



Program Review

Golden West College

General Information

Important Information

Some people have expressed concerns about losing information after being logged off. There are some ways to avoid this.

- Please type your information into a Word document then paste the information here.
- At the bottom of the page, there is a **“Save Progress”** button. That button can be very useful. However, if you have already been logged out due to a time error, it won't actually save the information to your account. To check to see if you have been logged out, a better approach is to click the **“Previous”** button. This will take you to the previous page AND it will save what you have typed on the current page. If you had been logged off, you will be immediately notified.

Submitter's First Name:

Submitter's Last Name:

Submitter's Email:

Submitter's ID:

Submitter's Phone Number:

Type of review? *

- Administrative
- Instruction (Please note: Library and Counseling should submit individual Program Reviews: One for Instruction and one for Student Services)
- Student Services

Who is your Dean/Supervisor?

- Robyn Brammer
- Joseph Dowling
- Rick Hicks
- Janet Houlihan
- Danny Johnson
- Claudia Lee
- Alice Martanegara
- Carla Martinez
- Alex Miranda
- Kay Nguyen
- Meredith Randall
- Christina Ryan Rodriguez
- Matthew Valerius
- Tim Vu
- Chris Whiteside

Are you the Department Chair? *

- Yes
- No
- Not applicable

Who is your Vice President? *

- Lee, Claudia
- Houlihan, Janet
- Randall, Meredith

If you experience any technical difficulties completing this form, please contact [Damien Jordan](#).

Program Review Purpose

“Program review is the process through which constituencies (not only faculty) on campus take stock of their successes and shortcomings and seek to identify ways in which they can meet their goals more effectively. It is important to note here that the task of identifying evidence-based successful practices, and sharing these practices college-wide, is far more important than the negative perspective of trying to ferret out ineffective practices” –Academic Senate for California Community Colleges, 2009-

Data Driven Decision Making

- *Continual improvement*
- *Evaluation of program resource needs*
- *Fiscal stewardship and transparency*
- *Culture of evidence*

Program Review Reporting Cycle

1. Program Review will be conducted every two years beginning Fall semester 2021.
2. Department Chair/Originator will be given feedback at each step in the process.
3. Data provided by ORPIE, including statewide data for success given to departments the first week of October (October 8, 2021).
Originator: The originator owns this information (usually the Department Chair). The document is "locked" unless sent back.(October 22, 2021).
4. Department Chair: If the Department Chair did not submit the document, it will go to the Department Chair for general feedback (November 1, 2021).
5. Dean/Supervisor: The Dean/Supervisor provides feedback in a single text box. The Dean/Supervisor may send back to the Department Chair if something needs to be changed. (November 8, 2021).
6. IEC: IEC provides feedback for a technical review. (November 15, 2021).
7. CCD: provides feedback on curriculum or instruction section. (November 22, 2021).
8. Vice President: The identified VP provides feedback and can send the document back for edits (December 1, 2021).
9. Review: The Department Chair incorporates the feedback and resubmits. The Dean/Supervisor can send back if there is still something missing (January 31, 2022).
10. Submission: Once the originator (Department Chair) submits the document, it will be locked (February 11, 2022).
11. Committee Reviews: Requests for funding will be sent to committees for their review (February 11, 2022). Reviews by committees must be submitted to Planning and Budget by March 15, 2022.
12. Hiring Deadline: Approved requests for faculty positions will be provided by the Executive Team (February 25, 2022).
13. Hiring Deadline: Ratings for classified professional positions will be provided to the Executive Team by April 22, 2022.
14. Funding Deadline: Planning and Budget will make determinations on Categorically funded requests (April 22, 2022).
15. General Funds and Classified positions: Items funded through general funds and available Classified Professional Positions will be determined (October 7, 2022).

Important Update

Some people have expressed concerns about losing information after being logged off. There are some ways to avoid this.

1. Please type your information into a Word document and then past the information here.
 2. At the bottom of the page, there is a "**Save Progress**" button. That button can be very useful. However, if you have already been logged out due to a time error, it won't actually save the information to your account. To check to see if you have been logged out, a better approach is to click the "**Previous**" button. This will take you to the previous page AND it will save what you have typed on the current page. If you had been logged off, you will be immediately notified.
-

Program Information

Name of Program (Academic Programs should be listed per discipline)

* Mathematics

Please provide a brief description and any significant change in your program since the last program review cycle.

