COMPREHENSIVE PROGRAM REVIEW REPORT

Economics

Program Context

1. Mission

Share how your program contributes to the college, fits into the college's mission, vision, and values, and contributes to the college's Education Master Plan. If your program has a mission statement, you may include it here.

What other academic programs and student/academic services does your program engage with? Examples of student/academic services include the Learning Center, Library, STEM Center, SparkPoint, Dream Center, etc. Another example, how does your program fit into any of the College's plans (such as Student Equity and Achievement Program, Technology, Strategic Enrollment, etc.)?

Cañada College Mission: Cañada College engages and empowers students in transforming their lives and communities through quality education.

Economics Program Contribution to Mission:

The Economics Department is fundamentally aligned with this mission. By offering high-quality, transferable general education and business courses, the program empowers students from diverse backgrounds to achieve their academic and professional goals. The program is deeply committed to being supportive—meeting students' needs and providing opportunities for growth, both academically and personally. Whether students aim to transfer to a four-year institution or enter the workforce, the economics curriculum fosters curious, self-directed, and responsible adult learners who are equipped to make a positive impact in their communities.

Per the mission, values and goals statement, Cañada College values:

- Equity
- Inclusion
- Diversity
- Access

The Economics Program addresses these values in the following ways:

- **Equity & Diversity:** The program is committed to ensuring that students from all backgrounds succeed. Its curriculum and support systems are designed to be accessible and relevant to a diverse student body, including first-generation college students, underrepresented minorities, and non-traditional learners.
- **Access:** The Economics Department actively connects students to campus resources (both in class, on campus and within Canvas,) such as the Learning Center, Library, STEM Center, and Dream Center. (see additional explanation below in Student Services) By doing so, it helps remove barriers to success and ensures students have the support they need to thrive academically.
- **Respect for Different Points of View:** The program explicitly respects different points of view, regardless of their political correctness, and values debate and discussion of topics germane to economics. This commitment creates a learning environment where all students feel welcome to share their perspectives and engage in meaningful, respectful dialogue. The international student enrollment offers real world examples of other economic systems that can be used as both a point of comparison to and diversion from the US economic system (see **Fostering Debate and Critical Thinking** below)

A successful program also engages Student Services with academics. For example,

- **Learning Center:** Economics faculty encourage students to become tutors and mentors, fostering a collaborative learning environment and peer support network. This also supports students' growth as responsible and supportive members of the campus community.

Program Review

- **Library:** Through participation in the Honors Transfer Program (HTP), economics students engage in scholarly research, often in partnership with the library. This not only deepens their academic experience but also supports the college's emphasis on research and information literacy.
- **STEM Center:** The program's interdisciplinary approach, especially with STEM students conducting economic/science research projects (often in **environmental** economics) promoting cross-disciplinary learning and curiosity.

Alignment with College Plans and Initiatives (some examples)

Strategic Enrollment Management:
By offering both transfer and workforce-oriented courses, economics attracts a wide range of students, contributing to enrollment growth and retention. Its flexible pathways help students achieve their educational and career objectives efficiently.

Technology Plan:
Economics faculty integrate technology into teaching, research, and student support, ensuring students develop digital literacy and research skills vital for modern careers and further education. Examples include using the FRED https://fred.stlouisfed.org/ Federal Reserve database in class to look up and analyze various pieces of economic data.

Community Connections and Workforce Development:
The economics program not only prepares students for transfer but also for immediate entry into the workforce (generally only after earning a BA/BS from a four-year institution), particularly in business and related fields. By collaborating with other social sciences and leveraging community partnerships, the department helps create pipelines to four-year institutions. In some instances, local employers as well (e.g. banks).

Interdisciplinary Collaboration:
As part of the Social Sciences (SS) collective, economics benefits from and contributes to a shared pool of expertise in the following areas: history, psychology, sociology, anthropology, political science and ethnic studies. Our frequent meetings and collaborate events like, "I Heart Social Sciences" social gathering and "Tea" events, where students hear a social scientist speak on some topic in the news, serve to enhance curriculum quality and student outcomes. This aggregation fosters innovative teaching and learning practices that benefit the broader college community. Additionally, the social sciences program learning outcomes (PLOs) are examined collectively with all the disciplines within the social sciences having robust conversations about them at our monthly SS meetings.

Fostering Debate and Critical Thinking:
Central to the economics program is the value placed on debate and discussion of topics germane to economics. Students are encouraged to explore, question, and critically analyze economic issues from multiple perspectives. This approach not only supports academic rigor but also helps students become more informed, engaged, and responsible citizens. Rather than merely opining or falling into the trap of judging others as "dumb, ignorant, or as part of some sort of "ist" group, the department strives to understand the "other side"—whatever and whoever that other side happens to be.

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."

Yes, there are several changes at both the high school and four-year institution levels that may impact the economics program (I am going to leave AI largely aside. While it clearly will have (is having) an impact, it is mostly conjecture.

Program Review

1. High School Financial Literacy Requirement

California recently implemented a new graduation requirement mandating that all high school students complete a semester-long personal finance course. This course will cover topics such as saving, investing, credit, and budgeting—some of which overlap with content in introductory macroeconomics. Additionally, this course may also serve as a way for high school students to meet the current "economic course" requirement that they have. If this new course is treated as one that can substitute for economics, this new course may impact enrollments as time goes on.
We will closely monitor the rollout of this financial literacy curriculum. As the curriculum becomes more defined, we may have to review our introductory macroeconomics course to avoid unnecessary overlap and ensure our course continues to provide value and depth beyond what students have already learned in high school.

2. Student Transfer Achievement Reform Act (AB 928) and Common Course Numbering (CCN)

The Student Transfer Achievement Reform Act (AB 928) introduces the California General Education Transfer Curriculum (Cal-GETC), creating a single, streamlined general education pathway for students transferring from California Community Colleges to UC and CSU campuses. All transfer-level courses, including economics, must now align with Cal-GETC standards to retain articulation with four-year institutions. In Addition, CCN necessitates our courses use the same numbering systems as CSUs and UCs

We are reviewing and updating the curricular topics in our economics courses to ensure they comply with Cal-GETC requirements and CCN. This will help maintain our courses' transferability and articulation with UC and CSU systems. We anticipate having to spend time putting our economics courses through the curriculum revision process soon.

3. Community & 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, its membership, and describe your advisory group's recommendations for your program.
After examining the labor market data for California at https://labormarketinfo.edd.ca.gov/
the economics department has not identified any significant changes in community needs, employment trends, technology, licensing, or accreditation that would require adjustments to our program. With respect to economics, this is not surprising conclusion. Economics is a well-established field in terms of which industries generally employ economists. Moreover, as noted earlier, most of these jobs are available only upon completion of at least an AS/AB degree. Lastly, while we note the rapid growth in blockchain, bitcoin, fintech and AI technologies (see below for a deeper dive into some of these) these developments have not yet translated into a clear need for changes to our curriculum. However, advising of students, in terms of transfer preparation might need some revision (again see the next to last paragraph in this prompt).

