

**FACULTY NEEDS ASSESSMENT APPLICATION**  
**Fall 2015**

Name of Person Submitting Request:		Ann Gibbons
Program or Service Area:		Mathematics
Division:		Mathematics, Business, and Computer Technology
Date of Last Program Efficacy:		Spring 2015
What rating was given?		Continuation
# of FT faculty 15	# of Adjuncts 48	Faculty Load: (77.31) 2014/15 (82.23) 2015/16.
Position Requested:		Tenure-Track Mathematics Instructor
Strategic Initiatives Addressed: (See Appendix A: <a href="http://tinyurl.com/l5oqoxm">http://tinyurl.com/l5oqoxm</a> )		<i>Student success: we are committed to helping students succeed in their educational and career goals</i>

Replacement  Growth

1. Provide a rationale for your request.

The Mathematics Department requests one full-time, tenure track faculty member due to increased course offerings and the continuation of increased demand for basic skills and non-transferable/degree applicable courses. It should be noted that although the department consists of 15 full time faculty members, one receives reassigned time as District Assembly President.

After years of slow growth, no growth or cutbacks, course offerings are continuing to increase. The FTES for 13-14 was increased to 1316 in 14-15 and increased again in 15-16. For the spring 2017 semester, 3 additional sections were added to fill the needs of students who were not able to enroll in a class this fall. Currently, the department is searching for new adjunct instructors as our current 48 adjunct faculty members are teaching the maximum allowable load. Eleven courses for spring 2017 remain unstaffed. In addition, faculty are needed to work with students in the new basic skills, non-credit Math Lab, the ALEKS Lab.

With a required load of 15 units per full-time instructor (per semester), our 15 full-time faculty meet their load by teaching less than 225 units, yet the department consistently offers courses exceeding 500 units per semester. Student demand for mathematics courses continue to increase especially at the basic skills level. It is not uncommon that courses fill immediately after registration opens. It must be mentioned that all students receiving degrees and certificates at SBVC must satisfy a mathematics requirement. Additionally, students receiving degrees in Science, Technology, Engineering and Mathematics (STEM) disciplines must complete courses up to at least the second semester of Calculus. Although the number of degrees awarded in Mathematics is relatively small, these numbers do not reflect required courses in mathematics for other STEM disciplines and the fact that students do transfer to four year institutions in STEM fields before securing degrees.

2. Indicate how the content of the latest Program Efficacy Report and current EMP data support this request. How is the request tied to program planning? (*Reference the page number(s) where the information can be found on Program Efficacy.*)

Data from the past five academic years show that the department is continuing to grow, but did experience declines of approximately 9.6% in 2012/13. During this five year period, FTES rose from 1178 to 1316. The decrease in 2012/13 is a reflection of the administrative request to decrease course offerings by 10%. Likewise, both FTEF and efficiency increased before a slight decrease in 2012/13. While success rates are improving, this improvement can be attributed to several variables including grant funded projects. Student retention has improved drastically from a low of 78% in 2010/11 to a high of 86% in 2013/14, and 2015/16. The number of sections offered did decrease over 2011/12 and 2012/13, however it has continually grown from 2013/14 up through 2015/16. We continue to improve in this area as evidence in an increase again as we are being given permission to expand. While the department has every intention to continue growing and increasing, this is becoming increasingly difficult without additional full-time faculty.

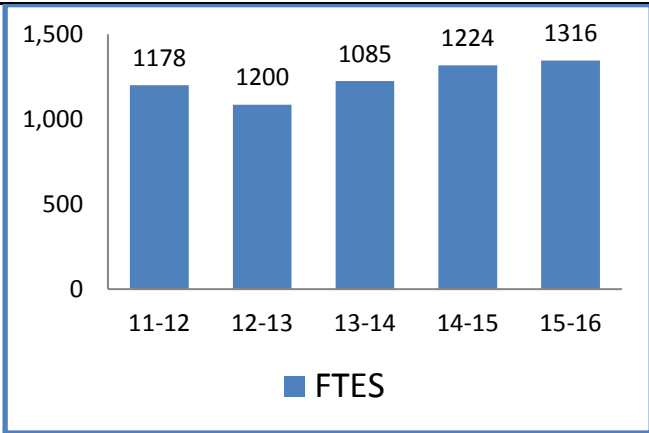
3. Provide updated or additional information you wish the committee to consider (*for example, regulatory information, compliance, updated efficiency, student success data, planning, etc.*).

It is important to note that mathematics is a very structured and sequential discipline. Student success in courses of this nature is dependent, in great part, upon consistent instruction. Poor instruction is counterproductive to student success. It is the vision and aim of the department to maintain high standards and strive for instructional consistency and excellence. The strength of the department is a direct result of its faculty. Presently, the department is at risk due to many new, untried adjunct instructors being hired each semester, many of whom are looking for full-time employment. In order to ensure continual success in meeting its instructional goals (that is, to serve the students and the community at large with consistency and excellence) the addition of a full time faculty members is vital.

