



UNCG esports arena grand opening

A GAMING ECOSYSTEM

UNC Greensboro joined the collegiate esports movement two years ago with a \$2.4 million state-of-the-art facility. But gamers aren't the only ones who stepped into the arena. Researchers are integrating gaming into curricula, helping youth turn screentime into STEM inspiration, and developing a skilled workforce for a rapidly growing industry.

IDEA TO INDUSTRY

When an NC legislator took his son to an esports tournament in 2019, he was captivated by the impact and excitement of the event. "He started looking for university partners to bring esports to our state," says UNCG's Chief Innovation Officer Dr. David Wyrick. "And we stepped up to the plate."

The gaming industry generated \$184 billion globally in 2022: that's 7 times the music or movie industries. In America, 62% of adults and 76% of kids game.

Fast forward five years, and UNCG is now a hub for innovation and fierce competition in the realm of esports and gaming. The program has rapidly evolved into a multifaceted initiative with an industry-facing approach.

Leveraging business and nonprofit partnerships, UNCG is engaging students of all ages to prepare them for high-demand fields and nurturing a skilled workforce in an emerging sector.

"We're positioning our state as a hub for gaming innovation and impact," says Wyrick.

UNCG athletes ranked top three nationally in Super Smash Brothers and Apex Legends.

UNLOCKING UNREAL ENGINE

Most know Epic Games as the company behind the massively popular Fortnite game. But the Cary-based company is also the developer of Unreal Engine, the 3D creation toolset behind everything from the latest games to background graphics in popular shows like The Mandalorian. Now, UNCG and Epic are collaborating to teach educators and students about the foundational technology,

The first Unreal Engine Accelerator Experience was hosted at UNCG in October, as part of an E2. "The Educational and Esports Weekends are one-half training, one-half tournament,"



Girls Who Game middle-schoolers create, problem solve, and engage with STEM alongside UNCG faculty and student mentors.

UNCG's Dr. John Borchert says. Over 200 K-12 and university educators have come to campus for the experience.

UNCG's esports arena is third in the nation in usage volume.

"Bringing these tools to educators is nurturing the next generation of creators," says Epic's Steve Isaacs.

Stan Winborne, a Granville County associate superintendent, says, "I've seen students play video games, but this is so much more. It's a portal for students to create."

Industry opportunities reach well beyond gaming. "So many people are using this," Epic's Cathy Cheo-Isaacs says, listing media creators, advertisers, and even car companies. The latest E2 included Unreal training for video production and broadcasting.

E2s also spread word about UNCG's Scholastic Esports Alliance, which partners with Steigler EdTech to support a statewide esports STEM league for high school players.

UNCG's Scholastic Esports Alliance supports over 3200 league players. Over 80 high schools competed in 2023's regionals, with over 7100 viewers.

GAMING CURRICULA FOR ALL AGES

"What's really innovative is the integration of education and research," Borchert says. Within UNCG, faculty from various disciplines are developing curricula connecting gaming to established fields, from sports broadcasting to digital animation.

Last year, the UNCG Videogaming and Esports Studies minor launched, with 20 courses from 10 departments. "These students will have a unique combination of critical thinking and applied skills," says Borchert, "to engage in all aspects of gaming and new media industries from production and scholarship to event and recreation management." The business school is also offering a concentration.

Faculty are integrating gaming into their research efforts. For example, Wyrick and his spinoff Prevention Studies, who partner with major players like the NCAA and NFL to develop athlete wellness interventions, are now studying and developing programs for gamers.

K-12 students then benefit through a partnership between UNCG and Spark NC, a non-profit working with 17 districts statewide to help students discover high-tech fields. Students explore Spark's catalog of stackable, project-based learning modules at their own pace, building course credits and portfolios for college or job applications.

"We've bundled elements of our new curriculum into something like a tasting menu for SparkNC high school students," says Borchert.

"I love the intellectual rigor each professor brought to the modules," SparkNC Director Dana Brinson says. Content includes video game design and theory, and some less expected offerings. "Students are supported to build their analytical skills and use conceptual thinking. Guilford County Schools' lab brought in a health class to explore UNCG's 'Health Hacks for Esports' unit and study nutrition and mental health for competitive gamers."

"From top industry internships for college students to a Dell partnership that mentors middle-school girls – these different pieces are coming together to create a thriving North Carolina gaming ecosystem," says Wyrick. New knowledge is created through faculty inspiration and industry collaborations and spreads through classes and E2s, esports tournaments and leagues, summer camps, and Sparklabs. "And we're just getting started."

Collaborate with us. Learn more at innovate.uncg.edu and research.uncg.edu.



UNCG RESEARCH & ENGAGEMENT

Dr. David Wyrick
Chief Innovation Officer, Innovate UNCG Director
dlwyrick@uncg.edu
336-334-4501