The Program Review for the GWC Math Department is centered on analyses from the AB 705 Institutional Report from 2017-2020, the 2021-22 Mathematics Program Review data (both supplied by ORPIE), collaborative discussion, relevant research, and data-informed action planning.

Since the last program review cycle, the mathematics department at GWC has experienced programmatic changes due to AB 705 and also transformed learning experiences and methods due to COVID-19. The changes and challenges of adapting to COVID-19 are unique within the math discipline, especially as it relates to seeing student work in real time.

AB 705 resulted in many enrollment and staffing changes with the goal of increasing persistence and success for students in math courses within their first year of enrollment at GWC. Changes are bulleted below.

- All students had access to G100 level transfer level math without taking a placement test.
- Increased number of students enrolling in Math G160 (statistics), Math G140 (business calculus), Math G115 (college algebra), and Math G100 (liberal arts math).
- Elimination of Math G010 and significant reduction in sections of Math G030, G040 and G080.
- Implementation of corequisite courses for Math G115 and G160.

What are your program's strengths?

* The strengths of the Math Department during the past two years are a result of focusing on AB 705 and a collaborative commitment to support students during this challenging time.

Successes include:

- Increased throughput in Math G100, Math G115, and Math G160.
- Removing the barrier of Math G030 for students' success in transfer-level math course.
- Increased number of AA and ADT degrees when comparing 2016-2021 (except for 2018-19).
- Students have diverse modalities to choose from for the type of math class they enroll in.
- Collaboration with the counseling department on the Early Alert Program for ongoing student-intervention in math courses.
- Formation of the AB 705 taskforce composed of faculty, administrators and classified staff from across campus.
- Development of an AB 705 data collection plan including quantitative and qualitative data being implemented in Fall 2021.
- Development and implementation of the dual enrollment statistics courses at HBUHSD.
- Expansion of embedded tutors to all math G115 courses and offered up through Calculus courses

These successes, amid the large challenges of COVID-19, were sometimes hard to observe in real time due to the heavy workload transitioning courses to remote learning and meeting the diverse needs of our students. These successes must be analyzed and continually addressed through data-informed work, innovation, and ongoing collaboration.

What are the challenges for your program? (If there are regulations or requirements for your program that require additional support, please note those here.)

* The current challenges that the math department faces are largely due to the combined impact of AB 705 and transitioning to remote learning almost at the same time during COVID-19. These challenges include:

- Increased non-throughput, particularly in Math G115 resulting in a barrier for unduplicated pupils working to be a STEM major, but without the necessary algebra skills.
- Ensuring students enroll in the correct math class – SLAM (Math G104, G160) versus STEM (Math G115).
- Addressing the cumulative math and study skill gaps students possess as a result of COVID-19.
- Addressing the gap between student success and performance versus student math knowledge, particularly in the STEM pathway.
- A lack of full-time faculty members, especially for Math G160, to satisfy the increased need of our students enrolling in this course.

INSTRUCTIONAL PROGRAMS

Do any of the courses in your program have a CTE TOP code?

- * Yes
 No

What type of awards does your program offer?

- Certificates
 AA/AS Degree
 Associate Degree for Transfer

Please provide the information for the number awards for Associate Degrees (CCI-approved), Associate Degrees for Transfer (State-approved), and Certificates of Achievement for this program. Please put N/A if an area is not applicable for your program.

	3-years ago	2-years ago	1-year ago
Certificates	* 0	* 0	* 0
Associate Degrees	* 81	* 34	* 43
Associate Degrees for Transfer	* 38	* 21	* 30

Please comment on the trends for the number of awards. You may then comment on any other relevant information provided by the Office of Research, Planning, and Institutional Effectiveness (ORPIE).

* The number of awards is outlined below. It is important to note that the data from 2018-19 as it relates to awards is inflated due to GWC going back, examining records, and optimizing the number of degrees and certificates awarded that year.

