

# Program Review - Academic - Mathematics Latest Version

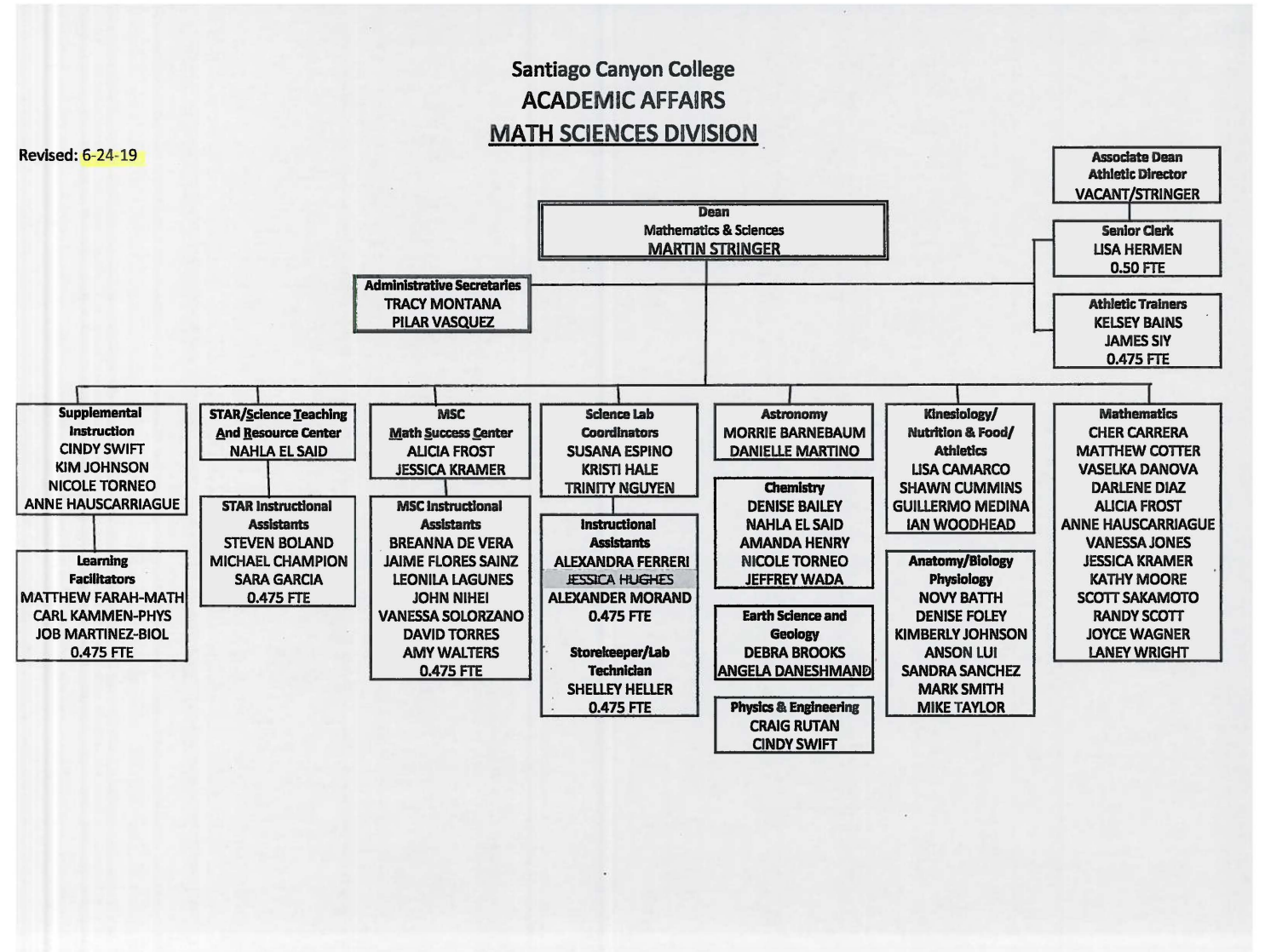
## Overview

Program Review - Collaborators : Version by Sakamoto, Scott on 11/14/2019 14:43

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Program Review Overview - Organizational Chart : Version by Sakamoto, Scott on 11/14/2019 14:43

Please insert the organizational chart for this program or service area.



## Program Review Overview - Award Programs : Version by Sakamoto, Scott on 11/14/2019 14:43

AS-T in Mathematics

AS in Mathematics (during review period but not current)

Award Programs
Mathematics, AS-T

## Program Review Overview - Course Offerings: Unique Courses : Version by Sakamoto, Scott on 11/14/2019 14:43

Unique Courses in 2014-2015	Unique Courses in 2015-2016	Unique Courses in 2016-2017	Unique Courses in 2017-2018
35	37	41	41

## Program Review Overview - Course Offerings - Number of Sections Offered : Version by Sakamoto, Scott on 11/14/2019 14:43

Number of Sections Offered	2014-2015	2015-2016	2016-2017	2017-2018
Classroom Instruction	208	221	221	217
Distance Education- Hybrid	10	12	10	14
Overall	218	233	231	231

## Program Review Overview - Course Offerings - Total Enrollment : Version by Sakamoto, Scott on 11/14/2019 14:43

Total Enrollment (Seats Filled)	2014-2015	2015-2016	2016-2017	2017-2018
Classroom Instruction	7298	7423	7255	6929
Distance Education - Hybrid	358	435	397	526
Overall	7656	7858	7652	7455

## Program Review Overview - Course Offerings - Students per Offered Section : Version by Sakamoto, Scott on 11/14/2019 14:43

Students per Section	2014-2015	2015-2016	2016-2017	2017-2018
Classroom Instruction	35.1	33.6	32.8	31.9
Distance Education - Hybrid	35.8	36.3	39.7	37.6
Overall	35.1	33.7	33.1	32.3

## Program Review Overview - Faculty Workload LHE : Version by Sakamoto, Scott on 11/19/2019 14:28

Full-time LHE #	Full-time LHE %	Part-time LHE #	Part-time LHE	Overload LHE #	Overload LHE %	Total LHE #	Total LHE %
(17/18) 399.1	45.16%	410.9	46.49%	73.7	8.34%	883.8	100%
(16/17) 362.7	39.67%	456.1	49.88%	95.6	10.45%	914.4	100%
(15/16) 318.6	33.08%	493.4	51.23%	151.2	15.69%	963.2	100%

## Program Review Overview - Faculty Workload Faculty Headcount : Version by Sakamoto, Scott on 11/14/2019 14:43

Current full-time faculty headcount (Fall 2019) is 11. Two instructors resigned after Spring 2018 and two more resigned after Spring 2019. One replacement was hired for Fall 2019.

