Instructional Program Review 2018/19 (Comprehensive)

Mathematics

Created on: 08/21/2018 10:36:00 AM PST
Last Modified: 02/04/2019 07:11:26 PM PST

Table of Contents

General Information (Instructional Program Review 2018/19 (Comprehensive))

2018/19 Instructional Program Review

Program Review Data and Resources

Submission Information (REQUIRED)

Lead Writer - Phyllis Meckstroth

Liaison - Monica Romero

Department Chair - Phyllis Meckstroth, Ken Kuniyuki

Manager - Susan Topham

This is not a CTE

Faculty/staff (REQUIRED)

Number of T/TT faculty - 20

Number of Adjunct Faculty - 49

Number of sections taught by T/TT Faculty - 80

Percent of FTEF taught by T/TT Faculty - 46%

Number of Pro-Rata Faculty - 1 in Fall, 2 in Spring

Program Mission (REQUIRED)

Mission Statement: The Math Department of San Diego Mesa College seeks to cultivate a culture of mathematical excellence in an equity-minded forum that equips students for success in their future endeavors. We foster their curiosity and appreciation for math while empowering them to expand their abilities to think, communicate and participate effectively in the technological world of the 21st century. We aim to support the goals of all students whether pursuing degrees, acquiring workforce skills or learning for personal enrichment.

Program Overview (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Program Overview Section (See appendix)

Curriculum (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Curriculum Section (See appendix)

Form: "2018/19 Comprehensive Program Review Instructional Program Overview Section"

Created with : Taskstream
Participating Area: Mathematics

(REQUIRED) Program name

Mathematics

(REQUIRED) Program strengths

Discuss strengths of the program.

- The math department offers a wide range of math classes which fulfill the GE requirement for most degrees, prerequisite classes for many science, engineering and business classes and higher level math classes for those students who want to be math majors.
- The math department has faculty on many of the campus and district wide committees, including the district assessment committee, the district discipline committee, Basic skills and Guided Pathways.
- The math department has be instrumental in developing the Placement Assistant process used and Mesa
- The math department responses to the needs of the university by offering classes using sophisticated software that is used in STEM industry work upper division courses.

(REQUIRED) Program challenges

Discuss challenges to the program.

- Our biggest challenge that we have been working on this year and last is compliance with AS 705. This bill has required community colleges to change their placement assessment to eliminate a placement test and rely on the students' high school graduation date, their GPA and what their last math class that they completed. We must also maximize the probability that a student will pass a transfer level math and English class in their first year attending a community college. This is being interpreted by saying that all students should be placed directly into a transfer level math class. We are allowed to offer support to help the students pass the course. Many hours have been spent developing a new placement mechanism and developing support for the students. Any curriculum changes that we make must be agreed upon by the other two colleges in the district. The Placement assessment also has to be agreed on. The changes that we are making are new to us and we are not sure what will work and what will not work.
- Hiring adjuncts to cover all the math classes at both Mesa and for CCAP. The district needs to be actively recruiting and attracting a diverse pool of qualified faculty. They also need to make the onboard process less time consuming. Some classes are taught by substitutes for the first week or more while their instructor is being processed
- The current printer that is shared by the department is getting old and is down more and more. This causes stress for the faculty. They are not able to get ready for their classes on time We are not allowed to have our own printer, so we are dependent to the department printer to be usable.

(REQUIRED) External influences

Discuss external influences (Collegewide and beyond).

- The largest external influence for the department is the passage of AB 705. This bill requires us to implement a new placement system, eliminate many of our basic skills classes and create a support mechanism for many of our transfer level classes. We have designed a learning community for intermediate algebra with support using a beginning algebra refresher lab for the support part of the community.
- The California State University system has also had to change their prerequisites and curriculum. We will have to have our offerings align with them.
- Math of the other department in the college have prerequisites or advisories from the math department. They need advise on how to change their prerequisites so that they keep their articulation with the universities.
- Last year and the Fall 2018 semester we have been working with the Center for Urban Education (CUE). This work has involved attending meetings about equity, classroom observation and syllabi revisions.

