Mathematics Department
AUP for Academic Year 2022-2023
October 2021

Describe Department/Unit

Connection to College Mission

The Mathematics Department at Cerro Coso Community College plays an important role in preparing students to achieve their educational goals. The department currently offers math courses from one level below transfer to transfer level as well as an online math degree. Beginning in the fall of 2019, the department implemented a plan to accelerate students through the math sequence by placing all entering math students into either a transfer-level College Algebra or for non-STEM majors, a Beginning Probability and Statistics course with a lab to provide Algebra remediation. The department's curriculum supports the mathematical needs of other disciplines and programs. The department's courses help students develop logical reasoning and problem solving skills which form a foundation for their careers and future study. The Mathematics Department at Cerro Coso Community College offers classes which support the requirement for the AA and AS degrees, vocational/technical programs, and transfer to the university. We have entered into agreements and developed equivalencies with the California State Universities (CSU) and University of California (UC) systems. When our students transfer to the CSU or UC system, credits they earn in the mathematics department are transferable. This is also an indication that these transfer students from Cerro Coso Community College will be successful in completing higher degrees. Courses in the math degree now are in alignment with C-ID descriptors to increase the options students have in transferring to other colleges. The Mathematics Department offers math courses at the Indian Wells Valley (IWV), Eastern Sierra College Center (ESCC), and Tehachapi Center as well as online. Our math courses are also offered at the Cal City and Tehachapi Correctional facilities.

In addition, Cerro Coso's math curriculum continues to be offered as dual enrollment courses at Tehachapi, Cal City and Boron High Schools. Currently, the department has six full-time faculty and several adjunct faculty to provide mathematics instruction to students in our broad geographic range.

Report on Improvements Made and Gaps Identified in the Prior Year

Student Equity

Actions Taken Last Year

Several instructors used zero cost or reduced costs textbooks to reduce costs for economically disadvantaged students.

Instructors provided testing accommodations for DSPS students.

Instructors provided out of class tutoring to all math students on a drop in basis through weekly scheduled office hours in the math lab or during their regularly scheduled office hours.

Gaps to be Addressed

Retention and Success gaps for DSPS students were -13 and -18 percentage points respectively.

Economically disadvantage students had a 9 percentage point lower success rate.

Prison success rates were 6 percentage points below the average over the last year.

African American and American Indian success rates were 21 and 27 percentage points lower respectively than the average success rates.

Success rates for students in the age bracket of 20 to 29 years old were about 10 percentage points lower than the average.

Outcomes Assessment: Loop-Back Improvements Made

Actions taken in the prior academic year

In MATH C055, the instructor updated to a new textbook which has a better approach to some of the tougher student learning outcomes- such as graphing problems.

One instructor started weekly check-in assignments via Canvas for their online courses. This helped the instructor build a connection with most of the online students. It also made the instructor aware of many of the ongoing challenges students face and allowed the instructor to tailor the teaching to maximize student's success. As an example the instructor had a focused discussion on graphing in the Algebra class because of information received in the weekly check ins.

Many instructors have begun the practice of uploading instructional videos into their Canvas course shells for their online sections.

The department continues to offer MATH C053 and MATH C055 courses every semester to provide prerequisite math skills for the transfer-level math courses.

Over the past year, Statistics instructors have modified their instruction in the lab portion of the course to focus on the remedial math skills specifically required for Statistics.

Outcomes Assessment: Results of Last Year's Assessments

Outcomes Assessment: Missed Targets

Outcomes Assessment: Schedule of This Year's Assessments

MATH C121 Honors Fall 2021 SLO 5 Only

MATH C152 Spring 2022

MATH C257 Spring 2022

Program Review

MATH AST Degree

Year of Last Program Review:

2021

Actions Taken in the Prior Year to Address Strategies:

Other than making some requested changes to the MATH C151 course outline of record for C-ID approval, no actions were taken in the last year. This is due to the goals being written just before the end of the academic year.

Strategies Still to be Addressed:

2 year strategies

Select additional electives for the program.

Obtain C-ID approval for all math courses in the program.

Make pathway clear so that students can graduate in 2 years.

5 year strategies

Identify where declared math majors are stopping out of the program.

Improve Online Math Instruction

Improve PLO Assessment Procedure

Last Year's Initiatives

Increase the number of students completing transfer-level math in one year.

Instructors did meet and shared ideas of the lab structure in MATH C121. In online sections of MATH C121, instructors over the past year, implemented teaching remedial topics at the beginning of each chapter that are specific to skills that will be needed to be successful with completing the problems of each chapter.