Full-time Faculty Headcount	Part-time Faculty Headcount	Overload Faculty Headcount	Total Faculty Headcount
(17/18) 14	39	11	53
(16/17) 13	37	12	51
(15/16) 13	37	13	52

## Program Review Overview - Faculty Workload LHE per Faculty : Version by Sakamoto, Scott on 11/14/2019 14:43

Full-time LHE per Faculty	Part-time LHE per Faculty	Overload LHE per Faculty	Total LHE per Faculty
(17/18) 28.51	10.54	6.7	16.67
(16/17) 27.90	12.33	7.97	17.93
(15/16) 24.50	13.34	11.63	18.52

## Program Review Overview - Faculty Workload FTEF (LHE/30) : Version by Sakamoto, Scott on 11/14/2019 14:43

Full-time FTEF	Part-time FTEF	Overload FTEF	Total FTEF
(17/18) 13.3	13.7	2.46	29.46
(16/17) 12.09	15.2	3.19	30.48
(15/16) 10.62	16.45	5.04	32.1

## Program Review Overview - Faculty Workload FTES and Efficiency : Version by Sakamoto, Scott on 11/14/2019 14:43

Total FTES	Overall Efficiency (FTES/FTEF)
(17/18) 1005.61	34.14
(16/17) 1053.16	34.61
(15/16) 1096.96	34.17

## Goals and Objectives

### Program Review Goals & Objectives - Process and Mission Statement Alignment : Version by Sakamoto, Scott on 11/14/2019 14:43

What processes does your program/service area follow to create, evaluate, and update annual plan goals?

The SCC Math department collaboratively reviews previous DPP (now AP) goals. If a goal or task is no longer pertinent, it is removed. If achievement of a goal is still in progress, it remains and is updated. When the Math department creates/discovers new goals, they are added to the DPP. Maintenance of the DPP is completed during or before the first department meeting each fall semester or when necessary.

How is SCC's mission statement (<https://www.scccollege.edu/About/Pages/CollegeMissionStatement.aspx>) reflected in your goals?

*Santiago Canyon College is an innovative learning community dedicated to intellectual and personal growth. Our purpose is to foster student success and to help students achieve these core outcomes: to learn, to act, to communicate and to think critically. We are committed to maintaining standards of excellence and providing the following to our diverse community: courses, certificates, and degrees that are accessible, applicable, and engaging.*

The SCC Math department goals align well with the SCC Mission Statement. Our DPP goals support Faculty (full and part-time) with facilities, technological access and support, and appropriate numbers to serve SCC students. Our DPP goals also support maintenance and improvements of services such as the Math Success Center (MSC) and Supplemental Instruction (SI), both of which are empirically useful in helping students achieve their goals. As a whole, the DPP goals are centered on supporting students and their successful transition to whatever comes next. This support is documented in our DPP with mention of improved facilities, updated technology, sufficient faculty, instructional assistants, student workers, and SI leaders.

### Program Review Goals & Objectives - Annual Plan Goals Not Aligned with EMP Goals : Version by Sakamoto, Scott on 11/14/2019 14:43

Annual Plan Goal
N.A.

## Data Analysis

### Program Review Data Analysis - 1 to 4 : Version by Sakamoto, Scott on 11/14/2019 14:43

What is the successful course completion rate (grades of A, B, C, Credit or Pass) for courses within the program and how does this compare to the institution-set standard for successful course completion of **63%**?

Math success rates are 5-11.5 percentage points lower than the school standard of 63%. There was a decline over the 3-year period. Hopefully, supplemental instruction, the new non-credit Math Success Center, and support courses in response to AB-705 can drive success rates up.

Academic Year	Success %	Retention %	Enrollment	Headcount
2014-2015	57.07%	77.85%	9078	5518
2015-2016	58.07%	78.92%	9239	5595
2016-2017	53.83%	77.84%	9000	5524
2017-2018	51.48%	75.12%	8887	5355

What is the successful course completion rate in basic skills courses (grades of A, B, C, Credit or Pass) within the program?

Basic Skills classes such as Math N06, N48, N55 and N60 will no longer be housed in the Math department starting Fall 2019.

Academic Year	Success %	Retention %	Enrollment	Headcount
2014-2015	61.87%	83.15%	813	698
2015-2016	51.52%	79.65%	1877	1450
2016-2017	49.89%	77.50%	1880	1511
2017-2018	46.64%	72.12%	1711	1361

What is the course retention rate (any grade except W) for courses within the program?

The Math department retention rates are 3-9 percentage points below the SCC retention rates. Implementation of AB-705, support courses, MSC, and SI could increase math retention rates.

Academic Year	Success %	Retention %	Enrollment	Headcount
2014-2015	57.07%	77.85%	9078	5518
2015-2016	58.07%	78.92%	9239	5595
2016-2017	53.83%	77.84%	9000	5524
2017-2018	51.48%	75.12%	8887	5355

What is the course retention rate in basic skills courses (any grade except W) within the program?

These rates declined over the 4-year period. However, Math will not house Basic Skills courses starting Fall 2019.

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2015-2016	51.52%	79.65%	1877	1450
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## Program Review Data Analysis - 5 : Version by Sakamoto, Scott on 11/14/2019 14:43

We have a definite increase each year in the number of A.S.T. degrees. The decline in A.S. degrees is a simple function of the A.S.T. degree. We clearly have an increase in total degrees awarded.

Number of Awards in the Following Programs:	2014-2015	2015-2016	2016-2017	2017-2018
Mathematics, AS-T	21	26	30	38
Mathematics, AS	6	4	1	0

## Program Review Data Analysis - 6 to 13 : Version by Sakamoto, Scott on 11/14/2019 14:43

Are there any patterns, trends, or anomalies in the Student Demographic Data (Ethnicity, Age, Gender, Veteran Status, etc.)?

**GENDER:** For each year success and retention rates were 1-3 percentage points lower for males relative to females.

**AGE:** 17 and under group success rates were 20-30 percentage points higher than other age groups. The 18-21 group has the overall lowest success rates, but were very close to other groups (except 17 and under). The 17 and under group also had retention rates that were 10-15 percentage points higher than other age groups.

**ETHNICITY:** African American (n just over 100) and Pacific Islander (n low 2-digit) had lower success rates. Latino (large n) also had relatively low success rates. Asian was the highest performing group. White and Filipino (n low 2-digit) were also higher performing groups. There are some definite gaps based on ethnicity to be addressed.

**DSPS:** Success rate gap started at about 7 percentage points, but over the 3-year period, the gap shrunk to less than 1 percentage point. Although there is a small gap in retention rates (about 2 percentage points) this gap has also shrunk over the 4-year period.

**LOW INCOME:** Success gaps for low income are still present, although they shrunk from 7 to about 5 percentage points. Retention rates stayed consistent at about 2-3 percentage points. The SCC math department has moved MSC (formerly MaSH) to non-credit, continue to offer free SI and regularly review OER materials in an attempt to alleviate financial barriers.

**VETERAN:** Success rates for veterans are similar to non-veterans (within 1-2 percentage points, lower or higher). Retention rates are 2-3 percentage points higher for veterans. The veterans have all of the same services available to all students, but perhaps the veteran's program at SCC helps keep this population performing similar to the population and non-veterans.