AA Degrees – 2016-17: 5, 2017-18: 5, 2018-19: 81, 2019-20: 34, 2020-21: 43

ADT Degrees - 2016-17: 16, 2017-18: 15, 2018-19: 38, 2019-20: 21, 2020-21: 30

Overall, since 2016-17, there has been an increase in both students obtaining AA degrees and ADTs in math with AA degrees increasing from 5 in 2016-17 to 43 in 2020-21. ADT degrees have increased with 16 awarded in 2016-17 to 30 in 2020-21. When it comes to success in all math courses at GWC, the largest disproportionately impacted subgroup is Hispanic/Latinx. For faculty data, the GWC math department maintained 10 full time faculty from 2016-17 with 8 as tenured and two as tenure-track faculty. The remaining faculty are part-time teaching; approximately 35% of the math courses at GWC.

For the below questions, please provide your FTES (full-time-equivalent students, resident) divided by your FTEF (full-time-equivalent faculty). Please submit your rates from four years ago, two years ago, and this year.

Please note: For programs with earned credit, please use FTESr/FTEF. For non-credit or the International Students Program, please use FTESm/FTEF.

FTES/FTEF ratio from 3 years ago

39

FTES/FTEF ratio from 2 years ago

36

FTES/FTEF ratio from last year

34

Outside of hiring new faculty (which should be included in your program goals, if needed), please discuss this trend and your plan for improving efficiency

The math department continues to implement, improve, and refine the following steps to ensure instructional and operational efficiency. These steps include:

- Offer a diverse blend of online, live online, and on campus courses to ensure the diverse needs of students are met.
- Creation of OER teams for Math G115 and Math G160 to develop, pilot, and refine OER content making it accessible for students in the 2022-23 academic year. These two courses generate the most FTES within our department, furthering our commitment to make mathematics courses more accessible for all students.
- Strategically placed embedded tutors to serve all course sections and students. This resulted in students having increased access to out of class support at various times each week.

Using the data received from Office of Research, Planning, and Institutional Effectiveness (ORPIE), what strategies has your department implemented over the past two years to be more inclusive of the distinct student populations you serve?

The math department has implemented the following strategies over the past two years to ensure inclusivity and support for the diverse populations of students served.

- Transformation of the learning experience for students to learn math remotely through COVID-19.
- Increased number of embedded tutors in 100 level math courses and above.
- Creation of Directed Learning Activities (DLAs) for Math G115 and G160 for the Academic Success Center.
- Formation of the AB 705 taskforce including: regular meetings, goal creation, analyses of institutional and statewide data, etc.
- Instructors who teach Math 30, "loopback" and form learning communities that continue through Math G115 the following semester.
- Collaboration with the counseling department to further enhance the Early Alert Program in math courses for struggling students.

Identify challenges and successes with respect to mode of delivery and/or technology. For instructional programs, address any differences between on-campus and distance education.

Successes

- Various methods for learning for students
- Increased through-put number and success rates
- Improved accessibility content for students with disabilities

Challenges

- Being able to see student work and knowledge in real time
- Addressing the gap between student success/performance and student knowledge (particularly for the STEM pathway).
- Checking for understanding from all students

Program Review Curriculum

After a thorough review of your courses, provided by CCI...

Do you have any courses that have not been updated to CCI within the required timeframe (6 or more years for a transfer-level-course; 3 or more years for a CTE course)?

- Yes
 No

For classes where the date of revision is more than 6 or more years for a transfer-level-course or 3 or more years for a CTE course, revisions for all such classes to CCI are required within the next two academic years.

- I understand

Do any of your SLOs use the exact wording as the course objectives?

(SLOs should be written to reflect and encompass the course objectives while not using the exact same language as the course objectives)

- Yes
 No

Are there courses in your Program (Degree/Certificate) that have not been successfully offered since the last Program Review? (Please note, classes that were cancelled, they were not successfully offered).

- Yes
 No

CCI will be providing a list of all courses not successfully offered within 2 years. These classes should be suspended or retired through CCI prior to the next Program Review. If there are extenuating circumstances, please provide those here.

Math 235: Applied Linear Algebra
 Math 282: Ordinary Differential Equations (Currently suspended). Should be retired by next program review.
 Math G10: Elementary Algebra, AB 705

Do you have active courses that are not part of a degree or certificate?

- Yes
- No

Please indicate the name of the course(s) and the name(s) of the certificate(s) or degree(s) you intend to connect it to when you submit your revision to CCI.

Course(s)	Certificate(s)	Degree(s)
see narrative below on why		

Once we finalize the above, we will make multiple options available for faculty to complete.