The primary role of our economics program continues to be providing a strong academic foundation for students planning to transfer to four-year institutions. Most students enrolled in our courses are preparing for further study in economics, business, applied math, or environmental sciences, and our curriculum is designed to support their success in these pathways. Although it is relatively rare for students with only an associate degree in economics to secure employment directly in the field, those who combine economics coursework with business studies may find relevant opportunities. Additionally, our program attracts workforce and CWA students who benefit from the critical thinking and analytical skills developed through economics.

For many of our students, the associate degree in economics serves as a steppingstone toward advanced degrees in economics, law, or related fields. A bachelor's degree opens doors to entry-level positions in government and industry, while graduate study—such as a Ph.D. in economics—can lead to specialized research and higher-level roles. According to the Bureau of Labor Statistics https://www.bls.gov/ooh/life-physical-and-social-science/economists.htm

the median salary for economists in the United States was $115,440 in May 2024, with entry-level analyst roles typically offering salaries between $60,000 and $80,000 and strong potential for growth as experience and specialization increase.

If we were to point to anything that we should be watching, the program feels the greatest potential for growth or change of the major is in the following areas:

Increased Emphasis on Quantitative Skills

Both UC and CSU systems continue to emphasize strong math preparation for economics majors. This is because the jobs in economics, finance and business are dovetailing more with advanced coursework in in mathematics, statistics, and computer science. We are encouraging students interested in economics to strengthen their math backgrounds and are exploring ways to enhance our curriculum with additional quantitative coursework. https://www.aeaweb.org/resources/students/grad-prep/math-training

Our college's "pathways to statistics", while well intentioned and serving the needs of many of our students, does not offer the economics student an exposure to math to sufficiently prepare him or her to transfer in economics.

Emerging Fields: Blockchain and Cryptocurrency

Again, the rapid growth of blockchain, cryptocurrency and fintech overall, is having the impact of merging economics with computer science and mathematics, creating new areas of study and application. While our resources are limited, we are exploring ways to introduce these emerging topics into our curriculum, potentially through special topics courses or guest lectures, to keep our program current and engaging.

Looking Back

4. Curricular changes

4A. Progress Report - IPC Feedback

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

1. ***1. Mission***: *"Consider specifically linking the College's mission to the program" (think I addressed this in my 25-26 PR doc)*

2. ***Looking Back 4. Curricular changes:*** *"The response strayed far afield of the topic of the question." (Agreed, needed to blow off steam, I suspect. More focused this time round).*

3. ***Current State of the program 7A. Enrollment Trends:*** *"What is meant by daytime classes during covid?" (I meant to say, sections of economics offerings that are scheduled during our morning - afternoon hours of the day.*

4. ***Access and Completion 8A: "****Thoughtful analysis and suggestions. One thing to note is that non-pass grades are included in success rate and completion rate calculation" (agreed, though the number of students electing that option in economics for any given year is almost always either quite small (one or two students per semester or, more likely, zero) your point about those students being included in the rates of success and completion is correct—thanks)*

5. ***Completion and Success Online 8C:*** *"Given the prior argument for F2F courses, it is interesting that Econ showed minimal gaps between F2F and Online Success and completion" (True and that is worth exploring. The question is, does the modality affect the rigor? And if so, how? Especially considering fast moving changes in technology.*

6. ***SLO Assessment Impact 9B*** *"Despite the department's reservations on the efficacy of SLOs we appreciate the diligence in analyzing the outcomes especially given that this is an accreditation requirement" (thanks for the kind words).*

Program Review

4B. Progress Report - Prior Program Goals

Provide a summary of the progress you have made on the program goals identified in your last program review. Include any challenges that have prevented or limited your pursuit of the program goals.

Per the 2020-23 economics program review document there were four program goals:

A) **Goal Title: Evaluate AB 705 effect on enrollments and ancillary services** Goal

Description: Observed student performance, noting that AB 705 has the potential to change the mix of students in economics classes. After enough time has passed, determined that AB 705 required us to rethink what sorts of support services we provide the students entering an economics class.

Progress: As a reminder, AB 705 greatly reduced the availability of pre-collegiate (remedial) courses. For economics, this means foundational classes such as algebra and advanced algebra are no longer offered. Mastery of algebra is a strong predictor of success in calculus, which is a critical requirement for students intending to transfer into economics programs. With all this in mind and recognizing the limits of what can be asked of students entering and economics class (i.e. no pre-requisites) we have attempted to help the transition into the more mathematical nature of the economics material by expanding the assignments that test student knowledge of relevant math topics. We have also expanded the various review sources students can access to ensure that when they do struggle, they have places to turn to. Again, ideally, transfer as economics and business students should complete at least one, if not two, semesters of calculus.

One cautionary note for counselors: While students may choose to follow the “stats pathways” for transfer, those intending to pursue economics programs—which typically require calculus—will not meet the admission requirements through that route.

Conclusion: Given our limitations, this goal is completed.

B) **Goal title: Faculty Member economic currency and fluency**

Description: Time and money need to be found to attend economics conferences. Both the teaching, and the subject matter, of economics continues to evolve. To give students the best experience possible in this field, faculty members must discuss the changes in both teaching as well as the subject matter. One of the best ways to do this is to attend conferences about economics and its teaching. We will encourage faculty to seek PD funds and locate in and out of state conferences on economics and or teaching. We will encourage library to keep abreast of economics issues through recent economics journals.

Progress: Mixed: Since the last review of the economics program, tighter budgets have made it increasingly challenging to fund projects that require additional resources, such as attending economics conferences. As an example, current levels of reimbursements for travel and conferences make it such that faculty often need to pick among attending something like NCHC https://www.nchchonors.org/ to discuss best practices in teaching honors courses or attending FRB https://www.federalreserveeducation.org/events or a Phi Theta Kappa honor society conference. In an ideal world these choices would not always need to be made. Nonetheless, staying current with developments in both the teaching and subject matter of economics is essential to providing students with the best possible educational experience. To address these challenges the economic faculty are encouraged to (and in fact have) attended Stanford’s summer economic conference for teaching faculty. https://siepr.stanford.edu/events/academic-conference/2025-summer-economic-institute-teachers

Recognizing the importance of access to up-to-date research, the librarians and the economics program work closely together to ensure that our collection of economic journals remains current, despite financial constraints. Lastly, all economics courses now include syllabus language reminding students that they are entitled to a free online subscription to The Wall Street Journal, further supporting their engagement with contemporary economic issues.