**FOSTER YOUTH:** There are significant gaps in success and retention for this group. Sample sizes are just under 100, but success rates have a 15-percentage point gap.

**RESPONSE:** Again, the math department maintains and tries to improve our many services (MSC, SI, etc.). We regularly discuss personnel to give SCC students the best support possible. Furthermore, the Math department makes every attempt to meet the distance education needs of our students. We have also made it policy to review OER materials when available.

**Labor market trends and needs:** Review the labor market data on the [California Employment Development Department \(http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1011\)](http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1011) website for jobs related to your program.

1. What occupations are related to your program?
2. What are the occupational projections for employment?
3. How do these projections affect planning for your program?

1. What occupations are related to your program?

STEM education, computer science, biology, chemistry, engineering, physics, actuarial science, and finance are examples of career paths for math majors. Other options in education include tutor and non-credit instructor. Furthermore, jobs such as inventory management and business operations are in play;

2. What are the occupational projections for employment?

Careers requiring a mathematics background have grown exponentially. The outlook for jobs, such as STEM teacher, is good for filling new jobs and replacing vacated positions.

### 3. How do these projections affect planning for your program?

The SCC Math department has increased our transfer level Math offerings. We take part in STEM advisory, Pathways to Teaching STEM mentorship, STEM counselor visits, Community Science Night and STEM Day. Furthermore, we make every effort to meet both face-to-face and Distance Education demand for math classes. All of these activities promote the importance of a solid mathematics background. We also hire student workers to work for the math department in varying capacities.

Please provide comment on the rates of progress through the basic skills course sequence within your program using the California Community College Chancellor's Office Data Mart [Basic Skills Progress Tracker](http://datamart.cccco.edu/Outcomes/BasicSkills_Cohort_Tracker.aspx) ([http://datamart.cccco.edu/Outcomes/BasicSkills\\_Cohort\\_Tracker.aspx](http://datamart.cccco.edu/Outcomes/BasicSkills_Cohort_Tracker.aspx)).

As the number of levels below transfer increases, the successful completion of a transfer level course decreased. This is a statewide issue addressed with AB-705.

California Community College Chancellor's Office Basic Skills Progress Tracker Data

Spring 2016-Summer 2018

First Math class taken at SCC below transfer level	# of students	# of students to successfully complete a transfer level math course	% of students successful in transfer level course
3-below (N48)	107	15	14%
2-below (N60)	144	24	16.7%
1-below (070, 080)	168	51	30.4%

Please provide comment on student survey results administered by the program, if any.

N.A.

Please provide comment on program exit exams or other assessments of graduating students, if any.

N.A.

Please provide the number of students who take and pass external license examinations, if relevant to the program.

N.A.

Please provide data on former students' post-SCC experiences (e.g. transfer success, career advances, post-graduation surveys), if any.

N.A.

Please provide data pertaining to the instruction or delivery of service, if any.

N.A.

## Outcomes Assessment

### Program Review Outcomes Assessment - Course and Section Count : Version by Sakamoto, Scott on 11/22/2019 19:55

Courses	Section Count
MATH070 - Geometry	2
MATH070L - Geometry Math Lab	2
MATH080 - Intermediate Algebra	32
MATH080 - Intermediate Algebra	11
MATH080L - Intermediate Algebra Math Lab	3
MATH086 - Intermediate Algebra for Statistics and Liberal Arts	20
MATH086 - Intermediate Algebra for Statistics and Liberal Arts	7
MATH086L - Intermediate Algebra for Statistics and Liberal Arts Math Lab	3
MATH105 - Mathematics for Liberal Arts Students	12
MATH105 - Mathematics for Liberal Arts Students	6
MATH105L - Mathematics for Liberal Arts Students Math Lab	3
MATH140 - College Algebra	17
MATH140 - College Algebra	7
MATH140L - College Algebra Math Lab	3
MATH150 - Calculus for Biological, Management and Social Sciences	9
MATH150 - Calculus for Biological, Management and Social Sciences	4
MATH150L - Calculus for Biological, Management and Social Sciences Math Lab	3
MATH160 - Trigonometry	13
MATH160 - Trigonometry	5
MATH160L - Trigonometry Math Lab	3
MATH170 - Pre-Calculus Mathematics	6
MATH170 - Pre-Calculus Mathematics	12
MATH170L - Pre-Calculus Mathematics Math Lab	3
MATH180 - Single Variable Calculus I	13
MATH180 - Single Variable Calculus I	6
MATH180H - Honors Single Variable Calculus I	1
MATH185 - Single Variable Calculus II	4
MATH185 - Single Variable Calculus II	9
MATH185L - Single Variable Calculus II Math Lab	3
MATH203 - Fundamental Concepts of Elementary Mathematics	1

Courses	Section Count
MATH203 - Fundamental Concepts of Elementary Mathematics	2
MATH203L - Fundamental Concepts of Elementary Mathematics Math Lab	2
MATH219 - Statistics and Probability	14
MATH219 - Statistics and Probability	34
MATH219H - Honors Statistics and Probability	1
MATH219H - Honors Statistics and Probability	1
MATH219L - Statistics and Probability Math Lab	3
MATH280 - Intermediate Calculus	2
MATH280 - Intermediate Calculus	5
MATH280L - Intermediate Calculus Math Lab	2
MATH290 - Linear Algebra	1
MATH290 - Linear Algebra	2
MATH290L - Linear Algebra Math Lab	2
MATH295 - Differential Equations	1
MATH295 - Differential Equations	2
MATH295L - Differential Equations Math Lab	1
MATHN06 - Essential Mathematics	2
MATHN48 - Pre-Algebra/Algebra Basics	7
MATHN48 - Pre-Algebra/Algebra Basics	2
MATHN48L - Pre-Algebra/Algebra Basics Math Lab	2
MATHN55 - Beginning Algebra	2
MATHN55L - Beginning Algebra Math Lab	1
MATHN60 - Elementary Algebra	14
MATHN60 - Elementary Algebra	2
MATHN60L - Elementary Algebra Math Lab	3
MATHN73L - Math Review	4
MATHN73L - Math Review	1
MATHN98A - Precalculus Support Course	1
MATHN98A - Precalculus Support Course	1
MATHN98B - Intermediate Algebra Support Lab	2
MATHN98B - Intermediate Algebra Support Lab	3
MATHN98C - Statistics Support Course	2
MATHN98C - Statistics Support Course	2

## Program Review Outcomes Assessment - CSLOs : Version by Sakamoto, Scott on 11/26/2019 15:01

Student Learning Outcomes	CSLO Count	CSLOs Measured
MATH080 - Intermediate Algebra	3 3	
Identify different types of equations and solve them by applying the appropriate algebraic methods.		
Solve applications involving different types of functions and/or equations by applying the appropriate solving techniques.		
Graph equations, functions, and conics by applying different graphing techniques and transformations.		
MATH086 - Intermediate Algebra for Statistics and Liberal Arts	2 2	
Solve an application problem by constructing a mathematical model and interpret the results in context of the problem.		
Solve various types of equations by applying the appropriate method.		
MATH105 - Mathematics for Liberal Arts Students	2 2	
Recognize mathematical applications in everyday life and demonstrate appropriate, relevant problem-solving skills.		
Locate and utilize mathematical resources and technology while demonstrating numerical reasoning and literacy.		

