Source: IPR

Cycle: Instructional Program Review 2016-17

User Name: Lead Faculty, Mathematics

Response Types: All Responses Types

## 1 Executive Summary

0 Executive Summary

Summarize your program's strengths, opportunities, challenges, and action plans. This information will be presented to the Board of Trustees. [1000 word limit]

#### Response Detail

#### No Response Information to Display

#### **Narrative**

The math program continues to adapt to the needs of its students, both in terms of the skills they enter college with and the skills they need to leave with. Currently big changes are happing in the high schools that affect the skill sets that our students bring to Canada.

The math program continues its work to shorten the paths to transfer for both STEM and non STEM majors. This spring we offered 5 sections of the Path to Statistics and 2 sections of the Fast Track to Calculus.

There is a continuing need for a test proctoring center to support all of the college's online classes. This center could also be used for placement testing.

Studies have shown that low placement is a major factor in a student not completing a course of study. We have been working with the math departments at the other schools to reach agreements on placement.

## Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

#### 2 Program Context

1 Mission

Identify how your program aligns with the college's mission by stating which categories of courses you offer: Career Technical, Basic Skills, Transfer, and/or Lifelong Learning. If your program has a mission statement, you may include it here.

## **Response Detail**

No Response Information to Display

#### **Narrative**

Career Technical Basic Skills Transfer Lifelong Learning Mission statement:

The mission of the Cañada Mathematics department is to provide a foundation for a liberal arts education and for the study of the sciences. This is accomplished by providing students with a broad range of courses designed to develop basic skills in computation and quantitative reasoning, to meet the transfer requirements for colleges and universities, and to meet the needs of occupational training programs.

### Suggested Follow Ups

Date Suggested Follow Up

Source: IPR

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Response Types: All Responses Types

#### 2 Articulation

Are there changes in curriculum or degree requirements at high schools or 4-year institutions that may impact your program? If so, describe the changes and your efforts to accommodate them. If no changes have occurred, please write "no known changes".

#### **Response Detail**

No Response Information to Display

#### **Narrative**

There are several curricular changes that are taking place in California. The middle schools and high schools are changing their curriculum to meet Common Core, and the state academic senate is trying to standardize classes and CID descriptors. All of these changes will require us to modify our curriculum.

Last year the math department replaced math 242 with math 243 so that students would not have to take trigonometry as a prerequisite. Like math 242, math 243 has been approved for CSU and UC transfer. There are some individual programs that still need to approve it.

Research has shown that students are hurt by low placement. The math department continues to work on improving placement through the use of multiple measures (placement tests, high school grades, work at other schools, etc..)

#### Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

# 3 Community and Labor Needs

Are there changes in community needs, employment needs, technology, licensing, or accreditation that may affect your program?. If so, describe these changes and your efforts to accommodate them. If no changes have occurred, please write "no known changes". CTE programs: identify the dates of your most recent advisory group meeting and describe your advisory group?s recommendations for your program.

#### **Response Detail**

No Response Information to Display

#### **Narrative**

n/a

#### Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

# 3 Looking Back

# 4 Curricular Changes

List any significant changes that have occurred over the prior two years in your program's curricular offerings, scheduling, or mode of delivery. Explain the rationale for these changes.

Print Date: Wednesday, September 12, 2018

Source: IPR

Cycle: Instructional Program Review 2016-17

User Name: Lead Faculty, Mathematics

Response Types: All Responses Types

## **Response Detail**

No Response Information to Display

#### **Narrative**

Our accelerated tracks, the fast track to calculus and StatPath resulted in fewer students in Math 111, 112, 122, and 123 so last year the math department banked these classes. In addition math 140 and math 115 were also banked. These courses were rarely offered. Enrollments in the calculus sequence continue to grow and we are now able to offer all of the classes every semester. We used to offer math 253, 270, and 275 in alternate semesters. Productivity data shows that many of these classes have been over 100% enrolled in recent semesters.

## **Suggested Follow Ups**

Date Suggested Follow Up

No Suggested Follow Ups to Display

5.A. Progress Report - IPC Feedback

Provide your responses to all recommendations received in your last program review cycle.

