College of Alameda

Annual Program Update

Supplemental/Revised **Template 2014-2015**

I.	Overview			
	BI Download:	September 19, 2014	Dept. Chair:	Michael Valdez
	Subject/Discipline:	Math	Dean:	Myron Jordan
	Campus:	College of Alameda		
	Mission Statement	• It is the Mission of College of Alameda to serve the educational needs of its diverse community by providing comprehensive and flexible programs and resources that empower students to achieve their goals. • The College of Alameda Department of Mathematics offers a variety of courses intended for those who want to pursue a degree or certificate in mathematics as well as those who wish to develop quantitative and problem-solving skills for use in other fields. • At CoA we enforce our motto of education anytime anywhere by offering a wide range of Math classes designed to fit around anyone's busy schedules. We offer day, evening, online, short term, late start and weekend college classes. We offer our students on-campus resources such as one-on-one tutoring through our Tutorial Center, drop-in tutoring in our campus Math Lab, and access to Math software that complement our required material in the classroom. • Our Math faculty is dedicated to the success of our students. We work hard to provide our students with a positive atmosphere that is conducive to learning		

II. Enrollment

TERM	SECT	CENSUS	FTES TOTL	FTEF TOTL	PROD
Fall-14	34	1323	199.12	9.20	21.64
Fall-13	33	1499	212.58	9.73	21.84
Fall-12	33	1501	211.20	9.35	22.59
Fall-11	33	1502	198.45	9.07	21.89
Fall-10	39	1710	228.25	10.66	21.42
Fall-09	44	1891	260.63	12.27	21.25
Fall-08	45	1681	233.53	12.81	18.23
Fall-07	42	1386	195.73	10.61	18.44
Fall-06	36	1333	187.50	9.21	20.37
Fall-05	36	1264	176.00	10.39	16.93
Fall-04	38	1343	191.37	9.76	19.60

TERM	SECT	CENSUS	FTES TOTL	FTEF TOTL	PROD
Spring-14	39	1688	238.37	10.79	22.09
Spring-13	36	1671	235.10	10.40	22.60
Spring-12	30	1365	180.58	8.10	22.29
Spring-11	39	1605	210.48	10.20	20.64
Spring-10	39	1804	239.60	10.40	23.04
Spring-09	46	1616	222.66	13.14	16.95
Spring-08	42	1355	186.13	11.42	16.29
Spring-07	42	1155	161.64	10.71	15.10
Spring-06	34	1059	145.50	10.61	13.71
Spring-05	36	1280	180.29	11.08	16.28

III. Student Success

Subject	Term	TOTAL GRADED	SUCCESS	SUCCESS RATE	WITHDRAWAL	WITHDRAWAL RATE
MATH	2008 Fall	1,634	876	53.60%	408	25%
MATH	2009 Spring	1,506	847	56.20%	338	22%
MATH	2009 Fall	1,765	1,022	57.90%	454	26%
MATH	2010 Spring	1,699	925	54.40%	498	29%
MATH	2010 Fall	1,651	968	58.60%	353	21%
MATH	2011 Spring	1,539	899	58.40%	281	18%
MATH	2011 Fall	1,454	820	56.40%	312	21%
MATH	2012 Spring	1,335	766	57.40%	310	23%
MATH	2012 Fall	1,450	887	61.20%	246	17%
MATH	2013 Spring	1,663	926	55.70%	395	24%

Subject	Term Descr Long	Headcount	Census Enrollment	Course completion	Completion Rate	Retained	Retention Rate
MATH	2008 Fall	1628	1707	1060	62%	1226	72%
MATH	2009 Spring	1547	1632	965	59%	1168	72%
MATH	2009 Fall	1840	1906	1146	60%	1310	69%
MATH	2010 Spring	1707	1805	1033	57%	1201	67%
MATH	2010 Fall	1673	1738	1103	63%	1298	75%
MATH	2011 Spring	1561	1628	1058	65%	1258	77%
MATH	2011 Fall	1514	1527	959	63%	1142	75%
MATH	2012 Spring	1374	1407	877	62%	1025	73%
MATH	2012 Fall	1490	1506	1010	67%	1204	80%
MATH	2013 Spring	1600	1671	1055	63%	1268	76%