Student Learning Outcomes	CSLO Count	CSLOs Measured
MATH140 - College Algebra	2 2	
Apply algebraic, numerical, and graphical processes to manipulate and analyze equations, inequalities, and functional relationships.		
Formulate and analyze mathematical models for a variety of real-world phenomena and use mathematical and technological tools to determine the veracity of the model.		
MATH150 - Calculus for Biological, Management and Social Sciences	3 3	
Apply appropriate problem-solving techniques, including critical thinking and analytical reasoning, to model real world problems in the fields of Business, Economics, Social Sciences and Biology.		
Formulate problems in numerical, graphical, verbal, and analytical settings and use differentiation and integration techniques of single- and multi-variable calculus to analyze those problems.		
Interpret and communicate mathematical results in a clear, accurate and professional manner.		
MATH160 - Trigonometry	3 3	
Analyze, sketch and apply the six trigonometric functions and polar equations using such principles as asymptotic, periodic, and reciprocal behavior, as well as plotting points generated by a table or by using technology.		
Model, evaluate and solve equations and real-world problems using inverse functions, Law of Sines, Law of Cosines, algebraic techniques, and technology.		
State, verify and apply trigonometric identities, including but not limited to reciprocal, co-functional and Pythagorean identities, sum and difference identities, double- and half-angle identities.		
MATH170 - Pre-Calculus Mathematics	2 2	
Use algebraic, numerical, and graphical processes to manipulate and analyze equations, inequalities, and functional relationships.		
Formulate and analyze mathematical models for a variety of real-world phenomenon and use mathematical and technological tools to determine the veracity of the model.		
MATH180 - Single Variable Calculus I	2 2	
Analyze functions and their graphs using limits, derivatives, definite and indefinite integrals.		
Apply basic definitions, properties and theorems of first semester Calculus to formulate elementary proofs and model and solve problems.		
MATH185 - Single Variable Calculus II	2 2	
Evaluate and approximate integrals using a variety of techniques and apply integration to solve problems involving area, volume, work, and differential equations.		
Represent functions using parametric equations, polar equations, and Taylor series and apply calculus techniques to these representations.		
MATH203 - Fundamental Concepts of Elementary Mathematics	3 3	
Analyze the structure and properties of rational and real number systems including their decimal representation and illustrate the use of a representation of these numbers including the number line model.		
Evaluate the equivalence of numeric algorithms and explain the advantages and disadvantages of equivalent algorithms.		

Student Learning Outcomes	CSLO Count	CSLOs Measured
Analyze multiple approaches to solving problems from elementary to advanced levels of mathematics, using concepts and tools from sets, logic, functions, number theory and patterns.		
MATH219 - Statistics and Probability	3 3	
Analyze the validity of statistical statements by evaluating the statistical methods applied on collected data.		
Represent data from a sample or population in an organized and visual manner.		
Interpret data represented in a chart or graph in context of the scenario.		
MATH280 - Intermediate Calculus	3 3	
State and apply basic definitions, properties and theorems of multivariable Calculus		
Apply vector operations in two and three dimensions and use vector methods to analyze plane and space curves, and curvilinear motion.		
Apply standard techniques of multivariable differentiation and integration to solve application problems		
MATH290 - Linear Algebra	4 4	
State and apply basic definitions, properties and theorems of linear algebra		
Perform operations on matrices in order to solve systems of linear equations, analyze linear transformations and apply matrix theory to model real-life situations		
Identify vector spaces, apply properties and utilize concepts of vector spaces.		
Compose clear and accurate proofs using the concepts of this course.		
MATH295 - Differential Equations	4 4	
Demonstrate the ability to communicate basic definitions, properties, and theorems of beginning differential equations.		
Apply various methods to solve the vast array of differential equations encountered in beginning differential equations.		
Demonstrate logical reasoning processes in identifying, modeling, and solving problems.		
Use the principles of beginning differential equations to apply problem-solving strategies to real-world situations.		
MATHN48 - Pre-Algebra/Algebra Basics	4 4	
Recognize and apply algebraic vocabulary and symbols.		
Perform algebraic operations on polynomials.		
Model real-world problems with appropriate mathematical notation and interpret the solutions in context of the problem.		
Solve linear equations and apply the relationship between solutions of linear of equations in two variables and their graphs.		
MATHN60 - Elementary Algebra	3 3	
Evaluate and perform algebraic operations on polynomial, rational and radical expressions.		
Solve word problems and equations involving linear, quadratic and rational expressions using appropriate algebraic techniques.		
Manipulate and analyze linear equations including finding slope, intercepts, graph and equation.		
MATHN98A - Precalculus Support Course	2 0	
Manipulate expressions and solve equations using concepts in algebra and trigonometry.		
Analyze functions graphically and algebraically.		
MATHN98B - Intermediate Algebra Support Lab	3 0	



Student Learning Outcomes	CSLO Count	CSLOs Measured
Simplify expression and solve equations as detailed in the Math 080 course content.		
Identify key concepts in application problems.		
Use key concepts to solve application problems as detailed in the Math 080 course content.		
MATHN98C - Statistics Support Course	2	0
Formulate questions that can be addressed with data, then organize, summarize, analyze, and apply mathematical reasoning to communicate results with and without technology.		
Construct, apply, and interpret mathematical models to represent and communicate relationships in quantitative data.		
MATH219H - Honors Statistics and Probability	3	3
Analyze the validity of statistical statements by evaluating the statistical methods applied on collected data.		
Represent data from a sample or population in an organized and visual manner.		
Interpret data represented in a chart or graph in context of the scenario.		
MATHN73L - Math Review	2	2
Classify and identify different problem types and select suitable problem solving techniques.		
Model and solve class appropriate applications in a clear, organized and professional manner.		

## Program Review Outcomes Assessment - PSLOs : Version by Sakamoto, Scott on 11/14/2019 14:43

Program Student Learning Outcomes	PSLO Count	PSLOs Measured
Mathematics*		
Mathematics	3	3

## Program Review Outcomes Assessment - Assessment of CSLOs and PSLOs : Version by Sakamoto, Scott on 11/14/2019

14:43

How does the program/service area systematically assess student learning outcomes and/or service area outcomes using specific and measurable performance criteria?

The SCC Math department uses embedded questions for SLO assessment. A Likert scale system is used where the top two or three scores generally represent successful completion of the assessment item. Data are gathered each semester, analyzed and reported prior to week 5 of the following semester. Recommendations are implemented as soon as possible following reports. Reports are also made available to faculty and others via the SCC public H-drive.

What is your assessment cycle, how are assessments carried out, and who is involved in the assessment process?