Conclusion: continue to **keep this as a goal**

C. Goal Title: Use of Social Hub Goal
Description: To continue to ensure that the social science hub in building 9 (SS HUB) is used as a place for the students to gather and study (i.e., like STEM has) and as a place where SS faculty can meet with students discuss assignments and topics of interest (i.e., like STEM has)

Progress: The SS HUB is largely in place and being used as we in the social sciences envisioned.

Conclusion: This goal is **completed.**

***D)* Support honors transfer program (HTP)**
Description: To find new ways to increase the number of students in the HTP and course offerings in economics that are honors related. Focus on F2F and study hyflex as options

Progress: Mixed: We continue to offer a significant number of honors by contract projects. However, limited enrollment growth and budget constraints have made new hyflex courses a risk that is not worth the reward. Additionally, going forward AI will necessitate rethinking how online courses writ large will maintain their rigor as well as their authenticity in terms of who is doing the work and how that work gets done. This will take time and district coordination as well as policy development.

Conclusion: Given the current budgetary and enrollment limits, along with the challenges posed by AI we consider this goal, for the moment**, accomplished.**

***E)* Goal Title: Student Honors Presentations**
Description: Have honors students present at local honor symposiums. This would also include PTK student research. Explore presentation options at regional, national and international conferences.

Progress: Mixed. We have had success with both honors students and PTK students presenting their research on campus as well as at the Bay Area Consortium. However, funding limits have made bringing students who would otherwise be qualified to present, at national and international conferences challenging.

Conclusion: This **should remain as an ongoing goal**, with added emphasis expanding funding sources for travel and registration for out of state conferences.

Current State of the Program

As stated in the 2022-2027 EMP: "Can~ada College continuously assesses processes and removes barriers to student access, success, and completion." The program review is an essential part of that process.
5A. Program Changes
List any significant changes that have occurred over the prior years in your program's curricular offerings, scheduling, or mode of delivery. Please describe if any changes impacted specific programs of study within your discipline. For decisions made by your department, explain the rationale for these changes. If applicable, how have state policy changes affected your program offerings?
Curricular Offerings & Scheduling
Our curricular offerings in Economics have changed little over prior years (*see econ-course-enrollment-data-2020-25 tab 4 for the offerings found at https://canadacollege.edu/prie/data-dashboards.php* The reason for stability **in number of offerings** can be boiled down to several variables:

- College enrollment trends
- High School enrollment trends
- Budget Trends

Program Review

The Office of PRIE **enrollment data** over the period 22-23 (the date of economics last program review) through the most recent data of 24-25 show the following pattens (see https://canadacollege.edu/prie/dashboards/student-characteristics.php

Collegewide:

· college wide enrollment and headcount improvement from the post covid period
· much of the college's overall growth can be attributed to students of color, specifically Latino students. White student numbers remaining essentially flat from 22-23 to the present.
· the biggest non-Latino area of growth appears to be in the Asian student population
· we continue to be very heavily skewed toward female students. Although economics is a notable exception.

Narrowing our scope to business/economics:

· Both business and economics appear to mirror the college's improving enrollment and headcount. In fact, if anything the rates of growth seem growing even faster than the overall college for the Latino and Asian groups.

High School enrollment trends: While economics does draw returning students, our program is primarily filled by graduates from The Sequoia Union High District (SUHD) district, as well as other nearby districts and individuals returning to school seeking either to transfer or get an advanced degree. SUHD, as a primary feeder for transfer level GE courses, has seen flat if not slightly declining enrollments in recent years https://www.ed-data.org/district/san-mateo/sequoia-union-highThis pattern would suggest, all things equal, we would tend to offer the same number of economics sections from year to year.

Budget Trends Additionally, budgets have also not changed materially since the last program review. We are a Basic Aid District. Our revenues are tied to increases in property tax revaluations upon their sale, we do not financially benefit, as a district, from student enrollment growth. Prop 13 gives families an incentive to stay put (not sell), thus limiting the gains from property taxes that would otherwise occur upon a home sale and market revaluation. Given all this, it is not surprising that fund I dollars (which is generally about 65% of the overall college budget and the relevant portion when discussing program's curricular offerings, scheduling, or mode of delivery) at Canada College has seen limited growth. Respectively, Fund I was $31,021,260 for 21-22; $35,663,304 for 22-23 and $37,715,367 for 23-24. This is about a 5% growth per year. Since about 96% of all our dollars go to salaries and benefits, we would expect to see little change in the number of economics courses offered, this is just what the evidence shows.

Lastly, while we noted that Canada and the District enrollments are about back to their pre-Covid levels, Econ **course offerings didn't expand** over that bounce back for the simple reason that the college ran courses with fewer students per section, as compared to historical averages. As enrollments returned, there was no reason to add sections. The existing sections become fuller.

Moving forward, unless or until one or more of the above variables changes in a meaningful way, we would expect offerings, scheduling and modalities to remain largely unchanged.

Honors Transfer Program: Another potential area for course growth is in the Honors Transfer Program (HTP) HTP continues to do its best to schedule more honors classes (ECON 230) as well as help with contract opportunities. While we have been successful with contracts, ECON 230 has proved difficult to enroll. The Cal GETC emphasis on streamlining transfer will not make enrollments in ECON 230 any easier to obtain. We should not expect HTP to contribute to new section offerings.

Middle College: Middle College continues to contribute enrollments to economics, and other social science/transfer courses. Should this program grow, we might expect economics to grow as well.

Modalities & Scheduling

Significant modes of delivery or scheduling in your program unchanged from prior years. We continue to offer the about same number of courses in economics that are in the same combination of F2F and online modalities as we have in the past (see online (*see econ-course-enrollment-data-2020-25 tabs 5 and 6 for the number of students in each modality found at https://canadacollege.edu/prie/data-dashboards.php*. Additionally, we note per the PRIE data that more students are taking F2F offerings in economics. Online enrollments seem to have peaked. The big exception to these observations is found in Note **1.**

Note 1 : In the spring of 25, the economics department discussions with the district to offer three sections of an async macroeconomics course at one of our feeder high schools in the spring of 26. The current district thinking to pair a High School teacher (who may or may not have a background in economics) with a part-time economics instructor from our District. The economics departments at Canada, Skyline and CSM think teaching a math and language intensive course like ECON 100 to **high school students** in an async format is very risky. This is a course that **college students** routinely struggle with in a F2F format. Moreover, three sections suggest a demand of around 90 students. Considering the fact there is already a "regular" economics class as well as an AP class at the feeder school in question we think the projected demand is overstated. However, that "async in high school ship" has, for the moment, sailed. The district wants this to happen. We eagerly await the results of the experiment and hope that our concerns are misplaced.