How are you using your Program SAOs/SLOs to improve your program outcomes? (If you are not actively using SAOs/SLOs to improve program outcomes, discuss how you plan to do so in this coming Program Review Cycle.)

Department regularly assess course SLOs. Data found is reported, used to improve instructor teaching methods, and is a driving force to improve and/or create outlets to reach students in need, close equity gaps, and improve student success.

Please note for the above response to "Please indicate the name of the course(s) and the name(s) of the certificate(s) or degree(s) you intend to connect it to when you submit your revision to CCI"

The active mathematics courses not associated with a degree/certificate (Math G10, G091, G092, G096) tentatively do not have the ability to be attached to any degree/certificate. The primary reasons can be attributed to the results of AB705. In conjunction with Ab705 data, Math G10 is 2 levels below transfer and negatively affects the student's ability to complete transfer-level mathematics within 3 semesters. Math G091, G092, and G096 (1 level below transfer courses) were courses created as support corequisites for Math G115, G120, and G160, respectively.

Program Review Goals and Requests for Funding

Requests – If you are requesting any of the following, they **MUST** be addressed within your Department goals.

- Faculty
- Equipment, Facilities, Technology
- Support Staff

(When you click that you need any of the above (Faculty, Equipment, Facilities, Technology or Support Staff) you will be provided the appropriate form on subsequent pages of this document)

Vision 2030 Goals Legend

1. **Enrollment:** GWC will increase credit and noncredit enrollment while providing efficient academic programs and student services.
2. **Equity and Success:** GWC will support, enhance, and develop equity-minded services and academic programs that lead to student success.
3. **Completion:** GWC will ensure students' timely completion of degrees and certificates by providing high quality academic programs and student services.
4. **Workforce Preparation:** GWC will support student success by developing and offering academic programs and student services that maximize career opportunities.
5. **Facilities:** GWC will provide flexible, accessible, and sustainable learning environments that support the success of students, faculty, staff, and communities.
6. **Professional Development:** GWC will support the success of all employees by providing professional development opportunities that focus on the achievement of College Goals.
7. **Communication:** GWC will effectively communicate and collaborate within the College and its communities.

Goals from Previous Program Review Cycle

Please refer back to the goals from your previous Program Review cycle and summarize all outcomes for each goal.

Summary and Outcomes of Previous Goals (from the last Program Review), including resource requests and if they were funded or not.

The last program review occurred in 2018-19. During the last program review, the math department had a 16.9% gap in success as compared to the average from the college. In 2020-21, the average success rate for the math department was 69.2% and the college average is 75.2%. One can see that this gap has closed to 6% in 2020-21 when comparing the math department with the college average. The math department is very proud of this growth, reducing the success gap by over 10% in just two challenging years. This is largely due to the implementation of AB 705 with a focus on innovation, meeting the diverse needs of learners, and DI students.

In the last program review, the department's goals included:

- Start offering online courses in Math G115 and Math G120
- Complying with AB 705 with the implementation of corequisite support courses
- Starting to offer dual enrollment at HBUHSD
- Enhance the math department's collaboration with cross sectional teams on campus and in the community.

The math department has met each of the predetermined goals within the last two years while increasing success rates during a global pandemic. Due to COVID-19, all math courses transitioned to online and/or remote learning. For AB 705, the department not only implemented coreqs, but continues to refine their offerings and strategic decisions in collaboration with the AB 705 taskforce. Dual enrollment is currently in its 3rd year of implementation and more diverse math courses are being planned for the future. Additionally, the success rates of the dual enrollment courses are above 80%, exceeding the college average. Finally, the math

department continues to engage in cross sectional collaboration efforts and work throughout campus including: AB 705 Taskforce, Academic Success Center intervention collaboration, tutoring, campus events, etc.

Goals for Current Program Review Cycle

Current goals should be connected to Vision 2030.

Goal 1 (Required)

Description of Program's Goal

The GWC Math department will innovatively redesign the math student experience in all levels of math and engineering classes based on the takeaways of 2020-21.

COVID-19 and AB 705 essentially beginning at the same time and sustaining since the last program review, all faculty in all disciplines have had to redesign the students learning experience. The GWC math department remains committed to implementing cost-free, equitable and diverse courses for all levels of math courses. This work will require instructional innovation, collaboration, and aligning interventions and supports to student need.

