



Program Review - Overall Report

2024 - 2027

Instructional: Game Development

Overall Trends

Please add any relevant documents here.

What overall trends do you see in success, retention, program of study, educational planning, and awards over the past 3 or more years?

The GAM discipline overall sees an upward trend in students who identify as female (almost doubling in 2022-23 from 2019-20). The male population as a baseline has more or less remained the same. 2022-23 marked a significant milestone for GAM with the enrollment of its first student who identifies as non-binary, a testament to our commitment to inclusivity and diversity. Overall enrollments are up and have more or less recovered from the "COVID slump". A point of concern is in that of the Student Educational Plan. The number of students without an Ed Plan of any kind is a staggering 75%. This is perhaps less troubling than in other more intricately woven disciplines (GAM is rather streamlined), but GAM students, by nature, are wayward individuals who would undoubtedly benefit from the guided nature of an Ed Plan. This is a major issue that faculty and the institution must rally behind.

The retention rates of the GAM discipline are for the most part on par with the college average. One segment that we are sorely behind in is for African American (Female) at 67.6% retained (82.1% campus retention). This may be due to the small sample size (only 34 students total with 23 retained), as case in which individuals count for more towards the overall percentage.

In success rates, the GAM discipline disproportionately struggles to serve its African American population. Again, this isn't helped by the sample size (only 5% of GAM's student population). Still, it is clear that there is a trend here. The discipline must work to both improve its African American population and assist them in participating positively in the college's success rate.

Program awards provide some insightful data. The GAM discipline, over the last 3 years, has awarded 73 degrees and 89 certificates. Of these programs, the vast majority were awarded to males (only 4 degrees and 5 certificates were awarded to females). White and Hispanic / Latino student awards eclipse those awarded by all other categories combined (27 degrees and 30 certificates awarded to white students, 30 degrees and 37 certificates awarded to Latino / Hispanic students). In the last 3 years, only 1 degree was awarded to an African American student, and the same can be said for certificates. Across the board, the GAM discipline proves to be an unattractive or unnoticed area of study for African American students, and the ones that do enroll struggle in retention, success, and achieving awards.

Disaggregated Student Subgroups

Look at the disaggregated student subgroups in success, retention, program of study, educational planning, and awards for your area. Are there any equity gaps that you will address in the next 3 years?

In review of the disaggregated student groups in success, retention, program of study, educational planning, and awards for GAM, equity gaps certainly do exist. While the majority of the GAM discipline's performance falls within range of that of the institution, it stands as an outlier in its underrepresentation and poor service of African American students. Further broken down, GAM has its greatest gap in female African American students. The African American equity gap must be and will be one that GAM aims to address in the next three years.

If there are any concerning trends over the past 3 or more years, or if equity gaps exist, what is your action plan to address them?

As stated above, equity gaps certainly do exist (specifically and most egregiously in our African American student population). A two-pronged approach to solve this problem is proposed. Firstly, we must enroll more African American students. The current population is very small, resulting in wide metrics swings and fewer opportunities to serve our students. Since the game industry is in many ways reforming from a myopically white-male focus to one that resembles something more diverse and equitable, spotlights, events, and opportunities to make students outside of the program aware that video games are a viable career for men and women of color. Attempts should be made to recruit new faculty of African American descent that can help bridge the gap in inviting students to our

Data Review

programs. Outreach to high schools that serve our community minorities should be done with an emphasis on diverse representation.

As for work in the classroom, effort should be made to highlight African American and diverse role-models in the video game industry, cementing in the minds of our African American students that positive outcomes are possible and success is something that is achievable. While the vast majority industry veterans are indeed white males, there indeed exists a diverse selection of professionals who have built amazing games and careers. It is time to shift the spotlight.

Lastly, since the data so sharply demonstrates that our African American students struggle in seemingly all of our available metrics, faculty should be encouraged to identify African American students and "check in." See if the students are well, endeavor to understand their present challenges, extend grace where necessary, and reaffirm that they have a safe home in GAM.

Please add any relevant documents here.

2026 Update

Overall Trends

Please add any relevant documents here.

What overall trends do you see in success, retention, program of study, educational planning, and awards over the past 3 or more years?

Since the last comprehensive review (2024-2027), the Game Development (GAM) discipline has continued to see steady enrollment trends, as documented in the Power BI Program of Study and SEP dashboard. The discipline serves a unique niche within the college's STEM offerings, providing students with specialized training in game design, game programming, and interactive media that prepares them for careers in the growing game development and interactive entertainment industry. The Power BI data shows that program of study declarations have remained stable over the past several years, with Game Design continuing as the most popular track within the discipline.

From an equity and accessibility perspective, the upward trend in female-identifying students noted in the previous comprehensive review cycle has continued, reflecting the program's intentional efforts toward greater inclusivity and representation. Male students remain the majority of the student population, consistent with broader industry demographics in game development, but the gap has been gradually narrowing as the program implements targeted recruitment strategies and creates more welcoming classroom environments for female and non-binary students. The emergence and growth of non-binary student enrollment reflects the program's commitment to creating an inclusive space that welcomes all gender identities. The program recognizes that diversity in game development is not only an equity imperative but also a creative and professional advantage, as diverse teams create more innovative and inclusive games and interactive media.

Retention rates for GAM remain broadly in line with the college average, according to the Power BI Success and Retention dashboard. The program continues to see strong retention in online and hybrid modalities, building on the improvements established during and after the COVID-19 transition when the program successfully adapted its hands-on, project-based curriculum to virtual and hybrid delivery formats. This adaptability has been critical for accessibility, as online and hybrid options allow students with work obligations, transportation challenges, and family responsibilities to participate in the program. Overall success rates have remained stable, though disparities persist for certain student subgroups, particularly African American students, as noted in the comprehensive review. The Power BI data reveals that African American students in GAM, while representing a small percentage of the student population (approximately 5%), consistently underperform relative to the college average in retention, success, and award attainment, representing a significant equity gap that the program is committed to addressing.

