACTIVITIES: • Continue Implementation of Elucian's Student Planning, which will allow us to link student demand to scheduling. • Multi-semester sequences will be completed and published for all departments, certificates and degrees. • Work with current technology team to implement Elucian features which best support Guided Pathways framework. These include a new student portal, student planner, and self-service tools for financial aid and tracking progress. • Explore early alert systems and either enhance the current process or purchase an integrated system that can utilize Colleague and potentially Canvas information to generate notifications. • Explore the possibility of having all faculty use the grade book in Canvas. • Develop consistent progress reports which are supported by technology, including Canvas. • Implement Cranium Café which will allow for online counseling.

EXISTING EFFORTS: • We have a wide array of technological improvements in various stages of completion: new portal, self-service & planning, Canvas, elumen, Cranium Café, and upgrades to Colleague (Enterprise Resource Planning Software). • Use lessons learned from Equity work with CUE to design electronic communications to be non-threatening and encouraging for students.

MAJOR OUTCOMES: • Student Planner will be implemented. • Students will be able to monitor their progress and schedule future semesters. • Deans and faculty will be using information from Elucian's Student Planning to inform scheduling. • Progress reports will be consistent. • Language used in electronic communication to students will have been reviewed and edited after considering it through an equity lens modeled after our work with CUE • A decision will be made on how to proceed with an early alert system • By the end of phase one, a determination will be made about whether all faculty will be required to use Canvas to track grades and attendance. □ Regardless of the determination made above, there will be an increase in faculty using Canvas to track grades and attendance.

11. STRATEGIC PROFESSIONAL DEVELOPMENT

Professional Development (PD) is strategically, frequently, and consistently offered for staff, faculty and administrators and aligned with the college's strategic goals, needs and priorities identified in integrated plans, program review, and other intentional processes.

CURRENT SCALE OF ADOPTION:

ANTICIPATED CHANGE IN SCALE OF ADOPTION DURING TIMEFRAME: Scaling in Progress

MAJOR ACTIVITIES: • Oversight Committee and workgroups will identify professional development needs • Committee chairs will be provided with professional development which assists them in leader their committees to contribute to the strategic goals as well as the goals of the Integrated Plan and Guided Pathways. • Inservice and Teacher Institutes will be coordinated around the identified needs. • Incorporate Faculty Equity Project into professional development around Guided Pathways. • All staff and faculty will be consistently trained and updated in the services available to students. • Develop inventory of professional development opportunities and participation. • Identify professional development opportunities locally and system wide and make those available to college constituents. • Develop an integrated budget for professional development which includes funding sources from all campus initiatives. • Professional development will occur to familiarize committees and general population of faculty and staff with the KPIs and other data uncovered by inquiry groups and identified by the oversight committee.

EXISTING EFFORTS: • Utilize the existing Professional Development committee to assist in the coordination of related PD opportunities for all. • Funding exists across multiple initiatives for professional development. These funds can be organized to achieve overlapping goals and reach cross functional teams. • Existing structure for professional development will be used to support strategic goals, integrated planning, and guided pathways. Important current PD activities include Inservice, Teacher Institutes, Teachers on Teaching Conference and the Faculty and Classified Equity Projects.

MAJOR OUTCOMES: • A budget for professional development using existing funding across initiatives will be developed. • A professional development inventory will be developed to track opportunities and participation. • In Phase one a professional development plan will be explored so that by Phase two, the oversight committee will be able to present a yearlong plan at the start of the academic year. • Professional Development Committee will be meeting on a regular basis and will monitor progress and participation. • Faculty will begin the course mapping process for pathways and meta majors. • Guided Pathways will be a focus or a highlight at all standing professional development activities (Inservice, Teacher Institute, Teachers on Teaching Conference).

12. ALIGNED LEARNING OUTCOMES

Learning outcomes are aligned with the requirements targeted by each program and across all levels (i.e., course, program, institutional) to ensure students' success in subsequent educational, employment, and career goals.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

13. ASSESSING AND DOCUMENTING LEARNING

The college tracks attainment of learning outcomes and that information is easily accessible to students and faculty. Consistent and ongoing assessment of learning is taking place to assess whether students are mastering learning outcomes and building skills across each program and using results of learning outcomes assessment to improve the effectiveness of instruction in their programs.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

14. APPLIED LEARNING OUTCOMES

Students have ample opportunity for applied/contextualized learning and practice. Opportunities have been coordinated strategically within and/or amongst programs.

This item will not be addressed in the current time period. Please refer to the timeline above for more information.