What actions will the program take to accomplish this goal?

- Innovatively redesign the student experience including flipped classroom, mastery learning, and other pedagogical techniques for on ground, remote, and dual enrollment courses.
- Expand the OER content, curriculum, and canvas shells to AB 705 math courses at GWC.
- Offer more classes with OER material, to make our department more equitable giving all students access to the curriculum in real time.
- Develop OER material to offer pilot classes with OER for Math G115 (College Algebra) and Math G160 (Introduction to Statistics).
- Further expand the math dual enrollment courses offered at partnering high schools.
- Develop an Engineering ADT at GWC.
- Further enhance and improve online instruction and the learning experience for GWC math students.

What metric will you use to measure your goal?

- Enrollment and success rates within classes of innovations (pilots of new pedagogy)
- Enrollment and success rates overall and in DI groups for OER versus non-OER courses
- Enrollment and success rates of dual enrollment courses

Which of the College's missions and goals does this goal support? (Vision 2030)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

Requests: What do you need to accomplish this goal? (Mark any or all that apply)

Please note: Indicating one of the following will create a form to appear on a subsequent page.

- Faculty
- Facilities
- Technology
- Equipment
- Professional Development (funding request)
- Support Staff (permanent classified)
- None of the above

Goal 2 (Required)

Description of Program's Goal

The GWC Math department will collaboratively solve the GWC STEM pathway challenges related to math courses including: enrollment, persistence, and success for disproportionately impacted students.

The Because all California community colleges cannot require students to take placement tests by state law AB 705, GWC Math department and Counseling Department together have created MAP (My Academic Plan) and Guided Pathways. This helps students in the process of completing self-placement for Math and English based on students' high school coursework, high school grades, and/or high school GPA. Although this process exists for the last three years, less than 50% of all new students engage in the MAP. Guided pathways will provide a clear, efficient, path for students to complete their math courses and degree/certificates. The GWC Math department would like to strengthen the STEM pathway, so it will provide all students with accurate and recommended course sequences that help students choose appropriate courses and help students register for correct Math course.

What actions will the program take to accomplish this goal?

- Analyze data to look for where the largest gaps exist, and for which disproportionately impacted subgroup.
- Identify effective supports and interventions for disproportionately impacted students in math courses.
- Further collaborate with the Academic Success Center to align intervention with each student's math need.

- Examine and implement best practices from other colleges as it relates to Guided Pathways.
- Collaborate with the counseling department to support students in enrolling in the correct math course for their major and goals.
- Create a self-assessment to occur both within the MAP process and within each math course to ensure students are choosing the correct math class.
- Create and implement a business statistics course

What metric will you use to measure your goal?

- * The GWC Math department will
 - Examine success and persistence rates for DI group students.
 - Hold focus groups with students who have passed and not/passed transfer-level math courses to diagnose barriers.
 - Compare the success rate of students who follow the guided pathways before and after the modification, overall and by subgroup.
 - Analyze all self placement tools and determine reasons for students enrolling in the wrong math courses.

Which of the College's missions and goals does this goal support? (Vision 2030)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

Requests: What do you need to accomplish this goal? (Mark any or all that apply)

- Faculty
- Facilities
- Technology
- Equipment
- Professional Development (funding request)
- Support Staff (permanent classified)
- None of the above

Goal 3 (Required)

Description of Program's Goal

- * The GWC Math department will strategically enhance the ecosystem of support focused on students' success across all levels of math courses. This ecosystem includes: academic success center, embedded tutoring, early alert program, stem center, etc.

What actions will the program take to accomplish this goal?

- * All math course coordinators within the math department will actively engage with ASC tutors to provide training, collaboration, and support as it relates to meeting the needs of students, they are a coordinator for.
 - Align STEM center offerings to student majors, interests, etc. This will best connect students with industry professionals to promote access and mentorship.
 - Work collaboratively with the ASC staff to align intervention at the ASC with student needs and learning gaps.
 - Create and implement a week before "Refresh" workshop series to support students with foundational skills before the semester starts in math courses.

What metric will you use to measure your goal?

