



University launches effort to ‘revolutionize the undergraduate experience’

By Janette Neuwahl Tannen

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The University’s inaugural Academic Innovation Fellows are hoping to craft novel degree tracks that revolutionize the way students study and learn in the coming years.

Reimagining the college experience for an ever-changing world.

That is what the 13 staff and faculty members selected as the University of Miami's first Academic Innovation Fellows are working toward this semester. Selected by President Julio Frenk and Jeffrey Duerk, executive vice president for academic affairs and provost, the fellows are meeting weekly to create a proposal for a novel undergraduate endeavor that will appeal to students well into the future.

"We have learned a great deal about education over the last 19 months, and now we want to be on the front of the wave to revolutionize the undergraduate experience, so that students will leave the University prepared for careers that are not even defined yet," said Duerk. "This is an opportunity to ask faculty to think and work intentionally outside of the box, and many of these fellows have been fearless in reshaping the classroom experience for our students, so their guidance will be invaluable."

As part of the University's strategic plan, the [Roadmap to Our New Century](https://roadmap.miami.edu/) (<https://roadmap.miami.edu/>), the fellows represent part of a larger focus on educational innovation encouraged by Frenk in his recent [State of the University](http://news.miami.edu/stories/2021/09/state-of-the-u-highlights-resilience-future-initiatives.html) (<http://news.miami.edu/stories/2021/09/state-of-the-u-highlights-resilience-future-initiatives.html>) address.

"Just as we continually develop new treatments in our academic health system, test them, and then incorporate the most effective cutting-edge approaches into our standard of care to better serve patients, we must intentionally cultivate a student-focused approach to the structure and delivery of curriculum," said Frenk. "The world is rapidly changing, and we are deliberately accelerating the pace at which we drive innovation in the classroom. This is what leading the educational revolution looks like."

As the first initiative of the New Century College—the University's novel conceptual incubator for pioneering educational ventures—the fellows are working to outline a new, accelerated interdisciplinary degree program focused on entrepreneurship, innovation, and design thinking—or a way to generate ideas that center on human benefits. It will likely take a hybrid approach, with in-person and online classes, experiential learning opportunities, and many individual and team projects.

Upon the fellows' completion of a degree framework, which is expected soon, it will go through the appropriate University review and approval processes.

One of the fellows, Suhrud Rajguru, is an associate professor of biomedical engineering in the College of Engineering and in the Department of Otolaryngology at the Miller School of Medicine. Rajguru has guided students and faculty and staff members across the University in how to bring their innovations to the commercial market. He also has firsthand experience creating devices to improve the loss of hearing and balance. Rajguru is eager to help future students learn strategies that can help propel their ideas into the world, which is also one of the aims of the new degree program.

"We want individual students and those working on interdisciplinary teams to have a higher probability of success in disseminating their ideas in whichever industry they choose—health care, the environment, engineering, technology, or others," he said. "If we can better prepare them about how to present those ideas and how to generate a social and/or economic impact using their innovations, I think it'll be great."

Another fellow, associate professor Marianna Makri, who teaches in the MBA and Online MBA programs at the Miami Herbert Business School, has enjoyed the creative process of building a new degree.

"It's been a very rewarding experience for me because we all came into the ideation process from different disciplines, which made for divergent thinking," she said. "It was a design challenge that we are approaching with great curiosity."

Ideally, any models of success from the New Century College that help improve instruction, engagement, or the student experience could be streamlined into the University's existing curriculum, Duerk added.

Allan Gyorke, the University's associate vice president for information technology, chief academic technology officer, and assistant provost for educational innovation, who is also a fellow, agreed.

"The future is coming, and change is constant, so why not think differently about the future of education instead of waiting for someone to invent it?" Gyorke said. "Let's start exploring what it should be and shape it."

With a first draft of the framework complete, and the creation of courses forthcoming, the fellows have agreed on a few key points. They will shape a multidisciplinary degree where students will get hands-on experience through partnerships with global businesses, nonprofits, and civic institutions; use cutting-edge technology; have the opportunity to learn multiple languages; possibly live abroad or attend classes remotely; and learn from their peers through collaborative projects.

Karen Mathews, associate professor of art history, has been integrating 3D modeling, as well as augmented and virtual reality, into her classes for several years. The challenge of learning how to bring ancient artifacts into the digital domain has encouraged her to work with other schools and departments across the University. Mathews has found this interdisciplinary approach enriching because it introduced her students to novel technologies, while also engaging them with the artworks themselves. Mathews said she is privileged to be a fellow.

"Most of the fellows have all taken innovative approaches to their own disciplines, pushing the boundaries of their pedagogy, and empowering students to take on complex problems or great challenges," she said. "And now is a powerful moment to do that. We want to provide an active learning environment where students are both solving problems and defining some of the content themselves. And we want students to take risks and embrace complexity—not shy away from it."

To help create the New Century College, the University is collaborating with the Minerva Project, a San Francisco-based educational company that opened its own college in 2014 called [Minerva University \(https://www.minerva.edu/\)](https://www.minerva.edu/), which was fully accredited last summer. The company is now recognized as a trailblazer, delivering top-tier educational programs through educational and corporate partners globally. A key component of Minerva's curriculum is its own online platform called Forum, a videoconferencing software tool designed to encourage participation.

