



Program Review - Overall Report

2024 - 2027

Instructional: Game Development

Overall Trends

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.



Please add any relevant documents here.

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

Data Review

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 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.

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): ()

- 2025 Objective 3.1 - KPI 8 (Student Services):
- 2025 Objective 6.6 (Student Services):

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?

Program/Unit Goals

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:
 - 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.

Program/Unit Goals

- 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): ()

- 2025 Objective 2.1 - KPI 4 (Academic Affairs):
- 2025 Objective 2.2 - KPI 5 (Academic Affairs):

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.

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.

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

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.

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

Mapping

Instructional: Game Development: (.)

- Below 70%: .
- Male to Female Ratio: .
- Mastery By Race / Ethnicity: .
- Increase Program Awareness for 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

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.

Resource Requests

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 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

Mapping

Instructional: Game Development: (.)

- Increase Earned Degrees and Certificates : .
- Increase Program Awareness for 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 of Study and Student Educational Plan



Program of Study



gam

- 3D Game Modeling and Animation
- Game Art: 3D Animation
- Game Art: Character Modeling
- Game Art: Environments & Vehicles
- Game Concept Art
- Game Design
- Game Development Core
- Game Programming
- Simulation and Gaming: Game Art

This report contains:

- Most recent program of study for all students enrolled at Norco College annually
- Student Educational Plan completion annually

Select one or more programs on the left

Source: Colleague Student Information System



Student Educational Pan	2019-20	2020-21	2021-22	2022-23	Total
Abbreviated and Comprehensive Ed Plan	3.72%	4.37%	1.86%	2.43%	3.06%
Abbreviated Ed Plan	6.51%	15.05%	15.35%	5.26%	10.31%
Comprehensive Ed Plan	12.09%	17.48%	12.56%	8.50%	12.46%
No Ed Plan	77.67%	63.11%	70.23%	83.81%	74.18%

Term

- winter 2022
- Spring 2022
- Summer 2022
- Fall 2022
- Winter 2023
- Spring 2023

Discipline

GAM

Course

- Select all
- GAM-1
- GAM-2
- GAM-3A
- GAM-3B
- GAM-4A
- GAM-4B
- GAM-5A
- GAM-5B
- GAM-6A
- GAM-6B

Discipline-Level: C ↑ ↓ ↓ ↓

Course-Level: GAM-2, GAM-1, GAM-4A, GAM-5B, GA...

Gender	Enrolled	Retained	Retention Rate	DI	Close Gap
Female	234	182	77.8%	1	30
African American	18	8	44.4%	1	8
Asian	33	25	75.8%	0	5
Hispanic	109	87	79.8%	1	11
Native American				0	
Pacific Islander				0	
White	62	51	82.3%	0	4
Two or More	11	10	90.9%	0	0
Unknown	Masked Data			0	
Male	1,075	974	90.6%	0	0
African American	65	61	93.8%	0	0
Asian	98	93	94.9%	0	0
Hispanic	594	539	90.7%	0	0
Native American	Masked Data			0	
Pacific Islander	Masked Data			0	
White	242	212	87.6%	0	3
Two or More	58	54	93.1%	0	0
Unknown	11	11	100.0%	0	0
Unknown	23	20	87.0%	0	1
African American	Masked Data			0	
Asian	Masked Data			0	
Hispanic	12	10	83.3%	0	1
White	Masked Data			0	
Two or More	Masked Data			0	
Total	1,332	1,176	88.3%	0	0

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Two or More	58	54	93.1%	0	0
Unknown	11	11	100.0%	0	0
Unknown	23	20	87.0%	0	1
African American	Masked Data			0	
Asian	Masked Data			0	
Hispanic	12	10	83.3%	0	1
White	Masked Data			0	
Two or More	Masked Data			0	
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