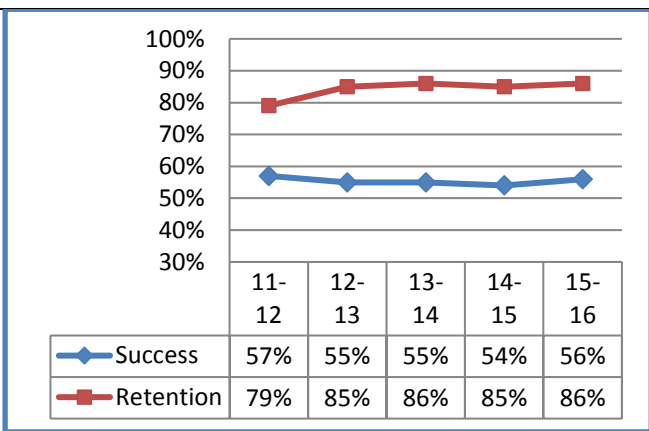
4. What are the consequences of not filling this position?

The present rate of growth for the department would not be able to continue. This includes not only FTES but also efficiency along with retention rates. Unlike adjunct faculty, full-time faculty members maintain office hours, serve on committees, and help shape the department and campus at large. Full time faculty are vital in developing, evaluating and assessing SLOs and in contributing their expertise to content review. These aspects best serve students, the department, and the college.

## MATH — 2015-2016



	10-11	11-12	12-13	13-14	14-15	15-16
Duplicated Enrollment	9,248	9,226	8,396	9,558	10,132	10,292
FTEF	66.87	67.27	64.26	71.22	77.31	82.23
WSCH per FTEF	528	536	507	516	511	491



### Description:

The Department offers courses in mathematics from arithmetic through differential equations and linear algebra. Students desiring basic skills and advanced mathematical methods find meaningful activities in the math program. Job opportunities in pure mathematics exist and even more in education, business, engineering, nursing, manufacturing, computer technology, and many other technical fields that rely on mathematics. Students planning to transfer to 4-year institutions should consult with a counselor regarding the process and requirements.

### Assessment:

Inaccurate data was provided for FTES for all years listed based on the FTES used in the 14-15 emp. Based on the increased enrollment numbers, it appears that FTES increased in 15-16. In the last five years, FTEF has increased from 67.27 to 82.23 (14.9%). Efficiency has fallen from 536 to 507 during the two years 11 – 13, increased in 13-14 then slightly fell in 14-15 to 511. In 15-16 it fell again to 491. Success rates have been holding steady running at 54% to 57% in the last five years. Retention rates rose in 12-13 and then have stayed steady as well at 85%. Sections decreased from 11 - 13 and have since increased a total of 26.8% in the last three years.

### Department Goals:

- The department wishes to continue growth, particularly in the number of sections offered and FTES
- The department wishes to continue growth in success and retention rates.
- The department wishes to improve access to the math courses students need for a degree and /or to transfer

### Challenges & Opportunities:

- Maintaining growth is difficult in scarcity. Finding available classrooms and computer labs for our classes can be difficult
- The department offers many courses, making content review arduous, especially with the expectations of maintaining and assessing student learning outcomes. Faculty is aware of course content and makes improvements.
- Efficiency is declining as faculty are proactive in dropping students for non attendance that would lead to failure.
- With the resources available through the AB86 grant, the department has started a noncredit lab with the opportunity to increase student success in the basic skills classes and to better prepare for the assessment exam.

## MATH — 2015-2016

	10-11	11-12	12-13	13-14	14-15	15-16
Sections	278	261	250	280	299	317
% of online enrollment	5%	12%	15%	14%	17%	21%
Degrees awarded*	12	7	20	18	14	
Certificates awarded*	N/A	N/A	N/A	N/A	N/A	N/A

TOP Code: 170100  
Award Source: [http://datamart.cccco.edu/Outcomes/Program\\_Awards.aspx](http://datamart.cccco.edu/Outcomes/Program_Awards.aspx)  
\* Data will be available in October 2016

**Action Plan:**

- Continue to provide pre-assessment opportunities throughout the year including offering workshops and testing on the feeder high school campuses.
- Continue to search for viable solutions for limited space; continue to offer online and hybrid courses, short term classes, and weekend classes.
- Continue to increase the number of upper division classes needed for student to attain a degree in Math and/or transfer to a 4-year school.
- Continue to support the new noncredit lab and the resources available for students to more quickly complete basic skills classes.