(REQUIRED) Areas of Focus

Describe one or more areas that your department is focusing on. You will refer to this response in the Program Analysis Section.

- Develop classes with support
- Develop support for students not in the classes with support
- Help faculty adjust to this new environment by offering professional development.

The Following Questions are for CTE Programs ONLY.

Enter "not applicable" if your program is not CTE.

(REQUIRED) Describe how the program's industry partners (including advisory committee) assist with program improvement including curriculum advice, obtaining equipment, providing internships and finding or providing other funding (limit 500 characters) (P.N. 1.b.). Please upload Advisory Committee minutes from the last year here.

Enter "not applicable" if your program is not CTE.

No answer specified

(REQUIRED) Describe how your program connects to High Schools, Universities and Continuing Education, creating career pathways in your field. Include articulation, specific projects, collaboration with teachers/professors, etc. (limit 500 characters) (P.N. 3)

Enter "not applicable" if your program is not CTE.

No answer specified

Form: "2018/19 Comprehensive Program Review Instructional Curriculum Section"

Created with : Taskstream
Participating Area: Mathematics

(REQUIRED) Program Name

Mathematics

(REQUIRED) What degrees and certificates are offered?

We offer an ATD and an AA in Mathematics and an AA in Applied Mathematics. We do not offer any certificates.

(REQUIRED) How many of each degree and certificate have been earned in the past 4 years?

ADT in Mathematics - 49

AA in Mathematics - 29

AA in Applied Math - 5

(REQUIRED) If you have no (or very few) degrees/certificates, what other paths do you offer? (for example, GE, transfer)

Mathematics is the service department for all other degrees in that students wishing to obtain an AA degree or transfer to a four-year institution are required to complete some level of mathematical competency. Of the 6048 degrees awarded in the part 4 years, nearly 14% of them have been in STEM fields which contain several mathematics courses in their required curriculum. Similarly, 21% of the degrees were in business field which required additional mathematics and 45% were for transfer which requires at least one math course beyond intermediate algebra.

(REQUIRED) Have you developed any new courses in the past 4 years? Please give details.

- A new course that is been implemented in Fall 2018 is LCOM 96X which combines Math 96 (Intermediate Algebra) and Math 15B (Refresher for Beginning Algebra). With the passing of AB705, the math department has had to look at its curriculum and see how we can modify some our current courses so that time can be given to support students who would otherwise have difficulty in the course. In the Spring 2019 we will offer Math 104 with support and Math 116 with support.
- Starting in Fall 2019 we may offer Math 119 and Math 141 with support.
- An Honors Math 254 has bee approved and will be offered in Spring 2019

(REQUIRED) Have you made other curricular changes? (for example, renumbering, sequence change, co-reqs or pre-reqs)

- Because of the AB 704 we are changing the prerequisites /advisories for all classes that have a basic skills math or English course as an advisory or prerequisite.
- We have added distance education to Math 212 and will offer it as a hybrid course in Spring 2019
- We are offering one section of Math 150 with a teaching emphasis in Spring 2019

The Following Questions are for CTE Programs ONLY.

Enter "not applicable" if your program is not CTE.

_____

(REQUIRED) List any licensure and/or accreditation associated with your program.

Enter "not applicable" if your program is not CTE.

No answer specified

(REQUIRED) Indicate the program TOP codes for your AA, AS, COA and COPs.

Please find TOP Code Link in the Directions.

Enter "not applicable" if your program is not CTE.

No answer specified

(REQUIRED) Indicate the SOC codes and title associated with your program's AA, AS, COA and COPs.

Please find SOC Code Link in the Directions.

Enter "not applicable" if your program is not CTE

No answer specified

(REQUIRED) Select the sector associated with your program.

Link to sectors list: In process of being developed

- *No answer specified*

Form: "2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section"

Created with : Taskstream
Participating Area: Mathematics

(REQUIRED) Program name

Mathematics

(REQUIRED) We are halfway through our 6-year cycle. Is your department/program on target to complete CLO assessment by Spring 2022? Please attach your schedule for CLO assessment, with explanations as needed.

Refer back to Direction #3 on how to attach documents.