Each course has 2-4 SLOs and each SLO is assessed at least once every three years. Individual course coordinators are responsible for the SLO process. Embedded questions are used to gather CSLO data.

Upon review of course student learning outcome assessment data, give at least one specific example of:

1. A course student learning outcome which students have definitely met and why you think students were successful.
2. A course student learning outcome which students have definitely **not** met and why you think students were unsuccessful. What changes have you considered making?

1. A course student learning outcome which students have definitely met and why you think students were successful.

In Math 185, SLO 1 reads, "Evaluate and approximate integrals using a variety of techniques and apply integration to solve problems involving area, volume, work, and differential equations" and data were gathered in Summer and Fall 2017. For this SLO, a 4-point scale was used and scores of 2, 3 or 4 were considered successful. Eighty-four percent of students were successful and the SLO was definitely met. Math 185 is a challenging course, but the SCC Math department does its best to prepare students. Math 185 students are generally, hard workers, well-prepared and well-informed. Success in the college level STEM pathway courses is not unusual.

2. A course student learning outcome which students have definitely **not** met and why you think students were unsuccessful. What changes have you considered making?

In Math 140, SLO 2 reads, "Formulate and analyze mathematical models for a variety of real-world phenomenon and use mathematical and technological tools to determine the veracity of the model" and data were reported in the 2017/2018 academic year. Again, a 4-point scale was used with 2, 3 or 4 points considered successful. For this assessment, 57% of assessment items were scored as successful resulting in the SLO not being met. In this case, a rather broad SLO is in use. College Algebra requires a lot of knowledge from previous coursework and it is difficult for students to remember earlier algebra as well as learn more advanced concepts. Although, we do not have support courses for Math 140 at this time, we will be allowing Math 140 students to enroll in support courses for Math 080. Perhaps this will bridge some of that knowledge gap.

What changes has the program **already** made based on its assessment of course student learning outcomes? Give specific examples and describe how you know if the changes have increased success?

- The MSC is now non-credit (and thus free) and we hope this makes the MSC more accessible. We do not have the ability to determine the effects of this move yet since the change occurred in 2019.
  - When facilities, funds, etc. allow, we target specific courses with SI. When we look at SI data, it is noticeable that students who attend SI three or more times in a semester are more successful.
  - When SLO assessment was introduced, math coordinators used varying assessment tools.
- Although, there are still some inconsistencies, we have standardized embedded questions and Likert scale scoring. Simply viewing success rates for SLOs overtime could indicate the positive influences of these changes.
- In response to AB-705, we are introducing support courses and experimenting with delivery methods in an attempt to find the most effective model for SCC students.

Upon review of *program student learning outcome assessment data*, what patterns, trends, or anomalies did your program identify?

#### Mathematics PSLOs:

**PSLO1:** Create mathematical models of real world phenomena, apply those models to make predictions about the behavior of the phenomena, apply appropriate problem solving techniques, and critically evaluate the veracity of the obtained results.

**PSLO 2:** Clearly communicate their mathematical reasoning and problem solving skills using a variety of formats, diverse technologies, and appropriate mathematical vocabulary and notation.

**PSLO 3:** Integrate into educational and professional conduct a calm, confident, and ethical approach to mathematical reasoning and problem solving while taking personal responsibility for mathematical successes

The 2017/2018 data gathered from capstone classes (Math 290 and Math 295) illustrates that 85% of 106 students met standards for success on assessment items. This success gives evidence that students completing the math sequence at SCC have the ability to mathematically model, communicate, and problem solve. These are some of the main abilities outlined in PSLO 1, 2, and 3 for the Mathematics department.

## Curriculum and Program Management

### Program Review - Curriculum and Program Management : Version by Sakamoto, Scott on 11/14/2019 14:43

With **SCC's Mission Statement** in mind, explain how your program/service area meets the academic, developmental, and vocational needs of SCC's diverse student population?

The SCC Math department works hard to meet the needs of our students. We offer transfer level math courses for students in STEM pathways, and courses like Statistics and Liberal Arts Math to meet the needs of a broader population of students. To comply with AB-705, we no longer offer classes more than one level below transfer, hopefully resulting in more students successfully completing a transfer level math course. However, we know we must continue to offer Intermediate Algebra to help students meet some prerequisites. Furthermore, compliance with AB-705 may lead to some underprepared students and we are committed to offering support courses for these students. We are currently experimenting with different models trying to determine the most effective delivery method for SCC students. We also offer free services such as MSC and SI, as well as partnering with other departments (such as English), giving students many opportunities to stay on track. Our classes are offered both face-to-face and on-line/hybrid in order to further meet the needs of our students. Every curricular decision we make is intended to promote success.

Currently, the SCC Math department participates in Guided Pathways, aligning goals with the state chancellor's Vision of Success, STEM advisory, Senate and many more programs and committees. We have strong knowledge of what our students are doing, where they came from, where they are going, and how to help them succeed. Our goals are in line with the SCC Mission Statement.

Does your program/service area offer sufficient courses, workshops or other services, with sufficient frequency, at appropriate times, and through appropriate delivery modes to meet the major requirements, transfer goals, and general education, co-curricular, and elective needs of the student body? If not, list what changes would help accomplish this.

YES! Every semester we offer the Calculus sequence for STEM majors, College Algebra and Business Calculus for Business majors, and Statistics and Liberal Arts Math for Humanities etc. Our Math 105, 140, 171 (formerly 170), and 219 courses are transfer level options for students in other majors.

Every semester we have MSC for 46 hours per week (20 per week in summer and intersession) staffed by instructors, Instructional Assistants (IA), and student workers. We offer SI for specific courses and have begun to hold IA led workshops on a regular basis in the MSC. We even stagger summer MSC hours to meet the needs of all summer classes.

Every semester we offer face-to-face and hybrid classes and when multiple sections are offered, we spread them out to give access to as many students as possible.

We are beginning to offer math 203 (math for elementary school teachers) every semester to meet the needs of future teachers.

General education needs can be met through transfer level classes and our Math 080 (Intermediate Algebra) class. These are offered every semester.

Does your program/service area offer learning opportunities that extend beyond the traditional classroom experience?

Our Math department members have taken part in STEM mentorship for future teachers. This program allows students to shadow real teachers to learn more about teaching skills and non-instructional obligations, as opposed to content that is learned in class.

We hire student workers for the MSC, SI, and reception areas in the MSC and Math office suite. These workers gain valuable experience in communication skills, organizational skills, and problem solving.

The SCC Math department has also taken part in Student Success Seminars. These seminars were developed to give students a head start for the semester. The seminars were run a week or two before the semester began and teachers would create activities based on individual perceptions of what students needed to know going into a math class.

How do program/service area faculty and/or staff **review the processes** it uses to manage the curriculum and program, including the process of introducing new courses and/or workshops and services, the process of conducting quadrennial reviews for instruction, and the process of creating new programs and services?