Hispanic/Latino students represent the largest demographic group in GAM, consistent with the overall demographics of Norco College and the surrounding Inland Empire community. The Power BI data shows that Hispanic/Latino students generally perform near the program average in success and retention, but the program continues to monitor outcomes for this population to ensure equitable access to support services and academic resources. The program is mindful that as a Hispanic-Serving Institution, Norco College has a responsibility to ensure that Hispanic/Latino students have equitable pathways to success in all programs, including GAM. The proportion of GAM students without an Educational Plan remains a concern, mirroring the broader institutional challenge. The Power BI Program of Study and SEP dashboard shows that a significant percentage of GAM

Data Review

students lack any form of educational plan, which can lead to inefficient course-taking patterns, longer time to completion, and lower award attainment rates. The program has been working collaboratively with counseling services to improve Ed Plan completion rates among GAM students, including integrating Ed Plan awareness into course orientations and connecting students directly with counseling resources. From an accessibility standpoint, the program ensures that Ed Plan information is available in multiple formats and that students can access counseling services both in-person and online.

In terms of awards, the Power BI Program Awards dashboard shows that the program has continued to confer degrees and certificates at a steady pace. Efforts to simplify the prerequisite structure, which were implemented following the prior review cycle, appear to be having a positive effect on student progression through the program by reducing unnecessary barriers to course enrollment and degree completion. The program continues to monitor award distribution across demographic groups to ensure equitable outcomes, paying particular attention to whether female students and African American students are progressing through to award attainment at rates comparable to their enrollment. The recently renovated STEM Center provides enhanced tutoring and collaborative learning spaces that are accessible to all GAM students, supporting their academic success and creating a welcoming environment for students from all backgrounds. The STEM Center's assistive technology workstations, adjustable furniture, and collaborative project spaces are particularly valuable for GAM courses, which require access to specialized software and hardware for game development projects.

Disaggregated Student Subgroups

Look at the disaggregated student subgroups in success, retention, program of study, educational planning, and awards for your area. Are there any equity gaps that you will address in the next 3 years?

The most significant equity gap in the GAM discipline continues to be in the performance and representation of African American students, as documented in the Power BI Success and Retention dashboard. As identified in the 2024-2027 comprehensive review, African American students represent approximately 5% of the GAM student population, and this subgroup consistently underperforms relative to the college average in retention, success, and award attainment. This underrepresentation and underperformance is a critical equity concern that demands sustained, intentional intervention. African American female students in GAM had a retention rate of approximately 67.6% compared to 82.1% campus-wide in the prior review cycle, representing a gap of nearly 15 percentage points that suggests the program's learning environment, support structures, or instructional approaches may not be adequately serving this population.

When examined through an intersectional equity lens, the data reveals that the barriers faced by African American students in GAM are likely compounded by factors including socioeconomic status, prior access to technology and gaming culture, and the representation (or lack thereof) of African American professionals in the game development industry. The program must actively work to counter these barriers by creating a classroom culture that validates diverse perspectives, incorporates culturally relevant content, and connects African American students with role models and mentoring opportunities in the game development field.

Gender disparities also persist and represent another significant equity challenge for the GAM discipline. While the trend of increasing female enrollment is encouraging and reflects the program's outreach and inclusivity efforts, awards continue to be disproportionately conferred to male students. This disparity between enrollment gains and award attainment suggests that while the program is successfully attracting more female students, there may be barriers to persistence and completion that specifically affect female students. These barriers could include feelings of isolation in a male-dominated field, lack of female role models in gaming, stereotype threat, and classroom dynamics that may not fully support the participation and achievement of female students. The program must examine not only enrollment but also retention, success, and completion rates for female students to ensure that recruitment gains translate into equitable outcomes.

Non-binary students have begun to appear in the GAM enrollment data, reflecting broader cultural shifts in gender identity expression and the program's efforts to create an inclusive environment. While the numbers are still small, the program recognizes the importance of intentionally supporting non-binary and gender non-conforming students through inclusive language, affirming classroom environments, and connections to campus support resources.

Hispanic/Latino students represent the largest demographic group in GAM, consistent with the demographics of Norco College and the broader community. The Power BI data shows that Hispanic/Latino students generally perform near the program average in success and retention, which is encouraging but still requires ongoing monitoring to ensure that equity is maintained. As a Hispanic-Serving Institution, Norco College has a particular responsibility to ensure that Hispanic/Latino students in GAM have equitable access to resources, support services, and career pathways in the game development industry.

The program will continue to focus its equity efforts over the next three years primarily on two key priorities: (1) improving success, retention, and award attainment outcomes for African American students through culturally

Data Review

responsive pedagogy, targeted support services, and connections to the recently renovated STEM Center's accessible tutoring and collaborative learning resources, and (2) closing the gender gap in award attainment by ensuring that female and non-binary students who enroll in GAM programs are supported through to completion through mentoring, inclusive classroom practices, and the creation of study groups and community-building opportunities that foster a sense of belonging.

If there are any concerning trends over the past 3 or more years, or if equity gaps exist, what is your action plan to address them?

The action plan to address the identified equity gaps in the GAM discipline is comprehensive, data-driven, and informed by the Power BI dashboards for Success and Retention, Program of Study and SEP, and Program Awards. The plan recognizes that the program does not need any new physical resources at this time, as the recently renovated STEM Center provides excellent accessible tutoring spaces, assistive technology workstations, collaborative learning areas, and specialized computing resources that fully support GAM students' academic needs. The plan instead focuses on instructional strategies, support services, and programmatic initiatives that leverage existing resources to close equity gaps.