Performance Indicators

KEY PERFORMANCE INDICATORS

CURRENT KPI DATA

PARTICIPATION

TRANSFERRABLE MATH & ENGLISH COMPLETION

FIRST TERM MOMENTUM

Budget Totals

Total Budget

\$131,902

Code	Amount	Percent of Budget
Indirect Costs	\$0	0%
Mendocino College Total	\$0	0%

Efforts & Support

EFFORTS: Not Complete

CHANCELLOR'S OFFICE SUPPORT: Not Complete

Certification

CHANCELLOR/PRESIDENT

J. Arturo Reyes
areyes@mendocino.edu

[SEND REMINDER](#)

Awaiting Submittal

PRESIDENT, ACADEMIC SENATE

Jason Edington
Academic Senate President
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[SEND REMINDER](#)

Awaiting Submittal



March 10, 2018

To: Academic Senate, Mendocino College

RE: Math and Quantitative Reasoning Task Force Recommendations

As the Treasurer of the California Mathematics Council, Community Colleges, I was asked to serve as the co-chair for the statewide ASCCC Math and Quantitative Reasoning Task Force (MQRTF) that is considering recommendations for mathematics education at the community college level. The task force includes representatives from disciplines such as math, statistics, education, and chemistry. It should be noted that the MQRTF is guided by a commitment to equity in math and quantitative reasoning, with the goal of providing a valuable education that meets the needs of all students, empowering them to be successful in a technologically evolving society. This task force has designed recommendations in response to requirements of AB 705, a recently passed law requiring colleges (or districts) to maximize the probability that students will enter and complete transfer-level math (and English) courses within a one-year time frame, and CSU executive orders 1100/1110 (GE breadth requirements and mathematics placement for first-year students).

At their most recent meeting, the executive committee of the ASCCC acted to send the taskforce recommendations forward to the delegates representing all 114 community colleges (and districts) for endorsement. I would like to encourage the Academic Senate members at Mendocino College to review the recommendations and direct our delegate to endorse them.

The very short version of the point of these recommendations is to:

- come into AB705 compliance
- leave ultimate control in the hands of local faculty for the pathways they want to use to come into this compliance
- provide adequate support for students who need it as they journey towards completion of their transfer level requirements
- provide students with options and encouragement to consider STEM fields, even if they didn't have original intent to do so, as to not increase the current equity gap in STEM majors.

I have attached the recommendations for your convenience. I am available to meet with you to discuss these further, if you wish.

Thank you for your consideration,
Leslie Banta

California Community Colleges Math and Quantitative Reasoning Task Force Recommendations – Part I

3-3-2018

Preamble

In fall 2017, the Academic Senate for California Community Colleges (ASCCC), the California Mathematics Council of Community Colleges (CMC³) and the California Mathematics Council of Community Colleges-South (CMC³-South) joined together and formed a task force to address math and quantitative reasoning education in the California community colleges. Math or quantitative reasoning is required for all majors: Science, Technology, Engineering, and Mathematics (STEM) majors and non-STEM majors, which may or may not have specific math requirements. In particular, this task force will examine quantitative reasoning as part of the general education pattern of curriculum design, especially in response to the requirements of AB 705 (Irwin, 2017) and the California State University Executive Orders 1100 and 1110 (EOs 1100/1110). The ASCCC is recognized in statute as the voice of the faculty in the California Community College system in regard to academic and professional matters, which includes curriculum, prerequisites, degree and certificate requirements, and student preparation. While the ASCCC reluctantly opposed AB 705¹, now that it is law, the ASCCC is working diligently to fulfill the direction of the legislature. CMC³ and CMC³-South are the California affiliates of the American Mathematical Association of Two-Year Colleges (AMATYC). AMATYC is the only organization exclusively devoted to providing a national forum for the improvement of mathematics instruction in the first two years of college. The California Community Colleges Math and Quantitative Reasoning Task Force (MQRTF) was formed to address the following as feasible:

1. *Research the various and diverse perspectives on appropriate content for math/quantitative reasoning education for non-STEM majors;*
2. *Develop recommendations on math and quantitative reasoning standards for non-STEM majors;*
3. *Develop a plan for how to provide opportunities for more students to consider STEM fields (since the United States is producing fewer and fewer STEM graduates, especially in groups that are disproportionately impacted);*
4. *Provide a report to the ASCCC, CMC³, and others, such as the California Community Colleges Chancellor's Office and Board of Governors, to consider that includes the research results and recommendations; and*
5. *Request a response from ASCCC, CMC³, and other stakeholders.*