Currently we are on target to complete the CLO assessment by Spring 2022. We have divided our classes into 5 pathways. The pathways are:

Basic Skills: Math 38, 46, 92 and 96

Business / Biology: Math 116, 121 122

STEM: Math 104, 141, 150, 151, 245, 252, 254, 255 (not all classes are needed by everyone)

SLAM: Math 118, 119

Math Education: Math 210A, 210B, 212

Our Timeline is:

Fall 2016, Assess 92; Spring 2017 Assess 38, 46, 92, 96

Fall 2017, Discuss/ Do POLs for 38, 46, 92, 96; Spring 2018, Assess 116, 121, 133

Fall 2018. Discuss/ Do PLOs for 116, 121, 122; Spring 2019, Assess STEM

Fall 2019, Discuss/ Do PLOs for STEM; Spring 2020, Assess SLAM

Fall 2020, Discuss/ Do PLOs for SLAM; Spring 2021, Assess Math Education

Fall 2021, Discuss/ Do PLOs for Math Education; Spring 2022, Review/ Action Plan

(REQUIRED) Please list your PLOs.

1. Create a mathematical model for an applied problem
2. Use a model to solve an applied problem
3. Communicate in words the solution to an applied problem using correct units.

4. Identify answers that are extraneous or unreasonable within the context of the given problem

(REQUIRED) What progress have you made in your PLO assessment? Please attach your schedule, with explanations as needed.

Refer back to Direction #3 on how to attach documents.

We are on track with our PLO assessment. We have assessed the Basic Skills Pathway and will assess the Business/Biology Pathway this year.

Schedule:

Fall 2017: Assess PLOs for Basic Skills

Fall 2018: Assess PLOs for Business/Biology (will be done by Spring 2019), Math 116, 121,and 122

Fall 2019: Assess PLOs for Math Education, Math 210A and 210B and upper STEM, Math 245, 252, 254 and 255

Fall 2020 Assess PLOs for SLAM, Math 118 and 199

Fall 2021: Assess lower STEM PLOs, Math 104, 141, 150, 151

(REQUIRED) What have your completed assessments revealed about your courses or program?

We need more work on basic skills, but much of our future work will be driven by the State and AB 705. The number of Basic Skills classes will be greatly reduced. This can be seen already with the Math 38 and 46 classes. Because of the changes in our class offerings, we have to find ways to give students support in the lower STEM classes. For many of these students this is their first transfer-level college math class. We will have to add study skills to these classes which used to be taught in the basic skills classes. We will have to help the faculty give support to these students. We have found that doing activities and worksheets, rather than straight lecture, helps students. We will have to develop or find already published activities and worksheet for the faculty to use. These will also have to be duplicated for classroom use.

(REQUIRED) If issues or problems were identified, what is your plan for implementing change?

We need to implement the changes from the state regarding basic skills (AS 705). We will assess the STEM pathways and see how the changes affect these also.

(REQUIRED) Based on your assessments, have you identified resource needs?

- Budget
- Faculty

Please provide any other comments.

We need attentive administrative support, in particular the realization that we have a lot of needs in the face of changes at the state level. People need to listen to us and work with us. We need more faculty to help implement the changes.

Form: "2018/19 Comprehensive Program Review Instructional Program Analysis Section"

Created with : Taskstream
Participating Area: Mathematics

(REQUIRED) Program name

Mathematics

(REQUIRED) Using the data dashboards, discuss how students are doing in your program. Please refer to indicators of success, retention, persistence, etc.

- In the past 3 years the overall success rate has gone up from 60% to 63%. The retention rate has held constant at 84%
- The basic skills courses (Math 38 and 46)success rates have increased from 59% to 61%
- Math 92 and 96 success rates have increased by at least 5%. This might be due to having the students placed in the correct pathway.
- Math 150 has the lowest success rate of 56%. We are trying to find ways to bring this up.
- The Math 141, 150, 151, 252 success rate is 61%
- The math education courses have gone down from 86% to 80% with a retention rate of 90%
- We are not sure how the success and retention rates will be impacted by AB 705. So far this semester, many of the faculty who are teaching entry-level transfer classes have reported that they have two groups of students in each class, those that are doing well and those that are having difficulty with the class. This is also true for the Math 96X classes, those that have three extra hours of support.