All processes are essentially reviewed the same way. When a process is new, we create/implement and note potential improvements. Monthly department meetings include agenda items to assess and improve these processes. Educational trends and legislation also play a role in the review process. We work collaboratively and consult with other groups such as Counseling and the SAC Math department to keep our course offerings, services, and program moving in the right direction. New courses are developed based on need. For example, we have taught Math 219 (Statistics) for years. With the implementation of AB-705, we are experimenting with support courses and one model has support woven into the class. This required a new class, so we developed Math 220. We always thought MaSH should be a free service. The opportunity presented itself and we now have the MSC. Workshops have been created to support some common mathematical weaknesses and the MSC has been a great hosting venue. Quinquennial review is performed by course coordinators on Elumen with a pretty standard process. Although SI has been at SCC for several years, this service started as a grant (title III or V) and we currently search out funding sources on a yearly basis.

How do program/service area faculty and/or staff coordinate activities with other college programs and services, including the Library? How do program/service area faculty and/or staff maintain their knowledge of other programs and services offered at SCC? If applicable, what contact does the program/service area have with outside advisory groups?

Coordinating with other programs/service areas is done through communication. We have books on reserve in the Library, Learning Communities with English and Math, participation in Community Science Night, and several other partnerships.

As a large department, we have membership on most SCC and District committees. Monthly math department meetings include agenda items for committee reports.

The SCC mathematics public H-drive folder includes a list of SCC services with descriptions and contact information.

Upon consideration of the information you have presented in this section, what areas or issues will need attention from the program/service area in the next three years?

- SI will need more consistent funding and housing.
- Support course models must be analyzed to determine the most effective structure.
- Course offerings will be adjusted to ever changing student needs.

## Resources

### Program Review Resources - Facilities Exclusive to Program/Service Area : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Classrooms	Labs	Offices	Storerooms	Conference Rooms
12	2	14	3	2

### Program Review Resources - Facilities Shared with Other Programs/Service Areas : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Classrooms	Labs	Offices	Storerooms	Conference Rooms
4	1	0	0	1

### Program Review Resources - Specialized Equipment and Resources : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Equipment/Resource	Description
Work station computer (full-time)	Each full-time faculty member has a PC or Mac with email, internet, access to printing and copying.
Adjunct and staff computers	D-203 is specialized for adjunct faculty and SI leaders. The room and adjoining offices have PC access.
Manipulatives	Large collection of manipulatives for concrete mathematical demonstrations.
Class set of tablet PCs.	All math instructors have access to a class set of tablet PCs for in-class use. This set can be used for demonstrations, data gathering, etc.
Surface Pro.	Each full-time faculty member has a Surface Pro. These can be used outside of the classroom (for example video creation) and inside the classroom for lecture and activities.
D-116 foyer.	D-116 foyer with PC and printer access for instructors.

### Program Review Resources - Funding Sources : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Between 2016 and 2019, SI has used several funding sources.

Funding Source	Description
Equity	SI for math 080, 180, 185, 219
Basic Skills Initiative	SI for math 080 and 219

### Program Review Resources : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

How well do the facilities used by the program/service area meet its needs? Do facilities and equipment meet appropriate safety criteria?

GENERAL: Classroom space and layout, offices, and MSC space seem to meet our needs. Some classroom technology (for example document cameras) needs updating. Science building classrooms have had some water (leak) issues and D-building classrooms have had issues with temperature, insects, and functionality. Temperature issues have apparently been resolved and insect issues are dealt with as needed. We are in the process of making our D-building space more efficient. We have also been able to offer office space and PC access to part-time faculty in D-116, D-203 and the Science building.

SI: Supplemental Instruction has been a beneficial program. However, it has been a constant struggle to get adequate dedicated space for SI.

PART-TIME OFFICE HOURS: We began participation in a part-time faculty office hour pilot program in the 2018/2019 year. We are probably a bit short on equitable space if this program continues. However, we continue to have space for adjuncts in the D, Science, and Humanities buildings.

How sufficient are the program/service area's equipment, supplies, and materials? Does the program/service area have a budget and timeline for the purchase of needed equipment and supplies?

Small items are purchased by individual instructors or requested from the division office. Publishers are not providing desk copies as before and we have struggled to get books for all of our teachers. Larger items run through the SCC resource request process. We do not have a budget for the purchase of materials or supplies.

How well do technology resources (i.e., computers, software, media and presentation equipment) meet the needs of the program/service area?

All full-time faculty have computers and all classrooms are mediated. We house dozens of computers in the MSC and have several computers for part-time faculty and SI leaders scattered around the D and Science buildings. We have adequate access to technology, and most of us are making do with our technological resources, but could use more, updated resources. These needs go through the SCC resource request process. We have recently been funded for a class set of tablet PCs, TI smart view, Camtasia, and a printer.

At times, software is lost each year as IT re-images the classroom computers in preparation for new academic years. It would be beneficial if this process was reviewed so math and other departments do not lose important computer applications.

How well do technology resources (i.e., computers and software), training, and technical support meet the **administrative** needs of the program/service area?

Our needs are met, however sometimes faculty are forced to use technology based on the choice of IT and not the instructor. Some issues come up with Mac and PC compatibility. I see tech. support trying to rectify situations that come up in our department.

Training seems to be readily available for instructors in need.

How adequate is staff support (provided by administrative assistants, lab assistants, learning facilitators, and instructional assistants, and other classified staff) to meet the instructional and operational needs of the program/service area?

There are two Administrative Assistants to work with the entire Math and Sciences division. Considering the forecasted increases in STEM pathways, this does not appear to be sufficient for a growing field. These administrative assistants are already stretched beyond reason.

We have 114 hours of IA usage for our MSC and IA's are used from time to time by individual instructors. More hours would allow instructors to utilize IAs more, creating a more effective working environment.

We utilize student workers in the MSC and reception areas (MSC and the moth office suite). Unfortunately, we do not have sufficient coverage for the reception areas to monitor MSC usage and receive students entering the math office suite.

Does your program/service area receive any categorical (Basic Skills, Student Equity, SSSP, Strong Workforce Program) and/or grant funding? If so, what major activities or resources has the funding allowed for? What impact has this had on your program/service area (address both positive *and* negative impacts)? If the college were to sustain these activities, which are critical to your program/service area and what would be required to institutionalize them?

Supplemental Instruction for Math 080, 180, 185 and 219 are currently funded, although we just took a major hit to the funding. We have had SI for Math 160 and 170 (now 171) in the past as well. Basic Skills and Equity have both been a part of our SI funding model. There is empirical evidence that SI attendance increases overall success rates as well as closing some equity gaps. Supplemental instruction could become a critical service for underprepared students entering math classes under the umbrella of AB-705.

Upon consideration of the information you have presented in this section, what areas or issues will need attention from the program/service area in the next three years?