Cal-GETC and AI impact on course offerings, modalities and times?

With respect to the Cal-GETC changes, while these changes are significant, they should not have much bearing on the number of or types of offerings the economics program provides our students.

Lastly, while AI is not something we wish to delve into deeply here, at some point we will have to consider how it affects what we offer and how we offer it. Those who allow students to engage with AI technology, both in class but even more so at home and online, will have to confront the very real threat that AI poses to authenticating student work.

5B. Program of Study Completability

Look at your course offerings, in the last program review cycle: was it possible for a student to complete your certificate(s) or degree(s) while only completing courses at Cañada College? If not, was your certificate(s) or degree(s) completable within the District?

Yes, students can complete certificates or degrees in Economics solely by taking courses at Cañada College. However, this is becoming increasingly challenging due to recent changes in course offerings. Specifically:

Economics Courses:

While the college continues to offer about the same number of Economics sections as during the last program review (*see econ-course-enrollment-data-2020-25 tab 4 for the number of sections by course found at https://canadacollege.edu/prie/data-dashboards.php*). there is now only one daytime section of ECON 102, which is highly subscribed.

Program Review

Major Requirements:

Economics majors benefit from having just two core courses in economics required for transfer. The remainder of courses needed to transfer into economics programs consists of specific courses in business, mathematics, and general education (e.g., Accounting, Business Law, and Calculus (Math 240, 250, 251). As these courses are offered across the district, these offerings give students some flexibility in fulfilling their transfer for this major. **However,** the availability of these courses at Canada can be problematic. When these courses are scheduled infrequently or in conflict with economics course times, students may encounter difficulties completing their program in a timely manner. Improved coordination among departments by the respective deans would help minimize scheduling conflicts and support student completion.

Course Modalities

In-Person and Online Options: Students have the option to take courses in-person and online (see online (*see econ-course-enrollment-data-2020-25 tabs 5 for the number of students in each modality found at https://canadacollege.edu/prie/data-dashboards.php*. While online offerings provide flexibility, student reliance on online-only courses for study may be problematic, especially given ongoing concerns about academic integrity and the challenges posed by AI in verifying student work.

In summary, while it remains possible for students to complete Economics certificates or degrees entirely at Cañada College, careful planning and improved coordination among departments are increasingly important to ensure student success.

5C. Program of Study Maps

Review your discipline's currently listed program(s) of study maps. Are any updates needed? If so, please list the needed changes. (These changes will be forwarded to the PRIE office after the Program Review process is completed, or you may submit changes using the PRIE Data request form.)

Yes. However, in the opening paragraph of the program mapper describing economics, there is an unnecessary question mark.(?) It needs to be edited out. Other than that, unless Cal-GETC requires changes, it looks fine.

6: Enrollment Trends and Changes

Use the data provided by PRIE to examine your enrollments by discipline and courses. Analyze each of the following: •Trends, significant changes, and any disproportionate enrollment impacts in course offerings, •Any disproportionate enrollments of student subpopulations indicated in PRIE data, •Trends in headcount, FTES, and load.

Based on your analysis of the data, discuss what you believe is noteworthy. If applicable, describe any other enrollment data that is relevant to your program, such as courses that are part of learning communities. You are welcome to include additional graphs or charts if they help your analysis. For example, has there been a significant increase or drop in FTES or Load? If applicable, consider trends in class cancellation rates and how it might have affected your course offerings. If needed, consider how the pattern of course offerings (times/days/duration/delivery mode/number of sections) affected your enrollment. Please note: If additional sources of data are used, please upload these documents or provide links.de links.

Use the data provided by PRIE to examine your enrollments by discipline and courses.

Note: While the time from in the PRIE data covers 2021-2025, my **focus will be from 23-25** as I feel 20 21 and 22 are often still colored by Covid issues). Based on the data provided by PRIE (see econ-course-enrollment-data-2020-25, tab 12), economic student success rates at the college consistently trail the overall college average. While the college's overall course success rate generally hovers between 75% and 80%, economics students typically succeed at a rate ranging from 60% to 77%. This pattern aligns not only with prior historical trends in economics at the college but also with trends observed at peer institutions such as Skyline and CSM.

District economists continue to monitor and address this challenge, recognizing that the lower success rates in economics are not unique to this institution. Similar patterns are found in other community colleges and four-year universities. The main contributing factors include the inherent difficulty of economics, the

discipline's reliance on its own set of concepts, language, and graphical/mathematical reasoning, and the challenges this poses, particularly for students whose math skills may need refreshing. Even returning students tend to experience similar difficulties, especially if their quantitative skills have diminished over time.

The department continues to seek new and innovative strategies to support student achievement, but these longstanding concerns underscore the need for ongoing attention and intervention.

Digging more deeply:

Analyze each of the following:
· trends, significant changes, and any **disproportionate enrollment** impacts in course offerings,

· any disproportionate enrollments of student **subpopulations indicated** in PRIE data,

· trends in headcount, **FTES, and load.**

Headcount Trends: Office of PRIE **enrollment data** over the period 22-23 (the date of economics last program review) through the most recent data of 24-25 show the following pattens
Collegewide:

· College wide enrollment and headcount improvement from the post covid period
much of the overall growth can be attributed to students of color, specifically with Latino students, with white student numbers remaining essentially flat to the present. The biggest non-Latino area of growth appears to be in the Asian student population.

Fill rate trends: Economics follows the overall observed pattern for both college and the Business/Workforce division. Starting from 20-21 it falls, bottoms out in 22-23 and rises thereafter. Interestingly, Econ bests the college fill rates at the beginning of the measurement period (20-21) and most recently (24-25) but had a bigger drop during the years in between.

FTE: has been stable from 2021 through 2025 at an average of 3.6 FTE

Load: Economics load is currently in line with the overall college's (E: 414 vs C:433). Narrowing the comparison to business overall, economics is E:414 vs B:404. Looking at economics vs humanities overall average, economics exceeds that division's average E:414 to H:397. Economics experienced a severe drop from 2021 through 2023, down into the high 200's. And, as noted in prior paragraphs, has since almost fully recovered. The college mirrored this pattern, albeit less severely in terms of the drop.

Disproportionate Impact Enrollment Trends: Economics consistently sees a gap in **female students and more recently, low-income students.** Negative equity gaps for female students in the Economics program at Canada College over the past five years have consistently ranged from -18.7% to -21.5%. For low-income students, the most recent reported gap is -5.7%, specifically for 2023-24. This is true even though:

· Canada College has approximately 59% females (which is in line with US averages for female representation at community colleges);
· The number of low-income students is quite significant as inferred by 59% of Canada College students were awarded financial aid.