The membership of the MQRTF was structured to include diverse perspectives in regard to math and quantitative reasoning with representatives from disciplines such as math, statistics, education, and chemistry. It should be noted that the MQRTF is guided by a commitment to

¹ AB 705 Oppose (ASCCC): <https://asccc.org/content/ab-705-oppose>

equity in math and quantitative reasoning, with the goal of providing a valuable education that meets the needs of all students, empowering them to be successful in a technologically evolving society. The following recommendations, which begin to address items 1 and 2 (above) in response to requirements of AB 705 and EOs 1100/1110, are the first part of two sets of recommendations from the MQRTF. The second set, or Part II will address item 3, and further address items 1 and 2.

Organization of the Recommendations

- C-ID: Overview
 - Process
 - MQR Pathways – Flow Chart
 - Descriptors
 - Foundations of Algebra for Math-Intensive Fields
 - Fundamentals of Algebra for Statistics or Liberal Arts
 - Elementary Mathematics
- “Drop back” Policy considerations
- Professional Development
- Data and Research
- Title 5 Stipulation
- References

Recommendations

C-ID: Overview

The MQRTF is bringing forth these recommendations as an option for colleges to consider for compliance with AB 705 and consistency with EOs 1100/1110. These recommendations are not intended to be used as required curriculum pathways. The C-ID course descriptors must remain as options for colleges to consider, but not required courses in curriculum pathways.

The MQRTF is presenting three draft C-ID descriptors that include content and objectives of the two algebra-based courses and one for more intensive instruction in elementary mathematics:

- Foundations of Algebra for Math-Intensive Fields – Elements of beginning and intermediate algebra as appropriate for long-term engagement in math-intensive fields– may include co-requisite support
- Fundamentals of Algebra for Statistics or Liberal Arts – Elements of beginning and intermediate algebra specifically designed for statistics, liberal arts mathematics, and other non-math-intensive fields – may include co-requisite support.

In the above two options, students with little or no elementary algebra skills may need additional prerequisite or co-requisite support.

- Elementary Mathematics – Elements of traditional arithmetic and pre-algebra for students needing to develop or improve computational and quantitative reasoning skills. This course is optional for those who choose this level of remediation.

Based on local placement policies, students will be provided the curricular support that they need to reach their academic goals. The proposed curriculum provides a structure for students to complete transfer-level math within a one-year time frame, as required by AB 705. Some students may require co-requisite or prerequisite course support.

Normally, this work would be done by the Faculty Discipline Review Group (FDRG). However, the ASCCC Executive Committee has requested that the MQRTF draft these descriptors and bring them forward.

These descriptors will include required and optional topics to allow colleges to tailor the courses to their student populations. In addition, the idea of offering groups of topics in these courses as modules will be introduced and considered. The descriptors will be sent to the math C-ID listservs and to the area meetings in March 2018. A resolution will be presented at the spring 2018 plenary session for the delegates to endorse the framework as an option that colleges may consider when addressing the requirements of AB 705. If the resolution passes, every effort will be made to accelerate the approval of the descriptors through C-ID.

Process:

Math faculty have been hesitant to endorse additional C-ID descriptors. The MQRTF agreed to recommend additional course descriptors provided some processes with C-ID approval be improved. Two of the most prominent concerns are:

- There is rigid adherence to the language in the C-ID descriptor for colleges to acquire course C-ID approval. We recommend reducing the level of detail required in the outlines and rely more on local faculty expertise and integrity. The descriptors should be refined so that they are including what is minimally necessary. For example, topics that are covered in a prerequisite course should not be required in the C-ID descriptor and specific real-world examples of concepts should be left to the discretion of the instructor or college. Perhaps a space where colleges may add additional topics as needed for their programs would be a beneficial option to assess the depth and rigor of course.
- With the passage of SB 440 (Padilla, 2013), “(C) A community college shall create an associate degree for transfer in every major and area of emphasis offered by that college for any approved transfer model curriculum approved subsequent to the commencement of the 2013–14 academic year within 18 months of the approval of the transfer model curriculum.” C-ID is used to develop descriptors for all transfer model curriculum. Thus, courses having C-ID descriptors have become a required component of the Associate Degrees for Transfer, with little room for other course offerings, especially at smaller colleges. These proposed course descriptors must remain as options for colleges to consider, and not as required courses in curriculum pathways.