- * Quantitative AB 705 data overall and subgroup
 - Student success data for courses with and without an embedded tutor
 - Academic Success Center utilization data versus course success data

Which of the College's missions and goals does this goal support? (Vision 2030)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

Requests: What do you need to accomplish this goal? (Mark any or all that apply)

- Faculty
- Facilities
- Technology
- Equipment
- Professional Development (funding request)
- Support Staff (permanent classified)

None of the above

Goal 4 (Optional)

Description of Department's Goal

OTHER INFORMATION

What additional information would you like to share about your program?

Optional file upload (if desired)

Optional file upload (if desired)



Program Review

Academic Senate
Faculty Request

Faculty Hiring Criteria:

The primary sources of information for ranking/rating program/department needs are:

- Faculty Request Form
- Program Review Reports
- Program Vitality Reports (PVR) if applicable
- Data tables summarizing key program measures

All data listed will be provided by the Office of Research, Planning and Institutional Effectiveness (ORPIE).

NOTE: All analysis of data is trend over the past 4 to 6 years (3 PR cycles = 1 SP cycle)

PROGRAM NAME & CONTACT

Program Review Unit/Department:

Mathematics

How many faculty requests would you like to submit?

- 0
- 1
- 2
- 3
- 4

First Faculty Request - Position Information

Position title and area of specialization (if applicable).

Full-time Mathematics fac

Please post your job description (or upload below)

If desired, please upload your job description Faculty Job Announcement Mathematics 102121.docx

Program Classification (Check all that apply).

- Instructor (Transfer-level classes)
- Instructor (CTE classes)
- Instructor (ELL/ESL or Non-Credit)
- Counselor
- Librarian
- Other

Does this faculty request meet the criteria for **Extenuating Circumstances** beyond the department/program control since the last 2 PR cycles? (Check all that apply and describe or leave all blank if none apply)

- Untimely death or loss of faculty member due to health conditions
- Sudden unexpected retirement or resignation
- Failed Search since last PR cycle (i.e., the position was approved by the executive but not filled for any reason).
- Loss of Tenure-track faculty
- Legal/Mandatory requirements

Please describe what you checked above.

Respond fully to each of the following two prompts. Your responses to the listed criteria and data parameters are the basis from which Senators apply the criteria to determine the rating/ranking of this request. Be as specific as possible in your responses.

PROGRAM/DEPARTMENT NEEDS (1 – 10 points)

- 1 - 4 points: Little or no contribution or impact
- 5 - 7 points: Some contribution or impact
- 8 - 10 points: Significant contribution or impact

How does this request for a faculty position meet the following criteria?

Important considerations in this prioritization process are conditions unique to the program/department which support the need for additional full-time faculty, such as: (Check all that apply and describe)

- Programs/departments with no or few full-time faculty to teach high demand area or for maintaining on-going (sequential) majors or certificates.
- Programs/departments with no or few full-time faculty

- Negative impact created by the loss of full-time faculty due to retirement or non-replacement of full-time positions.
- There is not sufficient full-time faculty to develop and maintain current curriculum for the program/department.
- The program/department cannot maintain a stable core of FT to PT ratio to provide a quality program or program growth.
- There are substantial problems of coordination/supervision of the program's/department's PT faculty.
(There are not enough FT faculty to coordinate, train, and supervise the PT faculty.)
- There is difficulty in finding and keeping qualified PT faculty.
- Relevant, necessary courses are not taught or are cancelled because of the absence of qualified full or part-time faculty.
- New developments and/or trends in the service area that would influence a determination of need for the position.
- Supervision is required to reduce health and safety hazards.
- Preparation for careers/employment in fields with strong current and future prospects.

Please describe what you checked above.

Due to the AB705 mandate, there was an increase in the demand and enrollment for Liberal Arts Mathematics, College Algebra, and Statistics courses starting in Fall 2018. These courses continue to be the primary FTES generating math courses. Upon completing these courses, many students continue to enroll in higher-level math courses as we notice an increase in enrollment in our Business Calculus and Calculus sequence courses (Calc 1 and 2). Further, Business Calculus has grown from 2 sections in 2015 to 4 sections in 2017, with close to 100% fill rate for all offered sections. The current PT faculty for Business Calculus is a retired GWC professor emeritus and will soon be retiring a 2nd time.

The department is seeking to develop a course in Business Statistics. Using faculty-developed Canvas course shells, we will expand our OER course offerings in College Algebra and Statistics. To best bridge our students' learning gaps, we will continue to offer co-requisite courses, creative hybrid/online instructional modalities, and more effective "just-in-time" intervention programs and student support services in partnership with our Academic Success Center. A new faculty will bring new energy and innovative ideas to initiate effective best practices.