Explaining the Negative Equity Gaps (enrollments)

· Economics has historically (at both community colleges and four-year schools) attracted more male students, partly due to perceptions around math intensity, career pathways, and social norms. Female students may be deterred from economics by the lack of female representation or inclusive culture within the discipline. Additionally, Economics classes may be seen as less directly aligned with immediate job prospects (a student will generally need at minimum a B.A. more often and M.A. with a fair amount of math and stats courses) or may require prerequisites perceived as challenging,

which can discourage low-income students who are seeking degree pathways with more obvious return on investment. Time has an opportunity cost, that cost may be more keenly felt by female and lower income students and translate into lower enrollment rates into economics.
· Lastly, Women are particularly underrepresented in engineering, physics, and upper-level mathematics compared to other disciplines. In the U.S, women make up about 22% of engineering undergraduates and a similarly low proportion in physics and some advanced mathematics courses, with the gap widening at higher achievement and course levels. This pattern matches what is seen in economics at Canada College, where female enrollment percentages are sharply below the campus average for females. While I do not pretend to be able to explain these observations, their existence, and correlation with what we see in economics, should be considered when considering the gaps.

7: Retention and Success

• Please Note: Retention rate counts enrollments who have earned a passing grade, a failing grade, or an incomplete grade. • Please Note: Success rate counts enrollments who have earned a passing grade.

7A. Current Retention and Success Data

Describe the retention and student success rates in your courses and any disproportionate enrollment impacts using the data provided by PRIE.

102 and 100 Retention and Success: By Course and modality

College retention rates have consistently been in the mid-80s percent. **College success rates** are typically in the low 70s percent over the most recent cycle. **Retention rates for Economics** courses tend to be higher than the college average, most recently reaching 89% most recently. However, **success rates** for these courses are lower than the college average for success, ranging from the mid to high 60s percentage during the same period.

When examining these rates by modality, face-to-face (F2F) courses slightly outperform online courses in both retention and success, which aligns with expectations given the challenging nature of economics and the greater availability of support resources such as office hours, tutoring, and group study for F2F students.

All the above patterns make sense for several reasons:
Economics is generally considered more difficult relative to the average college course, which helps explain why success rates are lower than the college average. It is, however, encouraging that retention rates match or exceed the college's overall retention. These higher retention rates may be due, in part, to the fact that most economics courses are F2F and those students have the greatest access to support services. Additionally, the difference between Econ 100 and Econ 102 success and retention rates is also understandable: Econ 102 tends to have better outcomes because it is typically taken after Econ 100 by students who intend to major in economics and are more committed to the subject. Econ 100, meanwhile, is often taken earlier by students who are exploring the subject and may find it more challenging, especially those who need it as part of their core coursework. These rates align with data from previous program review cycles and are comparable to economics departments at CSM and Skyline.

Regarding modality it is worth noting that when the effects of online courses are removed from the rates of retention and success, the economics department's retention and success rates approach those of the overall college. For a detailed breakdown by modality, the "econ-course-enrollment-data-2020-25" dashboard, tab 5, on the Cañada College website provides further data.

102 and 100 Success: Meeting time

With respect to time of day we see the following. Day 102 students outperform their online and evening counterparts. Conversely, the Day 100 students fare the poorest as compared to their night and online counter parts as we *see in econ-course-enrollment-data-2020-25 tab 6 by meeting time found at* *https://canadacollege.edu/prie/data-dashboards.php*
Not sure what to make of this. We don't want to fall into the trap of assuming that the night class and the online class might be taught a little easier or that the day students might carrier heavier loads than their

online and night peers, but these factors might be the case. We will look to see if we can improve the day rates of success during the next cycle.

102 and 100 Enrollment & Success: Gender

Interestingly, while the economics department has a negative access equity gap with respect to women (see discussion in Q6). The success metrics do not tell the same story. It is true that for one-year females had a negative equity success gap for econ 100 (2022) this does not repeat in subsequent years. Moreover, in econ 102, We see no gaps in female success from 2022-2025. Taking these last three points together we see that while women seem to under enroll in economics, those that do enroll generally do as well as any other group.

With respect to **success rates,** however, the story is different. Men and women succeed in 100 at the same rate, while in 102 women do slightly better than men. All do less well in 100 than 102. Again, this last data point is probably due the fact that as noted before 102 is most often taken after 100 and only by the students that intend to use 102 as part of their major.

Honestly, given the dearth of men at our college, I think the college would be better to spend their finite time on this negative gender gap, as compared to any one single program's differences https://www.pewresearch.org/short-reads/2023/12/18/fewer-young-men-are-in-college-especially-at-4-year-schools/ .

102 and 100 Success: Race and Ethnicity

Asian, white and multi-race students are likely to do the best in both 100 and 102. Not far behind are Latinos and Filipinos in 102. Not so for 100 where Latino and Filipino rates of success are not as close as their peers as we *see in econ-course-enrollment-data-2020-25 tab 8 by race/ethnicity found at https://canadacollege.edu/prie/data-dashboards.php*

Econ 100 tends to draw a wider range of student ability than 102 does. It is perceived, due to the number sequencing (100 being before 102) as the easier of the two courses. Thus, it would make some sense to see that reflected in the lower success rate in 100. Again, as 102 is viewed as the second of the two courses needed to transfer, it would make sense that those who enroll in 102 "survived" the econ 100. For these students doing well in 102 takes on additional import since it is probably a core course in their major.

With respect to the lagging success rates of some groups, we see over the 2022-2025 period, occasional years where both Latino men and women under perform in Econ 100. However, often, their rate of success where our dashboard says they should be. In Econ 102 this same time frame shows only one year in which only Latina females have a negative variance. I cannot begin to explain what happened during these years and more than I can explain why these same groups, far more often than not during 2022-25, did as well as our dashboard says they should.

102 and 100 Success: Age

While not asked for it is worth noting that students under 18 are the most successful in both 100 and 102 courses, likely due to a large proportion being dual-enrolled, homeschooled, or middle college students, who arrive especially well-prepared and with the most current math skills. The next most successful group is 18–22-year-olds, many of whom are transfer-bound, often full-time and focused on business or economics, and thus highly motivated to achieve strong grades. Success rates drop-in older groups (23-28, etc.), which often consist of returning or working students who may face greater time constraints and challenges with course material.

Program Review

Key points:

Under 18: Highest success, likely due to fresh academic preparation and frequent participation in advanced programs like dual enrollment or homeschooling, both associated with above-average academic achievement. Age 18-22: Second highest, often includes students focused on transfer or major requirements, typically enrolled full-time and motivated to perform well. 23 and above: Lower success rates, correlating with increased likelihood of working responsibilities, part-time enrollment, and longer gaps since previous education, leading to higher attrition. While I am just speculating, there is some evidence that older students' overall completion rates are lower, reflecting external pressures such as work and family obligations.