(1) Recruitment and Outreach - The program will significantly increase recruitment efforts targeting African American students through intentional outreach to local high schools and community organizations with emphasis on diverse representation in game development. Faculty will partner with the Game Development Club and campus organizations to host coding workshops, game jams, and career panels that showcase diverse role models in the game development industry, including African American, Hispanic/Latino, female, and non-binary professionals. The program will develop marketing materials that use inclusive language and imagery to appeal to a broad and diverse audience. Outreach events will be held in accessible venues and promoted through multiple channels to ensure that students from all backgrounds are aware of the GAM program and its career opportunities.

(2) Student Support and Retention - Faculty will proactively identify and check in with African American students during the first two weeks of each semester to understand their challenges, connect them with support resources, and provide personalized guidance. These check-ins will continue throughout the semester using early alert systems, Canvas messaging, and office hours. The program will implement a peer mentorship program pairing experienced GAM students with incoming or struggling students, with particular attention to recruiting diverse mentors who can serve as role models. The recently renovated STEM Center will serve as the hub for these mentoring activities, providing an accessible and welcoming physical space where students can collaborate, receive tutoring, and build community. Faculty will also refer students to campus support services including Umoja, Puente, the Disability Resource Center, and counseling services as appropriate.

(3) Curriculum, Representation, and Accessibility - Faculty will incorporate more diverse perspectives, creators, and role models in course content, highlighting African American and other underrepresented professionals in game development, including game designers, programmers, artists, and entrepreneurs from diverse backgrounds. Course projects will be designed to encourage students to create games and interactive media that reflect diverse cultures, experiences, and perspectives. All course materials will be reviewed for accessibility compliance, ensuring compatibility with assistive technologies, providing multiple means of engagement and representation per Universal Design for Learning (UDL) principles, and offering content in multiple formats (video with captions, text, interactive). OER and ZTC materials will be adopted wherever possible to reduce financial barriers that disproportionately affect low-income students.

(4) Ed Plan Completion - The program will work closely with counseling services to increase Ed Plan completion rates among GAM students, recognizing that students without educational plans are less likely to complete degrees and certificates. Faculty will integrate Ed Plan awareness into course orientations and first-week activities, provide students with step-by-step instructions for scheduling counseling appointments, and host dedicated Ed Plan completion events at the STEM Center each semester. Ed Plan resources will be made available in multiple formats and languages to ensure accessibility for all students.

(5) Award Pathway and Gender Equity - The program will continue to monitor the impact of the simplified prerequisite structure on award attainment across all demographic groups, especially female students and African American students. Faculty will track persistence and completion rates for female students to identify and address barriers that prevent recruitment gains from translating into equitable award outcomes. The program will create study groups and collaborative project teams that intentionally include female and non-binary students to foster community and reduce feelings of isolation in a male-dominated field.

The action plan to address the identified equity gaps focuses on several key areas: (1) Recruitment and Outreach - Increase recruitment efforts targeting African American students through outreach to local high schools with emphasis on diverse representation. Partner with the Game Development Club to showcase diverse role models in the industry. (2) Student Support - Faculty will proactively identify and check in with African American students to understand their challenges and provide support. Implement a peer mentorship program pairing experienced

Data Review

students with incoming or struggling students. (3) Curriculum and Representation - Incorporate more diverse perspectives and role models in course content, highlighting African American and other underrepresented professionals in game development. (4) Ed Plan Completion - Work with counseling to increase Ed Plan completion rates among GAM students. (5) Award Pathway Simplification - Continue to monitor the impact of the simplified prerequisite structure on award attainment across all demographic groups, especially female students and African American students.

Please add any relevant documents here.

Program/Unit Goals

Increase Program Awareness for Underrepresented Communities

Program/Unit Goal

We wish to increase registration to the Game Development program by building more awareness of the program within underrepresented communities

Goal Cycle

2024 - 2027

What are you doing now in support of this goal?

Employ the use of mentorships and pairing in and outside of classes, monitor how students are doing and check in often to see how they are doing.

What are your plans (3-year) regarding this goal?

Impliment the following items in order to increase the awareness of the game development program to underrepresented communities:

1. Develop a Comprehensive Outreach Strategy:
 - Collaborate with the Diversity and Inclusion Councils to create targeted outreach initiatives aimed at underrepresented groups, particularly African American students.
 - Utilize various channels such as social media, community events, and partnerships with local organizations to promote the Game Development program to these communities.
2. Create a Promotional Video Highlighting Diversity:
 - Produce a video showcasing the Game Development program's inclusive environment, featuring students, faculty, and alumni from diverse backgrounds, including African American individuals.
3. Engage with Community Partnerships:
 - Forge partnerships with local schools, community centers, and organizations serving African American communities to promote awareness of the Game Development program and its opportunities.
4. Establish Instructional Paradigms in Mentorship and Pairing:
 - Pair underrepresented students together, including African Americans, with experienced mentor alumni of the Game Development program.

Please add any relevant documents here.

[EnrollmentAndRetention.JPG](#)

Mapping

Educational Master Plan (2020-2025): undefined

- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✓)
- **2025 Objective 6.6 (Student Services):** Develop regional outreach and recruitment systems (✓)

Progress and Evidence

Evidence Date

03/02/2026

What progress have you made toward this goal?