IV. **Faculty** –

SUB	SECT	CENSUS	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL
FA13	33	1499	212.58	3.32	0.54	5.87	9.73
SP14	39	1688	238.37	4.32	1.01	5.46	10.79

V. Qualitative Assessments

CTE and Vocational: Community and labor market relevance. Present evidence of community need based on Advisory Committee input, industry need data, McIntyre Environmental Scan, McKinsey Economic Report, licensure and job placement rates, etc.	We offer on section of Math 225 (Math for Technicians) each semester to support our CTE students. The majority of the students enroll in this class are automotive students. The Math department is developing curriculum to integrate contextualized learning strategies into a course with emphasis on Apparel Design and Merchandising, Aviation Maintenance Technology, Computer Information Systems, and Dental Assisting.
Transfer and Basic Skills: Describe how your course offerings address transfer, basic skills, and program completion.	Our program aims to serve students who wish to attain a certificate or AA/AS/AAT/AS-T in their field and/or transfer to a 4-year institution (primarily UC/CSU). We also offer an AS-T and AS in Mathematics. We offer both courses at the basic skills and transfer level. Students can asses into the course through the college's assessment test or transcript from another community college. Below is a list of current offerings. (See back page for navigation map of courses). <u>Basic Skills</u> Math 225 – Math for Technicians Math 250 – Arithmetic Math 253 – Pre-algebra Math 201 – Elementary Algebra Math 202 – Geometry Math 203 – Intermediate Algebra Math 225 serves most vocational-tech certificates, while Math 203 (or higher) serve as the math requirement for various certificates and associates degrees. A majority of our basic skills sections are Math 201 & 203. These courses generally have low success rates. Thus, we plan to create new (accelerated) paths to assist students in reaching their transfer level math courses. Once these courses are designed, we will work with counseling to make sure students are properly placed.

The department is considering combining Math 201 and Math 203 into a 6 or 7 unit course that would combine both of these courses into a one semester long class. We will work to develop and offer an experimental version of the course in the 2015-2016 academic year.

We are also working to institutionalize the experimental course Math 248AF – Accelerated Mathematics for Statistics. It has been piloted for 3 semesters and is currently not being offered. There are concerns around the rigor and equivalence to Math 203 in addition to the UC's not accepting the course a pre-requisite for Math 13. BCC is the only college in the district that has institutionalized this course. We will be work with the other department chairs to discuss this matter and the future of this course.

Transfer

Math 13 – Introduction to Statistics
Math 50 – Trigonometry
Math 2 – Precalculus
Math 3A – Calculus I
Math 3B – Calculus II
Math 3C – Calculus III
Math 3E – Linear Algebra (Every Other Semester)
Math 3F – Differential Equations (Every Other Semester)

A majority of our transfer sections are Math 13. Math 13 serves as the primary transfer course of non-STEM students and AAT/AS-T degrees.

Math 3A serves as the primary transfer course for STEM students and AAT/AS-T degrees.

We have recently seen a decrease in enrollment for Math 2, Math 3A, and Math 3B. We will be working with counseling to ensure students are properly placed, while the department chair will ensure courses are staffed in accordance with student needs. In addition, we will be creating new transfer pipelines to calculus.

Current Calculus Pipeline

1) Math 50-Math 2-Math 3A (completed in 3 semesters)

New Pipelines (Fall 2015)

2) Math 202 & Math 50 (back to back in 1 semester), then Math 2-Math 3A

3) Math 50-Math 1 (concurrent in 1 semester), then Math 3A

	We would like to give this a trial run in the Fall 2015 academic year. This would require us to work closely with counseling to ensure students are aware of their options in addition to adopting Math 1 from BCC. This in turn will allow students to complete course requirements in a shorter length of time.