(REQUIRED) How does your program help to prepare students for success beyond your classrooms?

- Math classes are prerequisites to other BSTEM(Business, Science, Technology, Enginering and Mathematics) and SLAM (Statistics Liberal Arts Math) classes
- Math classes help develop students critical thinking skills

(REQUIRED) Given your stated area(s) of focus in your program overview section, has your program introduced new or different actions that may have affected changes in these indicators? Please describe.

- Two important changes that have impacted our department are the new Placement Assistant and the decrease in the number of below transfer classes.With the new Placement model, students are all placed at a transfer level math course. We are still offering a few Math 38 and 46 classes, but no one will be placed into them. We are also offering Math 92, 96 and 96X. We are recommending that students take these classes but they are not required to do so.
- We are developing Math 96x (intermedaite algebra with support) and offering it Fall 2019. There are 6 sections which filled up very fast. We will be offering more next semester. This is a learning comminity class where the student will get credit in both Math 96 and Math 15A.

- We are developing Math 104X and 116X to be offered in Spring 2019. They are also learning comminities where we have the students take a refresher class with their main class.
- We hope to develop a Math 119X and possibly a Math 141X class to start in Fall 2019
- We want to develop support for all students who are not in the support classes but still need to brush up on some concepts.

(REQUIRED) Has your program introduced any new actions specifically focused on issues of equity? Please describe.

- The Math Department has worked with the Center for Urban Education for over a year now.
- Eight of the faculty went to an ESCALA Summer Institute.The ESCALA HSI Faculty Summer Institute is a four-day immersive workshop designed specifically for college instructors teaching in Hispanic-Serving Institutions (HSIs). During the four days, faculty will discuss findings from research on HSIs, conduct equity exercises using their course data and video, and work in disciplinary teams to solve the challenges of implementing best practices into their particular class setting. At the conclusion of the Institute, each faculty will have designed a datainformed project that analyzes the impact of a change they will make in their teaching or assessments

(REQUIRED) Describe the trends in enrollment for your program. What changes might you foresee in the next 2-3 years?

- In the last two years the math department has followed the overall campus in FTES numbers. Last year we were up 1% compared to down 3% of the campus and this year we were down 6% compared to down 5% of the campus
- The average WSCH/FTET for the last 3 years for the campus is 472 while the math department is 649.
- The fill rate for the campus is 82% while the math department is 98%
- The average class size for the campus is 27.8 and the math department is 41.5.
- We teach an average of 6795 students a semester over the past 3 years, which is 12% of theaverage total number of students a semester
- With the implementation of AB 705 and the changes it has required, we do not know how our enrollment will change. We have to stay flexable so that we will best serve our students.

(REQUIRED) Are there any data sets that are not already provided in the dashboards that you could use to inform your program?

No answer specified

(REQUIRED) In what ways can the college support your program in our effort to encourage major and career exploration early on in a student's college experience?

No answer specified

The Following Questions are for CTE Programs/Services ONLY.

Enter "not applicable" if your program/service is not CTE.

_____

(REQUIRED) For CTE programs ONLY: Provide specific labor market information showing: 1) Number of jobs available or projected in San Diego County 2) Number of other institutions offering the program 3) How many Mesa students completed the program in the last three years 4) The pay rates for those in the industry (limit 500 characters) (P.N.2.A)

Enter "not applicable" if your program is not CTE.

No answer specified

(REQUIRED) For CTE Services ONLY: How are CTE students identified and tracked for service? (limit 500 characters) (P.N.2.B)

Enter "not applicable" if your service is not CTE.

No answer specified

(REQUIRED) For CTE programs/services ONLY: Upload the report from Launchboard that includes at least three (3) of the following Strong Workforce metrics for your BASELINE year.

Please use the Cal-PASS Plus Launchboard Link available in the Directions.

Refer back to Direction #3 to #6 on how to attach documents.