- Classroom technology updates.
- Supplemental Instruction: Housing, funding and staff recruitment.
- Sufficient support staff

## Human Resources

### Program Review Human Resources - Support Staff : Version by Sakamoto, Scott on 11/14/2019 14:43

Title of Position	Count	Full-time or Part-time	Months per Year	Funding Source
SI leader (Math 080, 180, 185, 219)	080(8), 180(6), 185(4), 219(2)	Part-time	8	BSI (080, 219), Equity (180, 185)
SI learning facilitator	1	Part-time	8	BSI/Equity
IA MaSH (now MSC)	7	Part-time	10	General funds
Student assistant (worker MaSH)	6	Part-time	8	General funds
Student worker (math office suite)	1	Part-time	8	General funds
Student worker (MaSH reception)	1	Part-time	8	Work study

### Program Review Human Resources : Version by Sakamoto, Scott on 11/14/2019 14:43

What are faculty, staff, and administrators doing to remain current in knowledge of learning theory, counseling and student development theory, maintenance and operations practices, instructional strategies, and content? In which professional organizations and conferences do faculty, staff, and administrators participate?

CURRENCY: Math personnel investigate, experiment and report to keep up to date with learning theory as it pertains to SCC students. Math members regularly meet with counselors to coordinate and apply counseling theory. Memberships in mathematical associations and conference attendance are general activities used to keep current on a broad range of educational theories. Locally, the Math department has members on many committees, task forces and groups. This participation and the above listed activities help us remain up to date on current trends ranging from SCC students to any student in the California Community College System.

MEMBERSHIPS: American Mathematical Association (AMA), American Mathematical Association of Two-Year Colleges (AMATYC), California Mathematics Council (CMC), National Council of Teachers of Mathematics (NCTM). There are other organizations full or part-time faculty are members of , but with over 50 instructors, the complete list would be large.

How do faculty, staff, and administrators participate in college-wide programs, shared governance bodies, and leadership activities? In what ways do faculty, staff, and administrators serve as resources for the community?

Math faculty members serve on most college and shared governance committees. The include, but are not limited to, Academic Senate, Facilities (Co-chair), Curriculum and Instruction (president), Planning and Institutional Effectiveness and Technology. The SCC Math department also takes part in DSPS advisory, STEM Advisory Group, Scholarship, OEI, Equity, and Guided Pathways. We have members on almost every committee and regularly try to fill new openings with our faculty.

Our MSC is a resource for anyone in need of mathematical assistance. We take part in Community Science Night, STEM Day, mentorship programs and other activities intended to support our college and community. Over the three-year period math faculty have also taken part in Student Success Seminars, Summer Bootcamps and workshops.

Are adequate numbers of qualified faculty, staff, and administrators available to teach and/or implement all components within a program/service area's offerings or services?

The SCC Math department seems to have adequate faculty for instruction and committee representation. However, we are down a few teachers (starting Fall 2019) and a few more for committee representation, instruction, and other activities would be beneficial. Support staff is adequate, but could be increased, especially Administrative Assistants for the Math and

Science division. Only two administrative assistants is a low number for a large division. The Math and Science division has on Dean that performs the duties of Dean of Math and Sciences as well as Athletic Director. One person performing the duties of two administrators is far from ideal.

Are adequate and appropriate mentoring and professional development opportunities available and do department faculty, staff, and administrators regularly utilize these opportunities?

There are adequate opportunities for professional development with ten Flex days full of activities. Training is offered when new programs or technologies are instituted. When math faculty see a need, we try to schedule development activities for our instructors or staff. When a faculty member does have questions, we have resources to get those questions answered.

Some professional development is off campus (conferences etc.) and we are not always offered financial support for these opportunities. It can be tough if the activity requires travel and/or lodging.

With varying ranges of experienced full-time faculty and administrators, mentorship seems innate.

Faculty and staff could take part in more professional development activities.

To what extent are adjunct faculty, part-time staff, and interim administrators knowledgeable about the program/service area's practices and standards? What opportunities are provided for adjunct faculty, part-time staff, and interim administrators to become engaged in program/service area activities and communication?

Flex week activities are made available to all faculty, staff and administrators. Monthly department meetings are attended by several adjunct faculty and minutes are made available to all faculty. Adjunct faculty are also given the opportunity to take part in committee (for example, SLO assessment, textbook and support course) work, training (distance education) and the MSC. Furthermore, adjunct faculty have recently taken part in a pilot office hour program.

Upon consideration of the information you have presented in this section, what areas or issues will need attention from the program/service area in the next three years?

- Full-time hiring to meet the needs of our students. As of Spring 2019, we are down from a high of 15 full-time faculty to 10 full-time faculty (11 starting Fall 2019).
- An Athletic Director to ease the burden of the current Dean of Math and Science.
- Funding for SI leaders and coordinator.
- Funding for professional development opportunities in response to AB-705.
- Funding for more IAs.

## Internal and External Communication

### Program Review Internal & External Communication : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

When were the program/service area's catalog entries last updated to ensure currency and accuracy?

Academic year 2018/2019

When was the program/service area's Annual Plan (formerly called DPP) last updated to ensure currency and accuracy?

Spring 2019 (for 2019/2020 academic year)

How does the program/service area keep its website comprehensive and current? Does the website contain the program/service area's mission? Does the website contain current contact information (telephone numbers, email addresses, and office hours and locations) for program/service area faculty and/or staff? Are program/service area outcomes posted? Are outcome assessment results posted?

The Math faculty make the decisions about updating/ maintaining the SCC Math department website. Individual faculty members make these adjustments as needed (usually in Fall). The Math department's mission statement is on the website along with contact information for full-time faculty. SLOs can be found, but assessment information is housed in the Office of Institutional Effectiveness.

How does the program/service area keep instructional faculty, counselors, advisors, and/or service area personnel informed about course offerings, trainings, workshops, and related practices?

INDIVIDUAL COMMUNICATION: Faculty, staff, counselors, and administrators discuss specific information when necessary. For example, the Co-chair in charge of staffing communicates with administrative assistants, counselors and administration about course offerings on a regular basis. Also, most full-time faculty are housed in one area making personal communication simple.

MEETINGS: The SCC Math department holds monthly meetings to keep faculty informed. Faculty also meet regularly with counselors and advisors to help create schedules that benefit as many students as possible.

E-COMMUNICATION: Email distribution lists are used to keep full and part-time faculty informed. Postings are also made on math department housed websites or folders. For example, the MSC website posts scheduled workshops and the SCC public H-drive has a collection of math course reference sheets and other course related information.

STUDENT COMMUNICATION: The SCC Math department uses these communication models to keep students informed. Furthermore, we have counselors visit classrooms, participate in learning communities, and maintain current knowledge of college wide services that would benefit our students.

How well do faculty and staff communicate about and coordinate the work of the program/service area?

Department meetings create an environment of collaboration. With course coordinators doing work for individual courses and chairs doing specific departmental duties, the work load is well dispersed among all faculty. Furthermore, all full-time faculty members take part in shared governance, advisory groups, and/or program coordination. Each member of the SCC Math department is doing their part both departmentally and college wide.

Upon consideration of the information you have presented in this section, what areas or issues will need attention from the program/service area in the next three years?