VI. Course SLOs and Assessment

	Fall 2014
Number of active courses in your discipline	14
Number with SLOs	14
% SLOs/Active Courses	100%
Number of courses with SLOs that have been assessed	0
% Assessed/SLOs	0

Describe types of assessment methods you are using

We are currently in the process of developing and mapping out an assessment cycle with the intent to assess all courses in the starting the Fall 2015 academic year. We would like to conduct a trial run in the Spring 2015 semester for the bulk of our course offerings: Math 201, Math 203, and Math 13.

To achieve this, we will work with faculty in developing 3 assessments for each course (1 per SLO, short answer or multiple choice) along with grading rubrics. Instructors will be given these questions to incorporate into there final. After, the data and feedback will be reported to the college.

To ensure all faculty are accountable for assessment, we will alter our course outlines to include the required assessment. Our department has had issues in the past with assessment, but we are committed to our plan put into action.

Describe results of your SLO assessment progress

Spring 2015 assessment results expected in Fall 2015.

Describe how assessment results and reflection on those results have led to improvements.

Spring 2015 assessment results expected in Fall 2015.

VII. Program Learning Outcomes and Assessment

	Fall 2014
Number of degrees and certificates in your discipline	1
Number with Program Learning Outcomes	1
Number assessed	0
% Assessed	0%

Describe assessment methods you are using

Once all courses are assessed in the Fall 2015 academic year, we will use these results to asses our PLO's.

Describe results of assessment. Describe how assessment of program-level student learning outcomes led to certificate/degree program improvements.

Fall 2015 academic year assessment results expected in Fall 2016.

VIII. Strategic Planning Goals

Check all that apply.	Describe how goals apply to your program.
☒Advance Student Access, Success & Equity ☒Engage our Communities & Partners ☒Build Programs of Distinction ☒Create a Culture of Innovation & Collaboration ☒Develop Resources to Advance & Sustain Mission	• Develop assessment questions and rubrics to assess SLO's & PLO's for implementation in Fall 2015. (See VI & VII) • Develop an alternative pathway to Statistics adapting existing programs to fit the needs of the college. • Develop an accelerated pathway to Calculus. • Offer a program that provides students mathematics preparation for the placement exam or beginning of semester at appropriate levels. • Connect with feeder high school to ease new student transition and develop other initiatives. • Investigate and implement multiple measures of first-time placement through statewide research. • Update COOR's and evaluate textbooks that reflect program and student needs. • Determine the ideal 2-year schedule that incorporates the full math program of courses so that students can earn an AS-T degree in mathematics within that time. • Offer Math 3E in Spring and Math 3F in the Fall so that we have a complete Math Program. • Work towards decreasing all class sizes to a maximum of 40 to ensure student success. • Work to expand resources for web-enhanced, hybrid, and online math classes such as: testing center for online courses, replace workstations in Math Lab, etc. • Improve office spaces, department management operations, and expand classroom resources. (Office chairs, filing cabinets, storage cabinet, technology tools for classroom.) • Research outside grant funding to improve math program at COA.

IX. College Strategic Plan Relevance

Check all that apply

☒New program under development
☒Program that is integral to your college's overall strategy
☒Program that is essential for transfer
☒Program that serves a community niche
☐ Programs where student enrollment or success has been demonstrably affected by extraordinary external factors, such as barriers due to housing, employment, childcare etc.
☒Other:

- As stated earlier, we plan build a Math program that offers distinct pipelines to statistics & calculus (See Part V)
- Math is required for every degree offered at College of Alameda making it one of the larger departments.
- A majority of our sections are basic skills, which help students develop skills to reach college level courses.

X. Action Plan

Please describe your plan for responding to the above data (quantitative, qualitative, and data specifically from course and program learning outcomes assessment). Consider curriculum, pedagogy/instructional, scheduling, and marketing strategies. Also, please reference any cross district collaboration with the same discipline at other Peralta colleges.

Include overall plans/goals and specific action steps.