Strong Workforce Program Metrics
a. Number of Enrollments
b. Number of students Who Got a Degree or Certificate
c. Number of Students Who Transferred
d. Percentage of Students Employed in Two Quarters After Exit
e. Percentage of Students Employed in Four Quarters After Exit
f. Median Earnings in Dollars Two Quarters After Exit
g. Percentage of Students Who Achieved a Job Closely Related to Field of Study
h. Percentage Change in Earrings
i. Percentage Who Attended a Living Wage.

Enter "not applicable" if your program/services is not CTE.

No answer specified

(REQUIRED) For CTE programs/services ONLY Upload the report from the CCCO Perkins site for the College Aggregate Core Indicator Information by 6 digit TOP Code.

Please use the Core Indicator Reports Link available in the Directions.

Refer back to Direction #3 to #6 on how to attach documents.

Enter "not applicable" if your program/service is not CTE.

No answer specified

Outcomes and Assessment (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section (See appendix)

Program Analysis (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Program Analysis Section (See appendix)

Program Goals (REQUIRED)

2018/2019

Goal

Goal	Mapping
1. Maximize the probability that students will pass a transfer-level math class within one year. AB705 has a Fall 2019 deadline for taking appropriate steps toward compliance. Recent changes in Mesa's placement process will make it possible for more students to enroll into a transfer-level math course. As a result, we expect to see and increase in the number of students in these courses. Many of these students may need additional support getting through the transfer-level course.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3
2. Promote student learning and achievement that leads to degrees, certificates, transfer, workforce training, and lifelong learning. a. We believe that our students will be best served by strengthening communication and collaboration within the department. Given the unprecedented changes in legislation, several recent hires	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 4.1, Strategic Goal 4.2

and several pending retirements (5-10 years), as well as the changes in our student demographic, we see this as a transitional period. We seek to optimize our department's assets, accept our differences, and strategize effectively for our current and future students. We recognize that it will take work to weave a stronger, more-integrated department that can dynamically address the range of our students' needs. b. Incorporating technology will be important for many of these paths, and diversity of pedagogic options for our students will be more important than ever.	
3. Develop support for students at all levels and modify/redesign curriculum. a. We need to develop support to students who are not in support classes but need to improve their basic math skills. This is for both the math department and other departments in the college. b. We need to develop support for the CAP program at the high schools.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 3.1, **Institutional Learning Outcomes 2016/17:** Critical Thinking
4. Enhance and expand the STEM culture and community at Mesa, equipping students for success and excellence in their future academics.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 2.1, Strategic Goal 3.1, **Institutional Learning Outcomes 2016/17:** Critical Thinking

Action Plans for Non CTE Programs (REQUIRED)

Actions

2018/2019

Goal

Goal: 1. Maximize the possibility that students will pass a transfer-level math class within one year.

Action: Decrease class caps for Support classes

Describe the actions needed to achieve this objective:	Class caps for non-transfer level course need to be reduced to 32 to increase the interaction between instructor and every student in the class. Currently with 46 students in a class the instructor does not have the opportunity to work with each student individually. Additionally, the amount of grading means that instructors are not able to make detailed comments on student work.
Who will be responsible for overseeing the completion of this objective:	department chair and dean
Provide a timeline for the actions:	Spring 2019 - Spring 2020
Describe the assessment plan you will use to know if the objective was achieved and effective:	Compare success rates of classes with lower caps to those with a cap of 46.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	Increase tenure faculty

Action: Develop support classes for Math 104, 116, and 119

Describe the actions needed to achieve this objective:	Develop Learning Community classes which combine a Math 15 refresher class with the class that needs support. Eventually these classes will be modified by possibly increasing the number units and rewriting the courses.
Who will be responsible for overseeing the completion of this objective:	Department chair
Provide a timeline for the actions:	Fall 2018 to start in Spring 2019: Math 104 and 116 Spring 2019 to start in Fall 2019: Math 119 and 141
Describe the assessment plan you will use to know if the objective was achieved and effective:	Math 104 and 116 will start in Spring 2019. We will compare the success rates for those classes compared to the classes in Fall 2018. Math 119 and 141 will start in Fall 2019. We will compare the success rates for those classes compared to the classes in Fall 2018 and Spring 2019.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	faculty to work on this change and monetary support for them Monetary support for a community of practice