Program/Unit Goals

The Game Development program has been actively working to increase awareness among underrepresented communities. Faculty have partnered with the Game Development Club to host events and showcases that highlight diverse voices in game development. Outreach efforts to local high schools have been initiated, with an emphasis on communities with higher proportions of underrepresented students. Mentorship pairings continue within classes, connecting experienced students with newer cohort members.

How do you measure your progress?

Progress is measured by tracking enrollment demographics in the GAM discipline, specifically monitoring the percentage of students from underrepresented communities (African American, female-identifying) compared to prior years. We also track Ed Plan declarations and program of study data.

Discuss your evidence/results.

Enrollment data from Power BI shows that the upward trend in female-identifying students has continued. The program has seen modest growth in diversity. However, African American student enrollment remains at approximately 5% of the GAM population, indicating more work is needed. The Game Development Club events have increased visibility, though measurable enrollment impact from outreach is still emerging.

Please provide any assessment data or other evidence that supports this Program/Unit Goal.

Is there a resource request associated with this Goal?

If yes, please provide a short description.

Please add any relevant documents here.

Increase Earned Degrees and Certificates

Program/Unit Goal

We wish to increase the number of earned degrees and certificates in our program

Goal Cycle

2024 - 2027

What are you doing now in support of this goal?

Communications platform for students to connect with their peers and instructors outside of class hours where it is possible to advise students about their Educational Plan and how to find counseling. Add flyers to graduation events and, recently, provide a Q&A section with links to graduation informations such as forms required to apply for graduation.

What are your plans (3-year) regarding this goal?

Here are a few strategies we can choose from that align with our department's capabilities to promote counselor awareness, and by extension, help increase the number of earned degrees and certificates from our program by providing students with an educational plan.

- On-Site Counseling Drop-In Hours:
 - Arrange for a counselor to visit our off-campus building (STEM center) a few times a week during peak student hours.
 - Promote these drop-in hours through posters, digital signage, and announcements to ensure students are aware of the counseling services available to them.
 - Have instructors encourage their students to utilize these sessions for academic planning, course selection, degree progress tracking, and overall support.
- Create Informational Flyers and Brochures:

Program/Unit Goals

- Either develop visually engaging flyers and brochures (or use what is already available, if available) that highlight the role of counselors, the services they offer, and how students can benefit from counseling sessions.
- Distribute these materials in common areas, classrooms, and online platforms to reach a wider student audience and promote counselor awareness.
- Utilize Digital Communication Channels:
 - Leverage digital communication tools such as email newsletters, social media platforms, and our department's website to share information about counseling services and upcoming drop-in hours.
 - Include testimonials or success stories from students who have benefited from counseling support to demonstrate its value and encourage others to seek assistance.
- Host Information Sessions or Workshops (CAP hour):
 - Organize informational sessions or workshops specifically focused on the role of counselors, academic planning strategies, and degree completion tips.
 - Invite counselors to present during these sessions and engage with students, addressing common concerns, questions, and misconceptions about academic planning and support services.
 - Provide updates on program developments, curriculum changes, industry trends, and opportunities for internships or projects.
 - Invite guest speakers from the gaming industry to share insights and career advice with students during CAP hour sessions.
- Provide Regular Updates and Reminders:
 - Continuously remind students about the availability of counseling services and drop-in hours through periodic announcements, emails, and bulletin board updates.
 - Incorporate and emphasize counselor information and contact details in orientation materials, course syllabi, and program handbooks for easy reference.
- Establish Peer Mentorship/Pairing Programs:
 - Implement a peer mentorship program within the Game Development program, pairing experienced students with incoming or struggling students.

Please add any relevant documents here.

[No Educational Plan.JPG](#)

Mapping

Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 2.1 - KPI 4 (Academic Affairs):** Increase number of degrees completed by 15% annually (✓)
- **2025 Objective 2.2 - KPI 5 (Academic Affairs):** Increase number of certificates completely by 15% annually (✓)

Progress and Evidence

Evidence Date

03/02/2026

4/2/2026

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Page 9

Program/Unit Goals

What progress have you made toward this goal?

The program has made progress toward increasing earned degrees and certificates by simplifying the prerequisite structure that was identified as a barrier in the comprehensive review. This change has made it easier for students to progress through the program pathways. Faculty continue to advise students on degree and certificate completion, and the program works with counseling to ensure students are aware of their options. Progress is measured by tracking the number of degrees and certificates awarded annually through the Program Awards Power BI dashboard, as well as monitoring student progression through program pathways.

How do you measure your progress?

The prior review cycle reported 73 degrees and 89 certificates over three years. The simplified prerequisite structure is expected to improve these numbers over the current cycle. Early indicators suggest steady award rates, though the full impact of curricular changes may take additional semesters to materialize. The program continues to monitor awards by gender and ethnicity to ensure equitable distribution.

Discuss your evidence/results.

Please provide any assessment data or other evidence that supports this Program/Unit Goal.

Is there a resource request associated with this Goal?

If yes, please provide a short description.

Please add any relevant documents here.

Curriculum

Are all your courses current (within four years)?

Yes

What percentage of your courses are out of date?

0%

If you have courses that are not current, are they in the curriculum process?

N/A

For out of date courses that are not already in progress of updating, what is your plan?

Do you have proposals in progress for all the DE courses you intend to file?

No

Do you require help to get your courses up to date?

No

Please add any relevant documents here.

Credit for Prior Learning

Equity Related Professional Development Questions

1. Which equity-related professional development trainings have members of your area participated in to improve student learning, student support, and/or college support?