First Gen and Low-income Success Rates

Economics demonstrates a negative success rate gap for First Gen students and Low-Income students. Before discussing these gaps, it is worth noting that Canada College writ large has similar (if not as large) equity gaps in both its performance with First Gen and Low-Income students. All this to say, whatever is problematic with respect to the economics department appears to be part of a much bigger picture that is evidenced by the college gaps in these two areas.

First Gen and Low-income success rates explanation: First, it is important to note that this is a very heterogenous group. No one or two ideas will explain what we see. Moreover, to the degree that what appears in the Economics department data also appears in the college wide data suggests a wider explanation that what I can proffer. With that being said:

All things being equal, for many first-generation college students and low-income students, the journey through higher education is unlike that of their peers. They are often the first in their families to navigate the complex landscape of college life. Without family members who have attended college, first-generation students frequently step into a world where they lack the guidance, knowledge, and experience that others take for granted.

While not true for all first gen and low-income students, a significant number of first-generation/low-income students may have attended under-resourced high schools. This means they enter college perhaps less prepared for the quantitative and analytical demands of programs like economics, calculus and engineering. Without a strong foundation, the content feels more challenging, making it harder to keep up with their peers. Again, looking at economics data, once we look at success for students *other than these two groups*, the equity gaps largely disappear.

Additionally, first-generation/low-income students often find themselves unfamiliar with the hidden rules of the academic environment. They may be unsure how to access tutoring, counseling, or financial aid services—or even how to approach professors and advisors. I cannot tell you how often students are surprised to know that Canada has a tutorial center.

Lastly, Financial challenges add another layer of complexity. Many first-generation students also come from low-income families and may need to work long hours to support themselves or contribute to their households. Balancing work, school, and sometimes family responsibilities leave little time for studying or participating in campus activities that build connection and confidence.

I have to say, despite all these challenges, first-generation/low-income students often demonstrate the most "grit" of all the students we see in the economics department. They often develop strong self-reliance and determination; however, this often happens only with time and with a few bumps along the road. Those bumps are what I think we see in the equity gaps we have just examined.

7B. Online Success

The college has a goal of improving success in online courses. Using the data provided by PRIE, what significant gaps do you see in success between different course modalities: asynchronous, synchronous, hybrid, and face-

to-face courses? Analyze any disproportionate online course retention and success rates by modality. If your program does not offer online courses, please write "not applicable."

Looking at the data from *in econ-course-enrollment-data-2021-25 tab 5 by modality found at https://canadacollege.edu/prie/data-dashboards.php* we see (ignoring the years immediately following Covid) that students in ECON 102 succeed most often in a F2F modality, as compared to both online and hybrid. ECON 100 F2F and online have essentially the same rate of success, with hybrid being the least likely to see success. 2021 did see a variance worth noting, however, recently (2024) there does not appear to be any variance that rises to the level of being disproportionate. Thus, there is little else to say here.

8: Resource Changes

8A. Impact of Prior Resource Applications

Describe the impact to date of previously requested new resources (assignment, equipment, facilities, research, funding) including both approved and non-approved resource request. What impact have these resources or lack of resources had on your program and measures of student success? Do you notice any disproportionate impact on any student populations? What have you been unable to accomplish due to resource requests that were not approved? ?

The professional development funds acquired by the program have primarily been allocated for attendance at honors conferences. These conferences provide valuable opportunities for faculty to learn about innovative ideas in honors courses and programs. However, there is no dedicated funding specifically for subject matter conferences, making it difficult for faculty to attend disciplinary events without diverting honors professional development funds. As a result, faculty often face challenges in staying current within their respective fields, and the lack of support for these opportunities can have a cumulative, long-term impact on their disciplinary expertise.

8B. Impact of Staffing Changes

Describe the impact on your program of any changes within the last program review cycle in staffing levels (for example, the addition, loss or reassignment of faculty/staff), in particular how those changes impact student success. Do you notice any disproportionate impact on any student populations? If no changes have occurred please write "not applicable."

No staffing changes. Not applicable

9. SLOs and PLOs

9A. SLO Assessment - Compliance

Are all active courses being systematically assessed over a three-year cycle? Refer to the Program's /Department's Three-Year Assessment Plan and describe how the plan is completed across sections and over time.

Yes, all active courses are systematically assessed over a three-year cycle following the Program Review's suggested calendar, which is published online and guides timely SLO assessments. While the schedule is followed closely, unforeseen events like class cancellations or Covid disruptions occasionally cause delays. In such cases, missed assessments are completed as soon as possible within the cycle. At the start of each semester, part-time faculty receive notifications about which SLOs to assess and are encouraged to submit their results, which are included in the overall program analysis. Participation from part-time faculty varies, as their assessments are voluntary.

To track progress across sections and over time, the person responsible for documenting assessment results reviews the calendar each semester and compares the percentage of completed SLOs to the expected progress in the three-year cycle. For example, by the end of year one, about one-third of SLOs should be assessed; at year two, two-thirds, and so on. This comparison helps ensure assessments are completed on schedule and evenly distributed throughout the program. The calendar can be found here: https://www.canadacollege.edu/assessmentsloplo/docs/draft2023plans/econ.pdf.

Program Review

9B. SLO Assessment - Impact

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

First the results, *to warrant an implementation of "specific strategies"* would need show something was amiss or could be improved upon. This is not always the case

Since the last program review of economics we have not really seen anything in the SLO results that demands a change in what we do or how we do it. How these discussions happen are as follows:

Given the time constraints on a single person department and working with busy part-timers who are under no obligation to engage, the department attempts to foster SLO discussion by:

Reminding p/t faculty each year that should he or she notice something in his or her SLO assessment that is seriously amiss he or she should contact the program coordinator (me) and bring it to that person's attention. We accomplish this in two ways.

First, those in the department try to talk, when possible. Often this plays out in the form of an "as needed" conversations. Over these last few years these conversations have come in the form of emails and or zoom discussions regarding particular aspects of a course that faculty are observe problematic SLO outcomes and wish to discuss them.

Second, mindful of the need for dialoging around SLO results but lacking in many full-time economists at Canada, the department has devised alternatives way of dialoging about SLOs.

1. All the full-time economics faculty in the district meet regularly. We meet least once or twice each semester. While the agendas of these meetings are varied, we often discuss things like:

- Who is doing what with respect to SLOs.
- What results people are seeing.
- What changes we are making to our courses after looking at the SLO results.

2. The other social scientists (and business professors) at Canada often, during the semester, chat with one another about what they are seeing in their SLO evidence and how they are responding to what the evidence seems to be saying.