#### Response Detail

No Response Information to Display

### **Narrative**

The placement test (CAI) has been delayed for at least one year. As a temporary solution we have agreed to use ALEKS PPL as the assessment. We have also reached district wide consensus on the use of high school transcripts for placement in classes below transfer level and are near consensus on classes above transfer level.

The retention and success for the online classes matches that of the traditional classes. Many online students take advantage of the STEM center and tutoring, however it would be nice if the campus had a dedicated testing center where students could have a quiet place to take tests.

We are reworking a plan for assessing the SLO's because we recently updated our course outlines. We need to come up with a plan to assess our PLOs as well. We have tried common assessments in some classes but most of our SLOs are assessed by the instructor teaching the class.

As co-chair of the ACES committee, Michael Hoffman is leading the campus-wide effort to focus on retention in classes particularly at the developmental level. A number of faculty from across disciplines as well as staff in student support services roles are working on projects to help retain our students and lead them to succeed.

## **Suggested Follow Ups**

Date Suggested Follow Up

No Suggested Follow Ups to Display

5.B. Progress Report - Prior Action Plans

Provide a summary of the progress you have made on the strategic action plans identified in your last program review.

Print Date: Wednesday, September 12, 2018

Source: IPR

Cycle: Instructional Program Review 2016-17

**User Name:** Lead Faculty, Mathematics

Response Types: All Responses Types

## **Response Detail**

No Response Information to Display

#### **Narrative**

The math department has participated in a number of professional development opportunities over the last year including participation in both campus-wide and statewide activities geared to-wards curriculum development and increasing student success.

Since 2013, Michael Hoffman has been involved with Reading Apprenticeship.

This past year Ray Lapuz and Po Tong were involved in California CAI (Common Assessment Initiative) and Multiple Measures Placements. Agreement on district wide new placement cut scores were reached. In addition, we also now have district wide consensus on the use of high school transcripts for the placement of students below transfer level.

As co-chair of the ACES committee, Michael Hoffman is leading the campus-wide effort to focus on retention in classes particularly at the developmental level. A number of faculty from across dis-ciplines as well as staff in student support services roles are working on projects to help retain our students and lead them to succeed. Michael also attended the year-long Leading From the Middle Academy to help facilitate this professional development.

The math department continues to work on its accelerated pathways. The math 190 group continues to meet weekly to discuss the Path to Statistics.

#### Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

## 6.A. Impact of Resource Allocations

Describe the impact to-date that new resources (equipment, facilities, research) requested in prior years' program reviews have had on your program. If measurable impacts on student success have been observed, be sure to describe these and include any documentation/evidence. If no resources have been recently requested, please write ?not applicable?.

#### **Response Detail**

No Response Information to Display

## **Narrative**

n/a

### Suggested Follow Ups

Date Suggested Follow Up

Source: IPR

Cycle: Instructional Program Review 2016-17

**User Name:** Lead Faculty, Mathematics

Response Types: All Responses Types

#### 6.B. Impact of Staffing Changes

Describe the impact on your program of any changes in staffing levels (for example, the addition, loss or reassignment of faculty/staff). If no changes have occurred, please write "not applicable".

#### Response Detail

No Response Information to Display

#### **Narrative**

Denise Hum left to go to Skyline and was replaced by Sumathi Shankar.

#### Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

## 4 Current State of the Program

#### 7 Enrollment Trends

Use the Productivity data packet to examine your enrollments (headcount, FTES, Load) and pattern of course offerings (Productivity by Courses by Semester). How have your enrollments changed? What changes could be implemented, including changes to course scheduling (times/days/duration/delivery mode/number of sections), marketing, and articulation of pathways that might improve these trends? NOTE: If other sources of data are used, please upload these documents or provide URLs.

#### Response Detail

No Response Information to Display

### **Narrative**

In 2015-16 our classes were 91% full. Transfer classes were 95% full in the fall and 98% full in the spring. There were a couple classes that were low (math 125 and 818), but these are driven by the programs they support. Many of our classes were over 100% enrolled.