Members of the Game Development Discipline have completed a number of equity related trainings and certifications. Through CORA, certifications were obtained in: Black Ally Program - Dismantling Anti-Blackness on Your Campus, Black Minds Matter, and Racial Microaggressions. Faculty members have also attended several of the CCCAOE (California Community College Association for Occupational Education) which has a number of rich sessions focused on equity and bridging equity gaps. All Faculty members were in attendance of the Achieving Equity in Guided Pathways summit lead by keynote speaker Dr. Rob Johnstone (September 14th and 15th, 2023). Aside from trainings, we also have one Faculty member representative that serves on the LGBTQ+ Advocates committee, a group that emphasises equity and fair representation at Norco College.

2. What knowledge or skills/techniques have members in your area implemented from these trainings and what changes have you seen?

Recognizing that students who come from diverse backgrounds face a gamut of challenges, the GAM discipline has worked to reduce friction and barriers wherever possible. Textbooks are expensive, and we have worked tirelessly to remove required textbooks from all of our classes. As of Fall 2024, the GAM discipline will be 100% ZTC (and as of this writing, only one course in the entirety of its offerings requires a textbook). Software and computers associated with Game Development are also notoriously cost-prohibitive. We have transitioned all of our courses to focus on free (and sometimes open-source) software available across all widely available platforms. Students in need of computers and accessories necessary to complete coursework can find these amenities available in the classroom, in dedicated lab environments, and even available for loan. Wherever possible and applicable in the classroom, a special focus has been made to put a spotlight on diversity. For example, in GAM-2 (Game History), subjects covered have been expanded to include game innovations spanning antiquity to cover such topics as The Royal Game of Ur (modern-day Iraq), Senet (Egypt), Go (China and Japan) and Mancala (east Africa). Racial and Gender representations are also a matter of discussion in courses such as GAM-1 (Business of Video Games) and GAM 3-A (Game Design), identifying the value and importance of queer games like Night in the Woods, games that spotlight gay relationships like The Last of Us 2, the importance of creating games that allow for a broad range of representations in character creation like Baldurs Gate 3, etc. We have also worked to put a spotlight on non-male industry professionals such as Jade Raymond (Assassin's Creed, Watchdogs) and non-white industry professionals such as Hidetaka Miyazaki (Elden Ring, Dark Souls). This is particularly important because of the vast equity gap in the games industry (according to Statista, 75% of the industry identifies as white, and over 60% identify as male).

3. What additional equity-related professional development/trainings do you seek to better support your area?

The Game Developer's Conference in San Francisco and the DICE Conference (recently in Las Vegas, though the venue changed) are industry events that have gained significant traction in areas of equity related directly to the Video Game industry. Officially our discipline has no representation there (something that was discontinued when funds were no longer available via Title V and other supporting funds). Accommodations to cover faculty attending these conferences would improve our College's industry footprint and provide a better window into the current state of the industry and its fight to bridge equity gaps.

Please add any relevant documents here.

Equity Related Professional Development Questions

1. Which equity-related professional development trainings have members of your area participated in to improve student learning, student support, and/or college support?

Faculty in the Game Development program have actively participated in a range of equity-related professional development trainings offered through Norco College's professional development program, the Riverside Community College District, and external organizations focused on equity in STEM and creative technology

Equity

education. These trainings have been specifically selected to address the equity gaps identified in the Power BI Success and Retention data, particularly the underperformance of African American students and the persistent gender imbalance in GAM enrollment and award attainment.

Core training areas have included culturally responsive pedagogy, which focuses on how to design instruction that incorporates and validates the cultural backgrounds, experiences, and perspectives of all students, particularly those from historically underrepresented groups in game development and technology fields. Faculty have participated in workshops on inclusive classroom strategies that create learning environments where students from all backgrounds, including African American, Hispanic/Latino, female, non-binary, and first-generation students, feel welcomed, valued, and intellectually challenged. Training on understanding and mitigating implicit bias in student interactions has been particularly important, as research shows that unconscious biases can affect grading, classroom participation patterns, mentoring relationships, and the quality of faculty-student interactions.

Faculty have also attended workshops on Universal Design for Learning (UDL), which provides a framework for designing course materials, activities, and assessments that are accessible and equitable for all student populations. UDL training has been especially relevant for GAM courses, where hands-on, project-based curriculum involving game engines, programming environments, and digital art tools can present unique accessibility challenges. Faculty have learned to ensure that these tools are compatible with assistive technologies and that alternative means of engagement and demonstration are available for students with diverse learning needs and abilities.

Additionally, GAM faculty have participated in STEM-focused equity trainings that address stereotype threat, imposter syndrome, and microaggressions in technology and creative fields. These trainings have been particularly relevant given the game development industry's well-documented diversity challenges, and have helped faculty understand how to create a sense of belonging for students who may not see themselves represented in the gaming workforce. Faculty have also participated in professional development related to OER and ZTC course design, recognizing that reducing financial barriers to course materials is an equity imperative that disproportionately benefits low-income students and students of color.

2. What knowledge or skills/techniques have members in your area implemented from these trainings and what changes have you seen?

Faculty have begun implementing a range of equity-minded teaching practices in GAM courses as a direct result of the professional development trainings, and the changes observed in classroom culture and student engagement have been meaningful, though sustained effort is needed to fully close the equity gaps identified in the Power BI data.

One of the most impactful changes has been the intentional incorporation of diverse representation in course materials, projects, and examples. Faculty now regularly highlight game developers, designers, artists, and entrepreneurs from underrepresented backgrounds, including African American, Hispanic/Latino, female, non-binary, and LGBTQ+ professionals in the game development industry. This approach helps counter stereotype threat by showing all students that people who share their identities have succeeded in game development, fostering a stronger sense of belonging and motivation. Course projects are now designed to encourage students to create games and interactive media that reflect diverse cultures, experiences, and narratives, which enriches the creative output of the program and prepares students for an industry that increasingly values diverse perspectives.