9C. PLO Assessment

Describe your program's Program Learning Outcomes assessment plan using your Program/Department's Three Year Assessment Plan. Summarize the major findings of your PLO assessments. What are some improvements that have been implemented as a result of PLO assessment?

Describe your program's Program Learning Outcomes assessment plan using your Program/Department's Three Year Assessment Plan. Summarize the major findings of your PLO assessments. What are some improvements that have been implemented as a result of PLO assessment?

The Social Sciences consists of ten departments: anthropology, communication studies, economics, ethnic studies, geography, history, philosophy, political science, psychology, and sociology, and has three PLOs. Mostly these are one full-time person departments. This cycle, we approached assessment more holistically with the purpose and goal of mapping all our course level SLOs to our PLOs and reviewing the alignment between discipline-specific assessment methods and outcomes (SLOs), and overall program outcomes (PLOs) for the social sciences.

131 SLOs from 40 courses in 7 disciplines were mapped to each of the three social sciences PLOs. 73% of the SLOs mapped to PLO #1, while 50% of the SLOs mapped to PLO #2, and 57% to PLO #3. Overall, we were very satisfied with the outcome. More SLOs map directly to PLO #1 (73%) and PLO #3 (57%) than PLO #2 (50%). However, that makes sense, given that "diverse viewpoints" and "social sciences concepts" apply to lots of different types of assessments and activities, whereas PLO #1 "evidence-based argument" is based on a specific type of assessment / activity. Furthermore, since "evidence-based arguments" often entail empirical findings that connect to research epistemologies, we would expect this PLO to lag behind the more basic conceptual frameworks that constitute each subfield. Note: The criterion for success was established as part of our group process of review and reflection. While it makes sense that fewer SLOs would map to PLO #1, we would not want that number to drop below 50%.

Program Review

While this holistic approach to mapping our SLOs to our PLOs is one important measure of success and alignment, our analytic rubric provides a more direct measure of student achievement. As a result, this coming year, we will return to our analytic rubric.
Analytic Rubric (direct assessment method):
In order to assess the PLOs efficiently, the Social Science faculty have created a general analytic rubric to be used across the departments to directly measure student writing assignments as a program (note: an analytic rubric is a rubric that provides descriptive feedback along several dimensions or parts, and a general rubric is one that can be used across assignments and/or disciplines). Each department brought 5 ungraded student writing samples selected by lot from one assignment administered during the semester to create a pool of assignments to draw from (the writing prompt was also attached to each of the samples). The rubric was then used to score a random sample of student writing assignments from the program. All faculty scored student writing assignments outside of their disciplines.

Looking Ahead: Program Planning and Goals

In this portion of program review, you will develop action plans based on your enrollment, retention, and success data (questions #6 and 7) for the most disproportionately impacted students. • Please note: your action plans will reflect the program's assessment of which equity issues need to or can be addressed. • Please note: action plans are measurable so that we can examine their success or failure, not because they are guaranteed to be successful. As part of our culture of continuous improvement, we encourage programs to pursue action plans that might or might not be successful. Successes and failures can both provide valuable information for programs.

10A. Improving Enrollment

What changes could be implemented, including changes to course scheduling (times/days/duration/delivery mode/number of sections),curriculum, marketing, and articulation of pathways to improve enrollment, particularly for disproportionately impacted student groups identified in Question 6? If applicable, include plans for faculty recruitment and faculty training.

Background and plans:

Enrollment Plans

As noted in Q6, the most recent load data for economics shows it is on par with the college load (414E; C433) and actually exceed business. Currently, the number of sections offered seem sufficient for the demand, although we might consider offering second day (F2F) section for 102 as we only have one and it fills up.

o **An action might be to discuss adding an additional section of 102 with the dean.**

Disproportionate enrollment impact trends.:

o Females consistently under-enroll in economics courses. Again, this is not a problem unique to Canada.
o Low-income students also under-enroll in economics courses.

Retention Plans (Course and Modality)

Economics retention rates in are higher than the college high 80s% vs lower 80s%. While higher aspirational rates are always worth pursuing, n**o action here seems to be needed**.

Success Plans (by course and modality)

Economics success rates in are lower than the college average 60s% vs 70s %. As noted in question 7, this is not surprising. Economics courses are some of the more challenging courses that a student can select. Integrating the math and the language tends to be something students underestimate the difficulty of. With respect to modality, nothing jumps out as being significantly different. However,

since students stay (retained) in economics courses at relative high rates but fail to succeed at those same higher rates, an action or two might be warranted.
· **Action: Earlier direction to tutors**. This is not easy since there is no way to mandate a student seek help. Perhaps some discussion with the Early Alter team
· **Meeting with students one on one** in our offices when problems first appear

Success (by Gender)
Rates of success are not materially different by gender. It is true that for any given one-year period, here or there, we might find a negative gender gap but as there is no year after year persistence in these kinds of gaps, we see no reason to propose any gender specific actions)

Success by (Race and Ethnicity)
Econ 102 shows very little difference in these measures of success**.** This is not surprising
As these students are often the ones that completed 100 and are taking the course as a ` core requirement. No specific race or gender action needs to be taken.

Econ 100 is different story. This is a course that students are often counseled into to fulfill a GE requirement and to "see if they like business". The audience is different as compared to 102. Given this as a backdrop, Latino and Filipino success rates are lower relative to their peers. As mentioned in Q7, this is puzzling. Proposing an action would imply that we have what I think is a cause of the problem. We do not.

Action: Meet with the other full-time economic professors in the district and see if they have a similar issue. Ask them what they have done in the past to close these sorts of gaps

As noted earlier, without significant increases in the number High school students, home schooled students and members of the community coming to college, and without significant increases into the instructional budget for course offerings, I see little in the way of changes to the **current number of economic offerings**. As to **course scheduling** (times/days/duration/delivery mode) we seem to have a sustainable set of courses both by number and modality. Another 102 class in the day (we have just one now) would be helpful as it routinely pulls 40+ students. Additionally, having the business dean sit down with the **non-business faculty and their dean who offer nonbusiness courses** that the economics/business student needs to transfer (e.g., math, stats), to discuss scheduling conflicts would be wonderful**. Marketing:** I have raised the issue **of home school recruitment**. These are students who are often excited to take "harder" courses, like economics. They are often more than prepared, as well. What has the district done to formally design a marketing tool and marketing strategy to pursue these kids? Not my job, but to my knowledge they have done not done much (again maybe I am mistaken). It's above my pay grade but I am happy to advise.

Course scheduling caveat: We will need examine AI issues as they relate to who is and is not taking courses and writing answers to exams and homework. This may play into more F2F courses, and we should be thinking about it and having Senate/Administrative conversations on the matter.