# **Suggested Follow Ups**

Date Suggested Follow Up

Source: IPR

Cycle: Instructional Program Review 2016-17

**User Name:** Lead Faculty, Mathematics

Response Types: All Responses Types

## 8-A. Access & Completion

One of the goals of the College's Student Equity plan is to close the performance gaps for disproportionately impacted students. The Equity Supplement data packet indicates which groups are experiencing disproportionate impact in your program. Which gaps are most important for improving outcomes in your program? How can the college help you address these gaps? What changes could be made?

## **Response Detail**

No Response Information to Display

## **Narrative**

The top priority for our department in this area is Course Completion for Hispanic Students:

The Equity Supplement says that Hispanic students in our department complete courses at a rate of 52.5% which is 10% points below the program average of 62.9%. To close this gap so that Hispanic students had an equitable completion rate, we'd need 141 more Hispanic students to complete their math courses.

Three other groups experiencing disproportionate impact would require a fewer number of completions to eliminate the gaps in Course Completion: We'd need 13 more African American students, 5 more Pacific Islander students and 5 more students of Unreported Gender to close the equity gaps in course completion.

To improve course completion rates for these groups, research suggests that instructors can employ a set of strategies focused on retaining them. First, the principle of "proactive" retention can help address the tendency for students who face cultural and social barriers to asking for help. Thus, if instructors do not wait for students to ask for help but, seek out the student to directly engage them or connect them to resources can help reduce the anxiety or social stigma related to help-seeking behavior (Wood, Harris III). The department needs more time to meet and discuss this.

The campus could provide a designated time for each department to discuss this data, along with publicized resources on best practices.

## Suggested Follow Ups

## Date Suggested Follow Up

No Suggested Follow Ups to Display

## 8-B. Completion - Success Online

The college has a goal of improving success in online courses. Examine the "Course Success and Retention by DE vs Non DE" data table in the "Effectiveness: Success and Retention" data packet. What significant gaps do you see in success between online/hybrid and non-online courses? What changes could be made to reduce these gaps? If your program does not offer online/hybrid courses, please write "not applicable".

#### Response Detail

### No Response Information to Display

#### **Narrative**

When we look at all of our classes together success and retention rates are about 10% higher for classes that are not online over classes that are online, but when we compare the specific classes we teach online and their traditional counterparts the success and retention rates are the same.

In general, we continue to try and improve retention and success rates for all of our classes by getting students placed appropriately and providing support both before (Math Jam) and during the semester (tutoring).

#### Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

## 9.A. SLO Assessment - Compliance

Print Date: Wednesday, September 12, 2018 Page 6 of 7

Source: IPR

Cycle: Instructional Program Review 2016-17

**User Name:** Lead Faculty, Mathematics

Response Types: All Responses Types

Are all active courses being systematically assessed over a 3-year cycle? Describe the coordination of SLO assessment across sections and over time.

## **Response Detail**

No Response Information to Display

#### **Narrative**

Over the past two years nearly all of our SLO's were assessed. The math department recently completed a review of all course outlines and there were some changes to our SLO's. We are in the process of creating a schedule to assess all of our SLO's on a two year cycle as we did in prior years.

## Suggested Follow Ups

Date Suggested Follow Up

No Suggested Follow Ups to Display

## 9.B. SLO Assessment - Impact

Summarize the dialogue that has resulted from these course SLO assessments. What specific strategies have you implemented, or plan to implement, based upon the results of your SLO assessment? Cite specific examples.

## **Response Detail**

No Response Information to Display

## **Narrative**

The biggest changes have been made in the elementary and intermediate algebra sequences. Realizing that we needed more time to cover the key ideas we moved some topics into other classes. For example, the logarithm properties are needed by STEM majors, but not by the majority of students who take math 120, so we moved that topic to Pre-Calculus and the path to calculus where all of the STEM majors will see it.

## **Suggested Follow Ups**

Date Suggested Follow Up

No Suggested Follow Ups to Display

# 10 PLO Assessment

Describe your program's Program Learning Outcomes assessment plan. Summarize the major findings of your PLO assessments. What are some improvements that have been, or can be, implemented as a result of PLO assessment?

## **Response Detail**

No Response Information to Display

#### **Narrative**

We did not assess PLO's last year. This is something we need to take a look at.

# Suggested Follow Ups

Date Suggested Follow Up