Action: Institutionalize Mathletics

Describe the actions	Currently we have been offering Mathletics

needed to achieve this objective:	during summer and winter intersession. It has been sponsored for by HSI and Student Success and Equity. We would like to expand this program and institutionalize it.
Who will be responsible for overseeing the completion of this objective:	Department Chair
Provide a timeline for the actions:	Summer 2019 - Summer 2023
Describe the assessment plan you will use to know if the objective was achieved and effective:	The students would be followed through their math career and other STEM classes during their time at Mesa.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	Faculty - .6 release time for 3 people food, - $4400 for lunches and snacks

Goal: 2. Promote student learning and achievement that leads to degrees, certificates, transfer, workforce training, and lifelong learning.

a. We believe that our students will be best served by strengthening communication and collaboration within the department. Given the unprecedented changes in legislation, several recent hires and several pending retirements (5-10 years), as well as the changes in our student demographic, we see this as a transitional period. We seek to optimize our department's assets, accept our differences, and strategize effectively for our current and future students. We recognize that it will take work to weave a stronger, more-integrated department that can dynamically address the range of our students' needs.

b. Incorporating technology will be important for many of these paths, and diversity of pedagogic options for our students will be more important than ever.

Action: Develop support for all math students in any math class.

Describe the actions needed to achieve this objective:	We are going to develop or find videos that will supplement or review the material taught in the various math classes. We will also be developing activity books to use with the support classes or used as reference for the other non-support classes. This material can be used by the students alone or can be assigned by the instructor.
Who will be responsible for overseeing the completion of this objective:	Department chair
Provide a timeline for the actions:	This is a long term goal so it could be started now but may not be done for 5 years.
Describe the assessment plan you will use to know if the objective was achieved and effective:	We can look at use of the material, see if there is a before use/after use or look at the success of the students using the support verses those who do not use the support.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	Possible software, faculty to make the videos and review current videos and computer equipment to make videos.

▼ **Action:** Provide professional development for faculty teaching the entry-level transfer classes

Describe the actions needed to achieve this objective:	Many of our adjunct faculty have taught the basic skills courses for many years. Since we are greatly decreasing the number of basic skills, these faculty will need to teach other classes which they may feel uncomfortable teaching. The faculty who are currently teaching them are encountering students with different skill levels. Both these groups need professional development to do their best in the classroom.
Who will be responsible for overseeing the completion of this objective:	course coordinators and department chair
Provide a timeline for the actions:	Fall 2019 - Spring 2020
Describe the assessment plan you will use to know if the objective was achieved and effective:	Compare success current rates with success rates after the professional development.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	Faculty should receive compensation for providing professional development.

Goal: Develop support for students at all levels and modify/redesign curriculum

Action: Modify and/or redesign Math 116, 121 and 122

Describe the actions needed to achieve this objective:	Currently business and biology students need to take this sequence of classes. Some of the universities have redesigned these classes. We would like to see if there can be changes made in these courses to help improve student success.
Who will be responsible for overseeing the completion of this objective:	course coordinators and department chair
Provide a timeline for the actions:	Fall 2020 - Spring 2022
Describe the assessment plan you will use to know if the objective was achieved and effective:	Compare success rates of current classes with the revised ones.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	

Action: Redesign Math 104 and 141

Describe the actions	These two classes need to be redesigned to

needed to achieve this objective:	satisfy the needs of the students entering the class and the requirements for the next class.
Who will be responsible for overseeing the completion of this objective:	course coordinator, department chair
Provide a timeline for the actions:	Fall 2020
Describe the assessment plan you will use to know if the objective was achieved and effective:	Compare the success rates of current classes with the redesigned ones
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	tenured faculty

Action: Redesign Math 118

Describe the actions needed to achieve this objective:	Math 118 is for Liberal Arts students who wish to transfer. Currently it transfers to some of the CSU campuses. We would like to redesign this course or develop another course that would also transfer to the UC system.
Who will be responsible for overseeing the completion of this objective:	Faculty, department chair and dean
Provide a timeline for	Fall 2020

the actions:	
Describe the assessment plan you will use to know if the objective was achieved and effective:	Having the curriculum adopted by the state and articulated with the CSU and UC systems
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	Release time for course development and research.