- The effects of AB-705 are being felt even before the official implementation date (Fall 2019). We will need to continue communication with faculty, counselors and other program members to determine the best path for the future of the math program.
- The SCC Math department needs to update some internal policies to accommodate legislation, delivery models, and scheduling.

## Planning Agenda

### Program Review Planning Agenda : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Actions for 2019-2022	Supporting Data	Resources Needed	Estimated Cost
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Actions for 2019-2022	Supporting Data	Resources Needed	Estimated Cost
Permanent facilities and institutionalized funding for supplemental instruction.	Data regularly shows significantly higher success rates for students attending 3 or more SI sessions in a semester.	Two classroom sized rooms and an office suite sized prep. space. SI leader salary plus benefits (approximately \$2000 per leader per semester for approximately 20 leaders). Approximately \$4000 for one SI facilitator and 3 LHE of release time for a faculty SI coordinator.	\$100,000 per academic year.
Continued experimentation with support course models (including no support) for transfer level courses in response to AB-705	The California Basic Skills progress tracker shows a sharp decline in transfer math completion rates as the number of levels below transfer (for initial course) increases. Support courses will help students who would have traditionally been placed in a non-transfer level course increase their potential of success in a transfer level course.	Release time or stipends for course development.	\$2,500 per semester.
Currently, the Math department is 4 full-time faculty short. We need to hire full-time faculty and a full-time MSC coordinator.	Currently, about 42% of Math courses are taught by full-time faculty. This percentage is well below the 75% college goal.	Full-time faculty salary and benefits.	\$360,000-\$520,000 per academic year (for 4 full-time instructors)

## Summary Report

### Program Review Summary Report - What is and is not working : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Briefly describe and explain what is working well in your program/service area.

The SCC Math department has done a good job in adjusting curriculum to comply with AB-705 and meet the needs of the SCC student population. The SCC math course schedule is efficient and we adapt offerings each semester as needed.

Math department members serve on almost all collegial governance committees and groups. During the past three years, Math department members have served as president of Curriculum and Instruction, chairperson on committees such as Facilities and Safety and Technology, as well as serving as officers for Academic Senate. Furthermore, we currently have members taking a lead role in Guided Pathways.

The Math Success Center (MSC), formerly MaSH, is a free service where students can work in a great environment and get help with any math activities. The MSC location consists of large common areas, smaller study areas, and even a small 1-2 person cubicle. Computers line the walls of two of the common rooms. The popularity of the MSC seems to grow on a yearly basis.

We offer supplemental instruction for Math 080, 180, 185, and 219. This has been a great service over the years and our faculty do a great job finding funding and space on a semester by semester basis.

Briefly describe and explain what is not working well or needs attention in your program/service area.

Mathematics is part of the Math and Sciences Division. As a whole, we are understaffed. The Math Department is down 4 full-time instructors. The support staff does a great job, but the headcount in the student worker, Instructional Assistant, and administrative assistant positions needs to grow. Furthermore, a Dean who serves as athletic director as well makes for scheduling conflicts. For example, during the full-time hiring process in 2018/2019, athletic director duties resulted in restricted availability for hiring committee Dean duties.

Although SI was listed in the previous section as working well, the semester by semester search for space and funding is not efficient. This valuable program needs permanent funding and space.

The SCC Math department is continuing to work hard to meet the needs of underprepared students. We always work diligently to help SCC math students achieve their goals.

The SCC Math department is working to improve the integrity of our Distance Education offerings.

### Program Review Summary Report - Resources : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

Facilities	Technology	Equipment	Personnel
SI SPACE: We do not have permanent space for SI. This goal has been on our plan since 2013/2014. Facilities have been hard to come by with many divisions competing for the same space.	SOFTWARE AND EQUIPMENT: Continued software and equipment updates to meet face-to-face and distance education needs. Technology goals have been part of our plan for years. We have not missed out on software, but we need to continue to plan for technology in our future.		IA: We have requested increased IA hours since 2008/2009. These increased hours will help efficiency in the MSC and classroom instruction. Finding sustained funding has been the main issue with achieving this goal.

Facilities	Technology	Equipment	Personnel
			SI: We have requested funding for SI leaders since 2013/2014. SI was originally funded with grants and later was funded through Equity and BSI. These funding sources serve many programs, resulting in cuts to the SI budget. We have not been able to find sustainable, consistent funding for SI.
			AD: We have been in support of an Athletic Director since 2014/2015. The large math and science division needs a dedicated dean, who does not also serve as athletic director. This position has regularly been ranked number one in recent resource request rankings.
			FULL-TIME FACULTY: This is a continuous request with growing course needs and retiring faculty. We have been under staffed for many years. We have not been able to replace all full-time faculty who have left.
			MSC RECEPTIONIST: We need a full-time MSC receptionist to monitor attendance, direct students, and help maintain the integrity of the MSC.

## Program Review Summary Report - Initiatives and Other Findings : Version by **Sakamoto, Scott** on **11/14/2019 14:43**

What campus-wide initiatives intersect with your program's activities, operations and/or plans? (Please provide a hyperlink and a list of initiatives)

GUIDED PATHWAYS: <https://sccollege.edu/CollegialGovernance/GuidedPathways/Pages/default.aspx> (<https://sccollege.edu/CollegialGovernance/GuidedPathways/Pages/default.aspx>)

ASSESSMENT: <https://sccollege.edu/StudentServices/slo/Pages/default.aspx> (<https://sccollege.edu/StudentServices/slo/Pages/default.aspx>)

AB-705 (state-wide): <https://ab705.org> (<https://ab705.org>)

DISTANCE EDUCATION: <https://www.sccollege.edu/distanceeducation/Pages/default.aspx> (<https://www.sccollege.edu/distanceeducation/Pages/default.aspx>)

OEL: <https://cvc.edu> (<https://cvc.edu>)

CALIFORNIA ACCELERATION PROJECT (CAP): <https://accelerationproject.org> (<https://accelerationproject.org>)

SEAP: <https://www.sccollege.edu/StudentServices/StudentEquitySuccess/Pages/default.aspx> (<https://www.sccollege.edu/StudentServices/StudentEquitySuccess/Pages/default.aspx>)

Summarize any other findings from your program/service area review and planning process that you would like to share with the college community.

We have worked diligently to adjust course offerings to meet the needs of an evolving student body. AB-705 has had a major impact on our educational system, and we have written new curriculum, adjusted course offerings, added new sections, experimented with support models, consulted with other departments (such as counseling), and partaken in numerous other activities to meet the needs of our students. AB-705 compliance has been a great challenge. The math faculty have been doing a great job making the necessary adjustments.

The MSC is now free and located in an area central to many math classrooms. However, the SI coordinator is forced to search for funding and space on a semester by semester basis.

Our math faculty and staff do a great job working with students and creating numerous learning opportunities, however, we are understaffed. We need to increase the full-time faculty headcount (we are down 3-4 members). Furthermore, we could use more support staff to maintain and improve our mathematics program.