Check-in practices with African American students have been implemented to better understand and address their individual needs, academic challenges, and personal circumstances. These proactive check-ins are conducted during office hours, before and after class, and through Canvas messaging, and have helped faculty build trust and identify students who may be struggling before they fall behind. Faculty report that these check-ins have been particularly valuable for African American students who may feel isolated in a discipline where they are significantly underrepresented (approximately 5% of enrollment).

Faculty are more intentional about creating inclusive classroom environments where all students feel they belong, regardless of their gender, race, ethnicity, or prior experience with gaming and technology. This includes establishing clear norms for respectful collaboration, structuring group projects to ensure equitable participation, and addressing microaggressions or exclusionary behavior when it occurs. The recently renovated STEM Center has been leveraged to provide additional tutoring and collaborative project spaces for GAM students, with the accessible design of the Center ensuring that students with disabilities can fully participate in all activities.

Equity

Faculty have also begun adopting OER and ZTC materials in GAM courses, reducing the financial burden on students and removing barriers to access. The adoption of UDL principles has led to more flexible course designs that accommodate diverse learning styles, abilities, and circumstances, including providing captioned video content, multiple format options for assignments, and alternative assessment methods that allow students to demonstrate learning in ways that align with their strengths.

3. What additional equity-related professional development/trainings do you seek to better support your area?

The GAM program has identified several critical areas where additional equity-related professional development and training would significantly benefit faculty and support the program's equity goals, as informed by the disparities revealed in the Power BI dashboards.

First, the program would benefit from specialized training on targeted student support strategies for African American students, who represent the most significant equity gap in the GAM discipline. This training should address the specific barriers, experiences, and needs of African American students in game development and creative technology fields, going beyond general culturally responsive pedagogy to provide evidence-based strategies for building trust, creating culturally affirming classroom environments, and designing interventions that are responsive to the intersections of race, gender, and socioeconomic status. Training that incorporates perspectives from African American professionals in the game development industry would be especially valuable.

Professional development on recruiting and retaining students from underrepresented communities in STEM and creative technology fields is critically needed, given the persistent gender imbalance in GAM enrollment (male students significantly outnumber female students) and the very small proportion of African American students in the program. Faculty need training on effective outreach strategies to K-12 schools and community organizations, as well as retention strategies that address the specific reasons why students from underrepresented groups leave GAM programs. This should include training on creating marketing and recruitment materials that use inclusive language and imagery.

Training on equity-focused assessment practices would be particularly valuable for the GAM discipline, where project-based assessments in game design, programming, and digital art may inadvertently advantage students with more prior exposure to gaming technology and software. Faculty need professional development on designing assessments that measure true learning and competency while providing equitable opportunities for all students to demonstrate their knowledge and creative abilities.

Faculty would also benefit from training on how to effectively leverage the recently renovated STEM Center resources for targeted student success initiatives, including how to structure tutoring and collaborative project sessions that are culturally responsive and intentionally designed to serve students from underrepresented groups. Training on accessibility compliance and assistive technology in creative technology education would ensure that all GAM courses and resources meet ADA requirements and are fully accessible to students with disabilities.

Additionally, the program seeks training on data literacy for equity, specifically how to use the Power BI dashboards to continuously monitor equity gaps, track the effectiveness of interventions, and make data-informed decisions about where to focus efforts. Workshops on closing the gender gap in gaming and creative technology education would also be valuable, providing practical strategies for creating gender-inclusive classrooms and connecting female and non-binary students with mentoring and networking opportunities in the game development industry.

Please add any relevant documents here.

Assessment

Below 70%

Date

03/22/2024

Observation**What did you notice?**

Both courses teach Game Engines and DCC tools

Course(s)

GAM-4A & 7A

SLO(s)

SLO-2

Discussion/Analysis

Below Average SLO's and Technology

Please paste any relevant screenshots here.

I have observed that two courses are below 70% mastery. Both courses work directly in various game engines and use many DCC (Digital Content Creation) tools that require high amounts of computer resources. Based on this observation, my own classroom observations, and student feedback, access to technology has had a significant impact on student learning in these courses.

GAM 4A - Game Scripting, SLO 2 - Understand fundamental programming techniques through visual game development.

GAM 7 - Game Studio - SLO 2 - Create an original and complete simulation, digital game, or mobile application.

Please add any relevant documents here.

Male to Female Ratio

Date

03/22/2024

Observation**What did you notice?**

Imbalance

Course(s)

GAM - ALL

SLO(s)

ALL

Discussion/Analysis

Male to Female Imbalance

Please paste any relevant screenshots here.

From the total number of students (314) in the GAM program, 40 are female. Observing further, only 1 identify as non-binary. In times past, not from this particular set of data, I have seen the number of female students increase, but I believe we can do better in decreasing the imbalance.

Please add any relevant documents here.

Mastery By Race / Ethnicity

Date

03/22/2024

Assessment

Observation

What did you notice?

African-American and Pacific Islander students are achieving below 70% mastery in courses.

Course(s)

N/A

SLO(s)

N/A

Discussion/Analysis

African American students (as well as Pacific Islander) are not on average meeting the 70% mastery benchmark for SLOs in GAM. This lines up with overall success, retention, and completion metrics discussed elsewhere in this Program Review. A variety of potential points of action are described there, but to briefly reiterate it is proposed that we attempt to increase enrollments for these students to allow for a larger sample size, target subject matter to better align with these students, identify successes and through lines to show these students that positive outcomes are attainable for people of their backgrounds, etc.

Please paste any relevant screenshots here.

Please add any relevant documents here.