With an additional full-time faculty, the department will be able to build on the guided pathways initiative and improve the transfer rate to Universities with an AA/ADT in various programs. The department will be able to expand our Liberal Arts math, College Algebra, and Statistics offerings as part of the dual enrolment agreements and a full-time faculty will be beneficial in the coordination of these efforts with our feeder high schools.

The STEM and BSTEM pathways have increased the number of sections of College Algebra and Statistics taught. Maintaining program curriculum and standards has been a challenge due to the additional number of PT faculty hired to teach these courses, several of which are LCF (6 LHE). To ensure the integrity and quality of the courses, a new full-time faculty will be assigned to help coordinate the curriculum, student learning outcomes, and mentorship of part-time faculty. In addition, a new faculty will assist department colleagues in developing innovative program modules that address the learning gaps of incoming students post Covid.

Additional Data (Fall semesters only) The top 6 FTES generating math courses making up about 72% of the total math sections offered during any semester (Fall/Spring).

What program/department conditions (such as cutbacks, lack of offerings, no replacements, facilities, coordination of part-time faculty, new program requirements, etc.) support the need for additional full-time faculty?

This new potential hire would instruct 2 sections of Math G160, one section of Math G115, and one section of Math G100. The conditions that are a product of both AB 705 and the pandemic simultaneously. There are more students enrolling in AB 705 classes, especially statistics and college algebra that support the need. The oversight that is required due to AB 705 has increased, and coordination efforts must also increase to align with the need.

COLLEGE-WIDE NEEDS (1 – 10 points)

- 1 - 4 points: Little or no contribution or impact
- 5 - 7 points: Some contribution or impact
- 8 - 10 points: Significant contribution or impact

How does this request for a faculty position meet the following criteria?

Where other considerations are relatively equal, does the request for this position contribute/impact the operations of other college programs such as: (Check all that apply and describe)?

- Coursework required or recommended for several degree/certificate programs,
- Significant general education requirements
- Serve substantial numbers of the student population
- Serve a special population of students not served by other programs
- Application to Statewide Community College Goals of serving students in Transfer, Degree and CTE programs
- New programs the college wants to develop and support through resources, facilities
- Contributions to college and district goals including student equity
- Negative fiscal impact to college created by the lack of full-time faculty due to retirement or non-replacement of full-time positions

Please describe what you checked above.

Transfer-level math courses are essential for many programs across the campus. Several of the department's transfer-level courses are required for AA degrees, CTE certificates, and transferability to four-year institutions. Specifically, College Algebra and/or Statistics are required for all STEM majors, nursing majors, business majors, and for general education requirements for transfer to many Baccalaureate programs.

AB 705 requires that all new GWC students complete transfer-level math within their first year of enrollment, which elevates the role that math courses play in each student's success at GWC. The Math department at GWC is within the top three FTES generating departments on campus and currently generates 309.3 FTES in fall 2021. The primary courses in high demand being College Algebra, Statistics, Business Calculus, and both Calculus 1 and 2.

The breadth of our course offerings ensures that a large intersectionality of diverse student populations enrolls and completes one or more college-level math courses. The Math department would like to build on this foundation to develop more innovative course modalities and develop curriculum to meet industry and student demands such as a course in Business Statistics and introductory level engineering courses. These new courses will further increase FTES as students will be able to complete their pathways to business and/or engineering degrees at GWC rather than looking at other college options.

The college has the infrastructure and capacity to offer new courses in mathematics and engineering that will further boost our profile in the community and build on our excellent STEM and BSTEM programs.

Upload additional information (if desired) PR Additional Data.pdf

If there are any licenses, certificates, or degrees required for this faculty position, please describe them here.

Master's Degree or higher in Mathematics (Teaching or Applied or Statistics)

How does this position address stated long-term college plans and Vision 2030 Goals?

COLLEGE GOALS

ENROLLMENT

Math courses are a requirement for many majors and without adequate number of full-time faculty, the department is forced to cancel classes resulting in a decrease in enrollment and FTES.

EQUITY AND SUCCESS

Math courses have traditionally been challenging for many students. Equity gaps persist in various demographics and impact the successful completion of students from their first year onward.