On site sections do a similar type of lab with just in time remediation of Algebra skills using lab activities and/ or statistical applications.

No new method of providing concurrent support for MATH C141 was discussed over the last year. Instead, the department elected to focus on creating a College Algebra for non-STEM majors which will have a concurrent remedial lab support built in as part of the class.

Math instructors continue to make available, outside of class support to all math students by conducting regular weekly math lab office hours for students to receive tutoring in a drop in as needed basis.

Offer College Algebra and Trigonometry at sites.

Although MATH C141 remains on the long-term schedule for the Tehachapi Center and the Mammoth and Bishop sites, there has not yet been a demand for Trigonometry at the sites.

Receive approval of a transfer-level course in the OEI Exchange

No additional progress has been made on this initiative over the last year.

Reminder of Initiatives for the Current Year

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Create a Transfer-Level College Algebra for Non-Stem Majors

Coordinate the MATH C121 Lab Among Instructors

Plan Initiatives for Next Year

Initiatives for Next Academic Year

Develop a MATH C110 Concurrent Support To Be Consistent Across All Sections

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Department members attend a conference on concurrent support strategies for transfer-level math courses.

Department members meet and/ or communicate with instructors from other colleges to inquire how they are providing concurrent support or just in time remediation for College Algebra.

Full-time faculty meet, discuss and agree upon the topics to be included in the support section of the course.

Early Observational Data, or "Lead" Measure(s):

The MATH C110 topic outline for the concurrent support is updated in the COR and brought through the CIC process.

The MATH C110 course gains approval from the state.

Does the department request help developing these instruments?

Yes

Institutional Performance Data, or "Lag" Measure(s):

Math C110 is added to the long-term schedule.

Retention and success rate data for MATH C110 are collected if the course is offered in fall of 2022 or spring of 2023.

Post class data is collected. Are students who take MATH C110 transferring? Are they taking a subsequent math course?

Person Responsible:

Math Chair and math faculty

Unit gap or institutional goals addressed:

It addresses a gap in student equity, It addresses a Student Equity and Achievement Plan goal

Goal 1 Maximize Student Success

Goal 3 Ensure student success

Achieve Accessibility Compliance for an Online Transfer-Level Math Course.

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Instructors evaluate their own courses for accessibility compliance. Instructors of online classes either work with the POCR review committee or sign a self evaluation accessibility checklist.

Early Observational Data, or "Lead" Measure(s):

1. Accessibility checklists filled out and signed by faculty

Does the department request help developing these instruments?

Yes

Institutional Performance Data, or "Lag" Measure(s):

A transfer-level math course becomes part of the exchange.

Person Responsible:

Math Chair and math faculty

Unit gap or institutional goals addressed:

It addresses a 2- or 5- year program review strategy, It addresses a gap in student equity

Addresses in part Math Program Review 5 year strategy of improving online math instruction.

Standardize the Concurrent Support for MATH C121 Across All Sections

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Full-time faculty meet in Fall of 2021 to discuss and agree upon a list of remedial topics to be covered in the lab portion of the class.

Early Observational Data, or "Lead" Measure(s):

A list of remedial topics to be included as part of the MATH C121 lab are added to the COR.

The updated course is brought through the CIC process.

Does the department request help developing these instruments?

No

Institutional Performance Data, or "Lag" Measure(s):

The concurrent support for MATH C121 is standardized across all sections.

Faculty round back to meet and discuss how the concurrent support is working.

Success rates and SLO performance data will guide future discussions moving forward.

Person Responsible:

Math Faculty

Unit gap or institutional goals addressed:

It addresses a gap in student equity, It addresses a Student Equity and Achievement Plan goal

Evaluate Resource Needs

Facilities

There are no facility needs at this time.

Information Technology

Graphing calculators

Marketing

There are no marketing needs for the department at this time.

Professional Development

The department does have a need for release time to collaborate on the structure of the lab for the new MATH C110 course. The department would like to send two or three faculty to a conference dealing with best practices for providing support in transfer-level courses or alternately, meet with faculty from other colleges who currently have a similar course in place to share ideas on how the lab portion of the class should be structured.

Other Needs

None at this time.

Staffing Requests

1000 Category - Certificated Positions

Mathematics

Location:

Justification:

No request for math faculty is being made at this time.

2000 Category - Classified Staff

None

Location:

Salary Grade:

Number of Months:

Number of Hours per Week:

Salary Amount:

Justification: