At Rochester Institute of Technology’s MAGIC Spell Studios LLC, students gain richer learning experiences in real-world production environments using the most advanced tech tools.

**RIT’s MAGIC breaks down learning barriers**

Empowering students with professional tools and practical production experience is core to the mission of Rochester Institute of Technology’s MAGIC Spell Studios LLC, the publishing arm of the RIT Center for Media, Arts, Games, Interaction & Creativity (MAGIC), and keeping it all up to date is vital to that mission.

### Business needs

- Offers real-world creative production environments
- Cultivates innovations, such as virtual reality and 360° video

### Solutions at a glance

- **Dell Alienware gaming PCs**
- **Dell Canvas**
- **Dell Precision workstations**
- **Dell OptiPlex desktops**
- **Dell Latitude laptops**
- **Dell Visor VR headset**

### Business results

- Opens doors to a vast support community
- Gains responsive support

Empowers richer learning experiences

Fosters cross-discipline collaboration
For decades, universities have offered studies in art, graphics, film, television and mass media, and many of them have facilities to offer students production experience. Typically, however, those disciplines have operated from within their own departments or schools.

This situation challenged anyone wanting to pursue a creative vision incorporating elements from some or all of these disciplines, such as what digital game development requires. In fact, until recent years, game development was not considered a higher-ed pursuit, despite the knowledge and skills required, and the rapid job growth in a global market expected to reach $128 billion by 2020.

But that’s not the case at the Center for Media, Arts, Games, Interaction & Creativity (MAGIC) of Rochester Institute of Technology (RIT) in Rochester, New York, and its publishing arm, MAGIC Spell Studios LLC. The latter supports RIT’s recent designation as combined digital-gaming hub and an innovation zone that mixes faculty, staff, students, technology and infrastructure across multidisciplinary programs.

Empowered to learn by doing

The Studios operate from a 43,000-square-foot building on RIT’s campus. Students can take advantage of a state-of-the-art sound stage, a cinema-quality audiovisual system, a tiered theater with a projection booth, and rooms for mixing sound and doing color corrections. It also features many labs and production facilities, where students learn by doing.

The mix of people, disciplines and capabilities sets the Studios apart from typical classroom environments. In effect, the facility is a crucible for innovative learning approaches and outputs, according to Jennifer Hinton, assistant director of the MAGIC Center and the Studios’ chief communications officer. “For all intents and purposes,” she says, “we’re a startup venture, fueled by the passion of our students and our own passion for bringing them together with the right tools and experiences, so they can realize their dream and vision.”

Dreaming big, supported by technology

In charge of the tools is Dr. Christopher Egert, associate professor and associate director of the MAGIC Center and the CTO for the Studios. “We encourage students to dream big and imagine possibilities without technology constraints,” he says. “We then provide some of the most advanced technology available from Dell EMC and Microsoft to help them get there.”

In the Studios, multiple custom configurations of Dell Precision workstations and OptiPlex desktops are employed to produce animations, graphics, special effects, virtual and augmented reality, and regular and 360° video, plus various digital mashups of these elements.

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Chief Technical Officer, MAGIC Spell Studios, Rochester Institute of Technology
To generate such diverse studio-quality outputs, student and faculty users of the MAGIC Center’s Precision workstations employ a wide range of different software applications. These apps are identical to ones used in the industries its graduates will work in, including Microsoft software. “All our Dell systems run Windows 10, and we use the Visual Studio Suite for everything from basic programming to advanced game engine design,” Egert says.

Other core applications used by MAGIC Center’s students and faculty include:

- **Adobe Creative Cloud**, for digital visual effects, motion graphics, design, layout, editing and compositing
- **Autodesk Maya and Autodesk Entertainment Suite**, for 3D animation, modeling, simulation and rendering
- **Unity 3D**, for 2D and 3D animation and VR game creation
- **Unreal Engine**, for game development, filmmaking and photoreal visualizations

Egert finds that the Dell workstations provide the CPU horsepower and graphics card support these applications require. “Creating immersive experiences that are believable in the view of our human mind’s eye requires complex scenes rendered at extremely fast frame rates,” he says.

**Facilitating new creative possibilities**

“With Dell Precision workstations, our users can run these apps with minimal latency, so we’re not sitting around waiting to see the result of a new creative stroke,” Egert adds. “And given that rendering is so fast, users can try many more creative approaches in less time. In effect, this boosts their overall creativity and how much they can tap into and apply their imaginations. It’s what makes the Dell Precision workstations that much more critical to our overall productivity.”
In addition, users often take Dell Latitude laptops with them to assist field production efforts outside the studio, and they use them for scriptwriting, project management and other tasks. Powerful Dell Alienware gaming PCs are used for game development, prototyping and testing, as well as on-site demos at major conferences and events, including the Game Developers Conference in San Francisco, PAX, NAB, Adobe MAX and others in recent years.

Students and faculty are also using the Dell Canvas display, a new workspace that supports touch, pen and totem inputs. “We’re excited about the interactivity of the Dell Canvas workspace,” Egert says. “It offers tremendous potential not only in creative production but also as an interactive medium of its own. What’s more, the Dell Visor virtual-reality headset really opens up all kinds of new possibilities for us.”

Hinton describes a much broader engagement for faculty, staff and students. “We can connect with Dell EMC experts just about anytime we want, to gain insights to roadmaps and even greater possibilities in the future,” she says. “And if students need help, we direct them to Dell EMC forums, not just for answers and resources, but also to learn about and become part of the rich, creative community within those forums.”

The relationship is both hands-on and future-oriented — students and faculty are engaged with Dell in discussion of roadmaps, technology trends, integration techniques, and state-of-the-art facilities planning and upkeep. “All of that is with a single goal in mind: creating new worlds and telling new stories,” Hinton says.

**Becoming part of a larger community**

Hinton and Egert agree that the support from Dell EMC sets it apart from what they have experienced with other vendors. When Egert was working in the Studios over a holiday weekend, he needed a part, which Dell ProSupport delivered in four hours. “I was amazed,” he says.

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