COMPLETION

Completion of degrees, transfer requirements, and some certificates relies on students being able to complete a transfer-level math course. Additional full-time faculty are essential for students to stay on the path to completion.

WORKFORCE PREPARATION

Analytical thinking via learning of math and statistics concepts continues to be important skills to acquire for any industry or professional work. The department will be able to expand our course offerings to meet industry and student demands.

FACILITIES

The new Math/Science building has the capacity to accommodate additional math and engineering courses and provide students with services through the STEM Center.

PROFESSIONAL DEVELOPMENT

A new faculty will bring new energy and ideas to the department that will encourage more professional development and innovative action plans.

COMMUNICATION

A new faculty will enable the department to better communicate and coordinate our courses with our pool of part-time faculty ensuring that adequate student engagement and intervention is provided.

You have more than 1 faculty request.

Please rank this request against your others. For example, if you are requesting 3 faculty for this discipline, you could put a "2" in this box, a "1" in the next box, and a "3" in the final request box. This will help later reviews better understand the needs of your program and your preference for hiring. If you only have 1 request, please put a "1" here.

1

Supervisor's Review

As the supervisor of this program, I have reviewed this request.

- No concerns
- I have concerns

Comments:

I have read and support the review.

General Information

You have finished your Program Review! Your supervisor, IEC, and (possibly) CCD will review your submission and provide feedback.

Please note, you will only be able to edit this form again if it is returned to you from your supervisor or your VP. Please stay in touch with your supervisor, if you receive feedback that you wish to incorporate.

...3439353239

Erin Craig
Signature

11/16/2021, 11:54 AM
Date

Review Feedback

Dean/Supervisor: Please provide feedback on this Program Review

Deans/Supervisors - If you would like to return this document to the originator, prior to IEC's review, please DO NOT CLICK NEXT here.

Instead, please click on "Return for Revision" (bottom of page) to send the document to the originator.

If you sign the document, it will go forward to IEC.

You will get another chance to review the document after IEC, CCD (if instructional), and the Vice President have provided comments.

IEC: Please provide feedback on this Program Review

Consider letting reader know that 2018-19 degrees data were inflated because of auto awarding, but the department is consistently increasing in degrees conferred. Is goal 3 relating to guided pathways? If yes, consider being more intentional in including "guided pathways" in goal.

Dean's Second Review

Superuser final check

CCD Reviewer

1. **Once you click the checkbox button below, scroll to the bottom and**
2. **Click on "Return for Revision" to send the document to the originator. DO NOT CLICK NEXT. When you click on Return for Revision, you will be given a page to provide your feedback.**

I have completed the CCD Review

Vice Presidents - If you would like to return this document to the originator, prior to the Dean's 2nd review, please DO NOT CLICK NEXT here. Instead, please click on "Return for Revision" to send the document to the originator. If you want to see the document again, please remove any comments from this page and add your comments on the email page that appears after you return the document.

If you sign the document, it will go back to the dean for a final review. If the dean forwards the document without returning it, the document will be locked, and the originator will not

able to incorporate the feedback from the reviewers.

Please provide feedback here. When finished, click on "Return for Revision" at the bottom of this page.

Vice President: Please provide feedback on this Program Review

DEAN'S ASSESSMENT OF POTENTIAL FUNDING METRICS

Which of the following *might* be a potential funding source for any of your requests? (Mark all that apply - or skip if not applicable)

- Equity:** Help disproportionately impacted students outside the classroom to either come to the college (access), stay in college (retention), complete transfer-level math or English, complete their degree/certificate, or transfer to a 4-year institution.
- Higher Education Emergency Relief Fund (HEERF II):** Assist students impacted by the COVID-19 pandemic
- Lottery:** Purchase of instructional materials to be used by students in the classroom.
- State Funded Equipment:** Any equipment considered that will last more than a year and costs more than \$5,000 that is used within the classroom.
- Workforce Development:** Improve the access, retention, or degree/certificate/career attainment for students in non-credit, Career Education, or career development

Dean / Supervisor
Signature

Electronically signed by Rick Hicks on 10/22/2021 1:51:02 PM

IEC Signature

Electronically signed by Robyn Brammer on 11/15/2021 8:05:17 PM

Vice President Signature

Electronically signed by Meredith Randall on 01/05/2022 8:36:58 AM