- Develop assessment questions and rubrics to assess SLO's & PLO's for implementation in Fall 2015. (See VI & VII)
- Develop an alternative pathway to Statistics adapting existing programs to fit the needs of the college.
- Develop an accelerated pathway to Calculus.
- Offer a program that provides students mathematics preparation for the placement exam or beginning of semester at appropriate levels.
- Connect with feeder high school to ease new student transition and develop other initiatives.
- Investigate and implement multiple measures of first-time placement through statewide research.
- Update COOR's and evaluate textbooks that reflect program and student needs.
- Determine the ideal 2-year schedule that incorporates the full math program of courses so that students can earn an AS-T degree in mathematics within that time.
- Offer Math 3E in Spring and Math 3F in the Fall so that we have a complete Math Program.
- Work towards decreasing all class sizes to a maximum of 40 to ensure student success.
- Work to expand resources for web-enhanced, hybrid, and online math classes such as: testing center for online courses, replace workstations in Math Lab, etc.
- Improve office spaces, department management operations, and expand classroom resources. (Office chairs, filing cabinets, storage cabinet, technology tools for classroom.)
- Research outside grant funding to improve math program at COA.

XI. Needs

Please describe and prioritize any **faculty, classified, and student assistant** needs.

Our developmental math courses have low success rates. Our most popular courses Math 201, 203, and 13, also have very large class sizes (45 for non-hybrid) that threaten student success. We anticipate the need to hire 1-2 additional contract faculty in math in the next three years to assist with handling increased enrollment, growth of the department, and management of SLO assessment.

Please describe and prioritize any **equipment, material, and supply** needs.

- Equipment Needs:
  - Replace the workstations in the Math lab to support online and hybrid math students.
  - 2-3 document cameras and digital projectors for math classes that can't be scheduled in a SMART classroom.
  - Printer/copier for department faculty needs and SLO assessment.
  - Copies of Mathematica Software and TI-Emulator Software for instructors and the Math Lab.
  - Copy of Adobe Acrobat Professional for instructor computers.
  - 40 portable (personal whiteboards) for classroom activities and one-on-one tutoring.
  - Replace computer workstations for all contract faculty as some are beginning to fail.

Please describe and prioritize any **facilities** needs.

- The mathematics online program needs a testing center to proctor in-person exams. Need a space to hold exams and a plan for staffing with faculty office hours and clerical asistants.
- All math courses need to be scheduled in classrooms with at least two whiteboards and at least 40 individual desks.
- All math courses should be scheduled in SMART classrooms as soon as they are available on the campus.
- A computer classroom dedicated to Math classes *only*.
- Furniture updates for offices of contract faculty including new office chairs.

College of Alameda

MISSION

The Mission of College of Alameda to serve the educational needs of its diverse community by providing comprehensive and flexible programs and resources that empower students to achieve their goals.

VISION

The Vision of College of Alameda is that we are a diverse, supportive, empowering learning community for seekers of knowledge. We are committed to providing a creative, ethical and inclusive environment in which students develop their abilities as thinkers, workers and citizens of the world.

VALUES

We use this vision to choreograph three central themes in our quest for "learning excellence" and services to students.

∗ Academic Excellence

∗ Budgetary Competence

∗ Community Engagement

We call these "our ABCs" emphasizing crucial success indicators for our students in achieving an enhanced capacity to pursue their dreams!