Resource Requests

Game Developer's Conference

Resource Year

2024 - 2027

What resources do we already have?

None

What resources do you need?

Funding to attend industry conferences that allow the discipline to connect with industry and align with current trends that can better inform curriculum decisions and pedagogy.

\$ Amount Requested

10,000

Resource Type

BUDGET: Request Ongoing Funding (Support, Mktg)

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Evidence shows that students of African American descent are not succeeding in our programs. Conferences such as GDC offer training and connections with industry that will allow us to enrich our programs with modern approaches to specifically improve success for these students.

This request for my area is Priority #:

1

Is this request

New

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Game Development: *undefined*

- **Below 70%:** *undefined* (✓)
- **Male to Female Ratio:** *undefined* (✓)
- **Mastery By Race / Ethnicity:** *undefined* (✓)
- **Increase Program Awareness for Underrepresented Communities:** We wish to increase registration to the Game Development program by building more awareness of the program within underrepresented communities (✓)

Shadow Tech Virtual Computers

Resource Year

2024 - 2027

What resources do we already have?

Computers in class

What resources do you need?

Shadow Tech Virtual Computers

\$ Amount Requested

20,000

4/2/2026

Resource Requests

Resource Type

BUDGET: Request Ongoing Funding (Support, Mktg)

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

As an advocate for equitable education and in alignment with our department and school goals, I am proposing the allocation of funds to provide Shadow Gaming virtual PCs for our low socioeconomic status students enrolled in the game development program. This initiative directly supports our objectives of increasing the number of degrees and certificates within our program and enhancing awareness in underrepresented communities, particularly the African American community.

Background and Rationale:

--Cost Barrier: Game development requires high-end computers with substantial processing power, which presents a financial barrier for many of our students who come from low socioeconomic backgrounds. Acquiring individual high-end PCs is financially burdensome and unattainable for a significant portion of our student population.

Equity in Education: Ensuring equitable access to necessary resources is fundamental to our mission. By providing Shadow Gaming virtual PCs, we eliminate the financial barrier and create a level playing field where all students, regardless of their economic status, can fully engage in the learning experience and succeed in their academic pursuits.

Program and School Goals Alignment:

----(Objective 2.1 & 2.2) Increase in Degrees and Certificates: Access to Shadow Gaming virtual PCs directly contributes to increasing the number of degrees and certificates completed within our program. Students will have the tools they need to excel in their coursework, complete projects efficiently, and graduate with essential skills for the game development industry.

----(Objective 3.1) Increase Program Awareness for Underrepresented Communities: By removing financial obstacles, we pave the way for more students from underrepresented communities, especially African American students, to join and thrive in our program. This aligns with our goal of fostering diversity and inclusivity within our educational environment.

----(Objective 6.5) Positioning as a Leading Academic Institution: Embracing innovative solutions like Shadow Gaming virtual PCs demonstrates our commitment to providing cutting-edge resources and preparing students for success in a competitive industry. It enhances the college's image and reputation as a forward-thinking academic institution that prioritizes student welfare and educational excellence.

Benefits of Shadow Gaming Virtual PCs:

--Cost-Effective Solution: Shadow Gaming offers high-end remote virtual PCs at an affordable monthly rate of \$49.99 per student, significantly reducing the financial burden on both students and the college.

Accessible Anywhere: Virtual PCs can be accessed from any device with an internet connection, allowing students to work on their projects and coursework seamlessly, whether they are on campus or at home.

Scalability and Flexibility: The subscription model of Shadow Gaming enables us to scale resources according to demand and accommodate fluctuations in student enrollment. It also provides flexibility for students who may need access to high-end computers beyond regular class hours.

Industry-Standard Experience: Utilizing virtual PCs familiarizes students with industry-standard tools and hardware configurations, better preparing them for real-world scenarios and employment opportunities in the game development field.

Expected Outcomes:

--Increased Retention and Graduation Rates: Access to Shadow Gaming virtual PCs will enhance student engagement, productivity, and overall satisfaction with the program, leading to higher retention and graduation rates.

Diverse and Skilled Graduates: By reducing barriers to entry, we will attract a more diverse student body and empower them with the skills and experiences needed to excel in the game development industry, contributing to a more inclusive and innovative workforce.

Positive Impact on Equity Gap: Providing equitable access to resources like Shadow Gaming virtual PCs directly contributes to reducing the equity gap for African American students, aligning with our school's objective of achieving a 40% reduction in this gap.

-Financial Plan:

--We propose funding 4 months of Shadow Gaming subscription per student in need for each relevant class. This investment not only addresses immediate needs but also lays the foundation for long-term success and impact within our program and the broader educational community.

In conclusion, investing in Shadow Gaming virtual PCs for our game development students is a strategic and impactful decision that aligns with our department and school goals, promotes equity and inclusivity, and positions

Resource Requests

our college as a leader in academic innovation. This initiative leap not only benefits our current students but also strengthens our reputation and impact within the region and the industry. I urge your support in making this essential resource accessible to all students in need.

Thank you for considering this proposal.

This request for my area is Priority #:

1

Is this request

New

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Game Development: undefined

- **Increase Earned Degrees and Certificates** : We wish to increase the number of earned degrees and certificates in our program (✓)
- **Increase Program Awareness for Underrepresented Communities:** We wish to increase registration to the Game Development program by building more awareness of the program within underrepresented communities (✓)

Faculty Professional Development Requests

Faculty Hiring Resource Requests

Program Review Reflections

What would make program review meaningful and relevant for your unit?