Goal: . Enhance and expand the STEM culture and community at Mesa, equipping students for success and excellence in their future academics.

▾ **Action:** Coordinate scheduling of math courses with other STEM classes and other campuses

Describe the actions needed to achieve this objective:	The scheduler will have to contact the schedulers of the other STEM classes to make it easier for students to take the classes they need each semester. The scheduler should also be in contact with the math schedulers of the other campuses in the district to be sure that students have a wide variety of time they can take classes.
Who will be responsible for overseeing the	Scheduler and dean

completion of this objective:	
Provide a timeline for the actions:	On-going - This should be done each semester
Describe the assessment plan you will use to know if the objective was achieved and effective:	Students will be able to complete their math or science classes with less conflicts.
List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	

▾ **Action:** Increase the number of honors sections and honors contracts in Math 150, 151, 252, 254, 255 and 245.

Describe the actions needed to achieve this objective:	Develop generic honors contracts for these sections. Encourage faculty to develop honors sections for these classes
Who will be responsible for overseeing the completion of this objective:	course coordinators and department chair
Provide a timeline for the actions:	long-term goal
Describe the assessment plan you will use to know if the objective was achieved and effective:	The number of students who complete an honors class in math

List resources needed achieve this objective and associated costs (Supplies, Equipment, Computer Equipment, Travel & Conference, Software, Facilities, Classified Staff, Faculty, Other):	possible software

Project Plan for CTE Programs Only (REQUIRED)

Closing the Loop (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Closing the Loop (See appendix)

Form: "2018/19 Comprehensive Program Review Instructional Closing the Loop"

Created with : Taskstream
Participating Area: Mathematics

(REQUIRED) Program name

Mathematics

(REQUIRED) Which one(s) of the following were received in past year?

- Faculty
- Other: HSI STEM Title 3 and BSSOT

(REQUIRED) How have these resources benefited your program and your students?

- We received 3 new faculty members in Spring 2018. They have been helping us design new support classes and are helping organize the workshops for math students. This will help the students complete a transfer level math course in the first year at Mesa, one of the requirements of AB705.
- BSSOT(Basic Skills Outcomes and Transformaitons Grant) has sent faculty to CAP (California Accelerations Project), RP (Research and Planning) conference and AMATYC (American Mathematical Association for Two Year Colleges). It is also providing release time for some faculty. The release time has been used for developing the support classes for Math 96, Math 104 and Math 116. The conferences have given faculty resources to improve their classes.
- HSI STEM TITLE 3 has sent faculty to ESCALA and STATPREP and provided funds for mini grants too. It is also providing release time for faculty for facilitating Peer mentoring for calculus classes and our Mathletics program.

Request Forms

- **BARC & Facilities Requests**
- **Classified Position Request**
- **Faculty Position Request**

Reviewers

Liaison's Review

Form: Instructional Program Liaison's Review 2018/19 (Comprehensive)

Manager's Review

Form: Instructional Program Manager's Review 2018/19 (Comprehensive)

Appendix

A. **2018/19 Comprehensive Program Review Instructional Program Overview Section** (Form)
B. **2018/19 Comprehensive Program Review Instructional Curriculum Section** (Form)
C. **2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section** (Form)
D. **2018/19 Comprehensive Program Review Instructional Program Analysis Section** (Form)
E. **Fujistu-Lifebook-E554.pdf** (Adobe Acrobat Document)
F. **Crossvue quote.pdf** (Adobe Acrobat Document)
G. **computer quote.pdf** (Adobe Acrobat Document)
H. **the-geometers-s.pdf** (Adobe Acrobat Document)
I. **intendedu.pdf** (Adobe Acrobat Document)
J. **http___www.minitab.pdf** (Adobe Acrobat Document)
K. **2018/19 Comprehensive Program Review Instructional Closing the Loop** (Form)