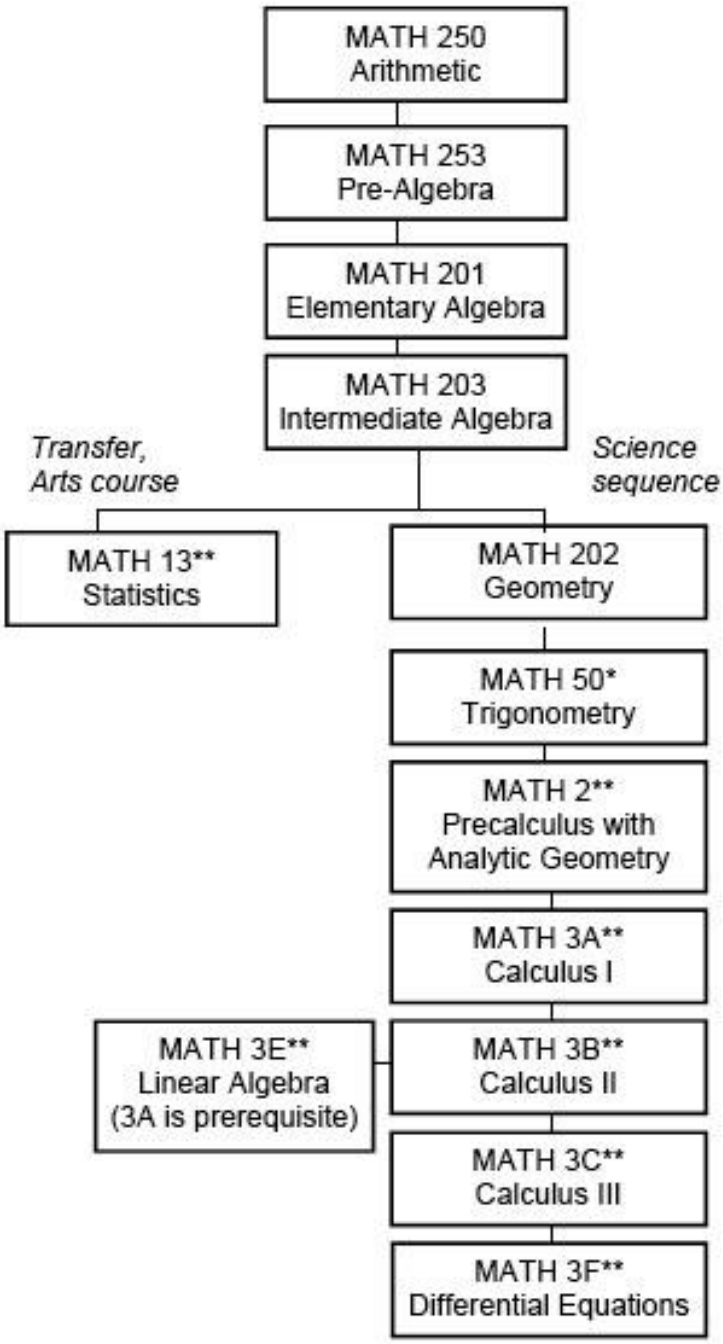
District Strategic Goals & Institutional Objectives 2014-2015

The following are the Peralta Community College District's Strategic Goals and Institutional Objectives for the Academic Year 2014-15 (July 1, 2014 – June 30, 2015) which will be evaluated in Summer 2015.

Strategic Focus for 2014-2015: Our focus this year will be on student success in the core educational areas of basic skills/ESOL (English for speakers of other languages), transfer, and CTE (career technical education) by encouraging accountability, outcomes assessment, innovation and collaboration while spending within an established budget.

Strategic Goals & 2014-2015 Institutional Objectives	
A: Advance Student Access, Equity, and Success	**A.1 Student Access:** Increase enrollment for programs and course offerings in the essential areas of basic skills/ESOL, CTE and transfer to achieve the District target of 19,355 RES FTES. **A.2 Student Success:** Increase students' participation in SSSP eligible activities by 50%, with specific emphasis on expanding orientations, assessments, academic advising and student educational plans. **A.3 Student Success:** Using baseline data, increase student engagement in activities such as student governance, student life activities, Student leadership development, service learning programs, learning communities, student employment, etc. **A.4 Student Equity Planning:** Address the achievement gap through fully developing and implementing the student success and equity plans at each campus.
B: Engage and Leverage Partners	**B.1 Partnerships:** Develop a District-wide database that represents our current strategic partnerships and relationships. **B.2. Partnerships:** Expand partnerships with K-12 institutions, community based organizations, four-year institutions, local government, and regional industries and businesses.
C: Build Programs of Distinction	**C.1 Student Success:** Develop a District-wide first year experience/student success program. **C.2 Student Success:** Develop an innovative student success program at each college.
D: Strengthen Accountability, Innovation and Collaboration	**D.1 Service Leadership:** Provide professional development opportunities for faculty, staff and administrators that lead to better service to our students and colleagues. **D.2 Institutional Leadership and Governance:** Evaluate and update policies and administrative procedures and the PBIM participatory governance structure.

Mathematics Course Sequence



* **Acceptable for credit at CSU**

** **Acceptable for credit at CSU and UC**