10B. Improving Retention and Success Rates
What changes does your program propose to make to improve student course retention and success, particularly for disproportionately impacted students identified in Question 7? How can the college help you improve student retention and success? Consider course offerings, curricular and/or pedagogical changes. You are encouraged to collaborate with the Director of Equity and/or Faculty Equity Coordinator to develop strategies for addressing equity gaps and to include those here. Examples of possible strategies include trials of new equitable grading strategies, use of OER/ZTC textbooks, surveys to capture student voices and needs in the classroom, new or improved partnerships with student services, and/or plans for faculty recruitment and faculty training.
Overall observation:
While overall **rates of success** are lower than the college average, they are consistent with past rates of success in this discipline and do not materially differ from what is seen at the economics departments of

CSM and Skyline. Additionally, **rates of retention are generally equal to or better** than the college averages. All this suggests that this discipline is challenging for many students. The challenging aspect of this CSU/UC transfer course should be reflected in rates of success. With respect to **raising success** rates for the students in economics who have lagging success metrics as identified in question 7, we suggest the following:

Increased emphasis on tutoring: This would mean college resources dedicated to both early intervention and tutorial services.

More impactful early alert system: Currently the early alert system does not ensure that students who are identified as struggling get help in a timely manner. Personally, some of us have been here long enough to remember when the first point of intervention was an email sent to a student's counselor (at the behest of the faculty member) that called the student in for a meeting (let's call it, "Come to Jesus"). That student/counselor relationship, which was one built upon multiple prior meetings with that same counselor, created a sense of continuity that I think our current system lacks. Honestly, looking at what we do now, from the outside it feels like we employ a lot more people to do a lot more work, with no better results (and I would argue poorer) than in the past. I think we are missing the boat by not going back to a system where Student "A" is assigned to Counselor "2" for that student's entire time at the college (of course creating a narrow set of exceptions). The current system unintentionally splits responsibility for a student's success into so many different hands that there is no accountability when a student falls through the system. The college could help improve my rates of retention and success by tilting to an alter system that functions as described above.

Increased coordination of offerings for courses that often lead to success in economics: Math courses, specifically any pre calc and calculus courses should be made available for students prior to or concurrent with enrolling in economics courses. This would involve those who schedule classes to discuss and minimize scheduling conflicts.

Attending Discipline-Specific Conferences: A Key to faculty developing new strategies for improving student retention and success. Supporting faculty attendance at conferences within **their own academic disciplines** can address several important concerns. The College could help with my rates of success and retention by offering more funding to attend conferences that discuss recent research, emerging methodologies, and innovative teaching strategies—**specific to economics. This would** enable faculty to bring fresh ideas into the classroom that directly engage students. Although general pedagogical conferences and bias trainings have their place in professional development**, they cannot substitute for the** unique insights gained from discipline-specific gatherings.

Reducing computer usage in class: There is a growing minority of colleges and classrooms that are moving toward students having to write what they hear in class, rather than typing notes on a laptop. The college could lead a discussion in a computer/phone policy. An effective policy could improve rates of retention and success. *Note: This would not rule out tablets and students writing on them!* Some studies suggest significant benefits of such a change https://www.learningscientists.org/blog/2024/7/18-1

Final thought: We truly appreciate the thoughtful and helpful suggestions presented in the program review document along the lines of things like new equitable grading practices, the use of *OER/ZTC textbooks, student surveys capturing classroom voices, enhanced partnerships with student services, and faculty recruitment or training plans*. However, we are not aware of a strong body of published, peer-reviewed, and replicated research that clearly demonstrates a positive correlation, much less causation, between some of the proposed strategies listed above and measurable improvements in student performance.

Given the current limited evidence base supporting the efficacy of these approaches, I will refrain from further discussion on them for now. However, I remain very interested in exploring well-documented research on these strategies and would welcome any peer-reviewed and replicated studies that demonstrate their effectiveness.

Program Review

Thank you again for your commitment to improving student outcomes and for fostering this important dialogue.

10C. Improvements Based on SLOs and PLOs

What specific strategies do you plan to implement, based upon the results of your SLO and PLO assessment, and how do you anticipate those changes will contribute to more equitable outcomes?

Introductory Note: *The question seems to assume the following:*

- *· That reported results need to be improved via new strategies (Ok, maybe).*
- *· Moreover, with respect to equity, that:*
- *a) the results lack equity and.*
- *b) that the cause of the absence of equity can be known and.*
- *c) the definition of "equity" is universally understood*
- *c) that lack of equity has a remedy that is under the program's power to execute (again, maybe).*

Introductory Note: *The question seems to assume the following:*

- *· That reported results need to be improved via new strategies (Ok, maybe).*
- *· Moreover, with respect to equity, that:*
- *a) the results lack equity and.*
- *b) that the cause of the absence of equity can be known and.*
- *c) the definition of "equity" is universally understood*
- *c) that lack of equity has a remedy that is under the program's power to execute (again, maybe).*

Reminding the reader of the SLOs for Econ 100 and 102 as well as PLOs for the social sciences
ECON 100 SLOs

- **Opportunity Cost:**
- **Ingredients for long term growth**:
- **Positive vs Normative Statements:**

SLOs ECON 102 SLOs

- **Opportunity Cost:** .
- **Costs**:
- **Positive vs Normative Statements**:

PLOs Social Sciences

- Analyze social science concepts and theories.
- Evaluate diverse viewpoints related to the human experience.
- Produce evidence-based arguments.

With respect to the SLOs and PLOs above and any outcomes that appear inequitable I plan to review literature concerning:
the implementation of culturally responsive teaching,
equitable access to resources and academic support,
effective use of data to identify and address disparities, and
the creation of an inclusive, student-centered learning environment.

Program Review

It is also important that those teaching in my discipline reflect on their own implicit biases and prioritize a student-centered approach, acknowledging that systemic factors—not solely individual performance—contribute to inequities within higher education.

However, it should be noted if my reading of the literature in this area does not offer peer-reviewed and replicated examples of teaching practices that materially improve student performance, I will likely not employ many of the ideas discussed in the literature. Since facuty members today already share their scarce time with many different projects on campus (e.g., mentoring honors students, tutoring students, working with clubs and or student organizations like PTK and HTP etc...) we have to be careful with each addtional thing we take on. Finally It's also worth noting that a recent meta-analysis of implicit bias work (499 studies over 20 years involving 80,859 participants) calls into question some of the very assumptions that this current question is premised on. It seems as if the literature in this field is fluid See https://www.law.georgetown.edu/wp-content/uploads/2017/10/Can-We-Really-Measure-Implicit-Bias_-Maybe-Not-The-Chronicle-of-Higher-Education.pdf

To my knowledge this meta analysis has not been refuted.

Supporting Information

Resource Requests