Finally, many processes around curriculum approval at the state and district levels have been expedited and given special considerations in order to meet the mandates of AB 705. Likewise,

to meet the request of the ASCCC Executive Committee, the descriptor approval process for these particular descriptors will need to be given some liberty.

MQR Pathways:

Attached is a Flow Chart for Math and Quantitative Reasoning Pathways that meet the requirements of AB 705. These pathways are options for colleges to consider but should never be a required component of a college's curricular offerings.

C-ID Descriptors:

Attached are draft C-ID descriptors for the following courses:

- Foundations of Algebra for Math-Intensive Fields – Elements of beginning and intermediate algebra as appropriate for long-term engagement in math-intensive fields– may include co-requisite support
- Fundamentals of Algebra for Statistics or Liberal Arts – Elements of beginning and intermediate algebra specifically designed for statistics, liberal arts mathematics, and other non-math-intensive fields – may include co-requisite support.
- Elementary Mathematics – Elements of traditional arithmetic and pre-algebra for students needing to develop or improve computational and quantitative reasoning skills. This course is optional for those who choose this level of remediation.

“Drop-back” Policy Considerations:

For some students an accelerated or co-requisite model may not meet their needs. It is important that we support those students in their educational pursuits and allow them to be advocates for their educational experience. This may include non-traditional or working students who cannot afford the time to add a co-requisite course.

Students should have the option to enroll in the Elementary Mathematics course. At the local level, colleges should be encouraged to develop practices and policies that will inform those students of the implications of this move and support the students with their learning needs.

Situations to consider:

- Initial enrollment in an Elementary Mathematics course, below where the student was placed
- Student enrolls in the course of placement, but then opts to drop-back to lower level to improve on prerequisite skills

Professional Development:

Increase and promote professional development opportunities for faculty, that are designed and facilitated by faculty in math and quantitative reasoning education. These courses are meant to be taught in a non-traditional model and many faculty have not had training in these newer and innovative practices. Professional development opportunities that are designed for pedagogy/andragogy that is applied to a broad base of models. In particular, some “how-to” sessions at the ASCCC Academic Academy in September 2018 would be just in time as colleges

are revamping their curricular offerings. It is also strongly recommended that colleges find release time to allow for faculty to work together to determine how to implement the changes, as well as the time for actual implementation. There are funds from SSSP, Equity, BSI, and the Guided Pathways Award program that could be appropriately allocated to do this required curricular transformation. Even though it is often difficult, or nearly impossible, for some of the smaller colleges to release their faculty to do this work, the work still needs to get done. At a minimum, stipends commensurate with the work being done should be provided.

Data and Research:

In addition to the typical data collection and research that takes place annually, colleges should examine the following:

- Self-reported high school transcript data compared to actual high school transcript data
- Students that take courses that are lower than placement recommends
- Students that drop before the census date
- Student feedback with new placement system and curricular pathways

It should also be noted that many colleges will have new curriculum, so student success comparisons between the “new course” and the “old course” may not be meaningful. Comparisons may be most meaningful at the transfer-level course, assuming the course content and rigor has not changed.

Title 5 Stipulation:

Currently, the following language is in Title 5 §55063:

Competency in mathematics shall be demonstrated by obtaining a satisfactory grade in a mathematics course at the level of the course typically known as Intermediate Algebra (either Intermediate Algebra or another mathematics course at the same level, with the same rigor and with Elementary Algebra as a prerequisite, approved locally), or by examination;

The competency requirements for written expression and mathematics may also be met by obtaining a satisfactory grade in courses in English and mathematics taught in or on behalf of other departments and which, as determined by the local governing board, require entrance skills at a level equivalent to those necessary for Freshman Composition and Intermediate Algebra respectively.

The language is quite clear—In order for a course to meet math competency requirements, it must require entrance skills at a level at least equivalent to elementary algebra.

Many colleges have created and offered courses that have been approved to meet math competency requirements, even though the courses do not require entrance skills at least equivalent to elementary algebra. It is argued that these courses do indeed comply with Title 5, at least in spirit, since these courses include the required entrance skills in the course content as well as content equivalent to that of intermediate algebra.

References:

- ASCCC: <https://asccc.org>
- AMATYC: <http://www.amatyc.org/?page=AboutUs>
- CMC³: <http://www.cmc3.org/index.html>
- CMC³-South: <http://cmc3s.org>
- AB 705: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB705
- EO 1100/1110: <https://www.calstate.edu/eo/>
- SB 440:
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB440
- C-ID Transfer Model Curriculum: <https://c-id.net/tmc>