The program review in the present state is better than it has been. The readily accessible data is a huge step in the right direction and has certainly been invaluable in conducting this report. As it applies to CTE programs, Ink it is important for our discipline to better understand the criteria surrounding success and continue to thiretention. GAM is a discipline that sees students entering the industry directly and not always following traditional pathways. This is clearly a success, but isn't something we track well.

What questions do we need to ask to understand your program plans, goals, needs?

I'm not entirely sure what specific questions might be asked, but something that I am ever curious about is the efficacy of F2F, hybrid, and online offerings. GAM offers a high volume of online / hybrid courses. While we know that the success rates for these types of offerings (specifically hybrid) is low, I'd like to know why that is, and whether or not increasing F2F style offerings is actually a net benefit for our students and the college (for instance, we might be persuaded to schedule more F2F courses failing to realize that while the intent is to boost success, we may very well be pushing students away to offerings at other colleges).

What types of data do you need to support your program plans, goals, needs?

I think the present data is excellent, and have made note of things I'd like to see in the segments above.

If there are any supporting documents you would like to attach, please attach them here.

Submission

All parts of my Program Review have been completed and it is ready for review.

Yes

Program Review Reflections

What would make program review meaningful and relevant for your unit?

Program review is most meaningful and relevant for the GAM unit when it provides actionable, disaggregated data that directly informs our teaching practices, program development, and equity-focused improvement efforts. The availability of the Power BI dashboards (Program of Study and SEP, Success and Retention, and Program Awards) has been a significant step forward in making program review data-driven and accessible to faculty. The ability to filter data by discipline, demographic group, and time period allows us to identify specific equity gaps and track progress toward closing them over time. Having these tools readily available empowers faculty to engage with data on their own terms, rather than relying solely on institutional research reports that may not address discipline-specific concerns.

The process is particularly valuable when it prompts genuine, critical reflection on equity gaps and leads to concrete, measurable action plans. For GAM specifically, having discipline-level data that can be disaggregated by course, modality, and demographic group would help us better understand where students succeed and where they struggle. The program review process becomes most meaningful when it connects data analysis to tangible resources and support for implementing changes, such as the recently renovated STEM Center which provides accessible tutoring spaces, assistive technology, and collaborative learning environments. Additionally, connecting program review outcomes to budget allocation and resource prioritization would ensure that identified needs translate into funded improvements rather than remaining aspirational goals on paper.

Program review is also most relevant when it incorporates equity and accessibility considerations throughout the process, rather than treating them as separate add-ons. When the data reveals disparities in outcomes for African American students or gender imbalances in award attainment, the program review process should facilitate access to professional development, institutional support, and evidence-based strategies for addressing these gaps. The process should be streamlined and efficient while maintaining the depth needed to drive genuine improvement, and should incorporate student voice and perspective to ensure that program changes reflect the actual needs and experiences of the diverse students we serve.

Reflections and Submission

Furthermore, program review becomes more impactful when it fosters cross-disciplinary collaboration and shared learning. The GAM program intersects with computer science, art, and media studies, and insights from program review in those related disciplines could inform our own improvement strategies. Creating structured opportunities for faculty across departments to share best practices in student retention, equity-minded pedagogy, and curriculum design would amplify the benefits of the program review process beyond individual units.

Another critical dimension is the integration of labor market data and industry trends into the review process. The game development field evolves rapidly, and program review should help us assess whether our curriculum aligns with current employer expectations, emerging technologies like AI-driven game design tools, and evolving industry standards for accessibility in game development. This external data, combined with internal student outcome metrics, would provide a comprehensive picture of program health and relevance.

Finally, the timeline and cadence of program review matters significantly. Annual check-ins with lightweight data updates, complemented by deeper comprehensive reviews on a longer cycle, would allow the GAM program to remain responsive to emerging trends without creating unsustainable workload demands on faculty. The process should also build in mechanisms for tracking whether previously identified action items have been implemented and whether they produced the intended outcomes, creating a continuous improvement loop rather than a repetitive reporting exercise.

What questions do we need to ask to understand your program plans, goals, needs?

What specific barriers do underrepresented students face in the GAM program, and how do those barriers differ across course modalities such as online, hybrid, and face-to-face instruction? How can we better track the impact of outreach efforts on enrollment diversity, particularly for African American and Latino male students who are underrepresented in computing fields? What resources would most effectively support student completion of degrees and certificates, including tutoring, mentorship, and access to industry-standard software and hardware? Are there particular courses in the GAM sequence where students are more likely to withdraw or receive non-passing grades, and do those patterns differ by demographic group or enrollment modality? How well does the current GAM curriculum align with regional labor market demands and emerging industry roles in game development, and what new skills or technologies should be incorporated? What professional development opportunities would best support faculty in implementing equity-minded teaching practices in technical courses like game programming and design, and how can we measure the effectiveness of those efforts over time?

What types of data do you need to support your program plans, goals, needs?

We need discipline-specific (GAM) data that is easily filterable in Power BI, including success rates, retention rates, and awards data disaggregated by ethnicity, gender, and modality. Year-over-year trend data for at least 5 years would be most helpful for identifying patterns and measuring the impact of program changes. Course-level data showing where students drop off in the GAM sequence would help us target interventions more effectively, particularly for gateway courses like GAM-1 and CIS-30A.

Additionally, we need access to labor market data and regional employment trends for game development and related computing fields to ensure our curriculum remains aligned with industry needs. Enrollment pipeline data showing how students discover and enter the GAM program would help us evaluate the effectiveness of outreach and recruitment strategies. Comparative data showing how GAM student outcomes align with similar programs at peer institutions would also provide valuable context for benchmarking our performance and setting realistic improvement targets.

If there are any supporting documents you would like to attach, please attach them here.

Submission

All parts of my Program Review have been completed and it is ready for review.

Yes