The University of Miami and Minerva are working collaboratively with the fellows to create a degree that will support and accelerate some of the University's educational goals. Minerva founder and CEO, Ben Nelson, said he is thrilled for the opportunity.

"This is a thriving University whose leadership has the foresight to reform its educational and experiential model to solidify its leadership among other universities in the coming century," he said. "We are confident that Miami's exceptional strengths married with our wealth of experience in creating standard-setting programs at Minerva University, and other partners, will redefine education within the context of a leading American research university."



Top row, from left: Jennifer Kahn, Marianna Makri, Karen Rose Mathews, and Barbara Millet.

Middle row, from left: Harihara Natarajan, Suhrud Rajguru, Lokesh Ramamoorthi, Andrew Dawson, and Michele DeStefano.

Bottom row, from left: Marcia Narine Weldon, Rik Bair, Allan Gyorke, and Samuel Martín-Barbero.

The Academic Innovation Fellows represent a variety of experience from across the University's schools and colleges. The following is a list of the fellows.

- **Jennifer Kahn** is an assistant professor of teaching and learning in the School of Education and Human Development. Kahn specializes in learning sciences and STEM education. Her research examines interdisciplinary, technology-rich activities to support youth and community learning. She also uses design thinking to uncover how individuals learn and what are the most optimal learning environments for children and young adults.
- **Marianna Makri** is an associate professor of management in the Miami Herbert Business School and teaches courses in strategic management, design thinking, entrepreneurship, and family business at the graduate level. Her research focuses on corporate governance, corporate strategy, and innovation management, and more recently on family firms as a unique form of ownership. Makri has served as a technical expert for Eurostars, an organization that supports international innovative projects.
- **Karen Rose Mathews** is an associate professor of ancient, medieval, and Islamic art history in the College of Arts and Sciences. Mathews has incorporated digital technologies like photogrammetry, virtual, and augmented reality into her art history classes to familiarize students with these new technologies and to make the study of art objects an interactive and immersive experience.

- **Barbara Millet** is an assistant professor of interactive media in the School of Communication and director of the User Experience Lab. Millet's interdisciplinary research focuses on information design, and she investigates the impact of design elements on information processing, as well as how the user interface influences human behavior. She is also part of a University of Miami Laboratory for Integrative Knowledge (U-LINK) research team looking at ways to improve hurricane forecast products.
- **Harihara Natarajan** is vice dean of undergraduate business education and a professor of management in the Miami Herbert Business School. Natarajan's research develops and applies optimization models to support decision-making in supply chains and service networks. He has worked on collaborative research projects with several companies including Armstrong, Capital One, Corning, Florida Panthers, Intcomex, and Uponsor Aldyl.
- **Suhrud Rajguru** is an associate professor of biomedical engineering in the College of Engineering and of otolaryngology in the Miller School of Medicine. Rajguru is also co-director of the Institute for Neural Engineering in The Miami Project to Cure Paralysis, where he and colleagues developed an unusual approach to help reduce noise-induced hearing loss. He also serves as assistant director of team science in the Miami Clinical and Translational Research Institute, and directs the [I-Corps@NCATS \(http://miamictsi.org/education/i-corps-ncats\)](http://miamictsi.org/education/i-corps-ncats) program, which helps student, faculty, and staff scientists learn how to bring their innovations to the commercial market.
- **Lokesh Ramamoorthi** is a lecturer of software engineering and cybersecurity in the College of Engineering. Before joining the University's faculty, Ramamoorthi worked in software design, project management, and technical operations for Fortune 100 clients. His research interests are software product design, application development, and cybersecurity. Before joining the faculty, Ramamoorthi also worked at the University's information security office, where he performed software security risk assessments.
- **Andrew Dawson** is the School of Law's vice dean for academic affairs and is the Judge A. Jay Cristol Professor of Bankruptcy Law. Dawson's research focuses on federal bankruptcy and labor laws, both in the corporate and municipal bankruptcy context. Before joining the Miami Law faculty, Dawson was a Kauffman Legal Fellow at Harvard Law School and clerked for both the U.S. Court of Appeals for the Third Circuit, and the U.S. Bankruptcy Court for the District of Delaware.
- **Michele DeStefano** is a professor in the School of Law and is an affiliated faculty member of Harvard Law School, and at IE University. DeStefano's work focuses on the intersections between law, business, and innovation. In 2010, DeStefano founded the nonprofit LawWithoutWalls, a think tank that pairs graduate students in business and law from all over the world with businesses and law firms to solve problems in the industry. She also recently co-created the Digital Legal Exchange, a nonprofit designed to inspire lawyers to become digital leaders in their businesses.
- **Marcia Narine Weldon** is a lecturer in the School of Law and director of its transactional skills program, as well as faculty coordinator of the business compliance and sustainability concentration. Before coming to the University, she worked at the Ryder Corporation as its vice president and deputy general counsel, as well as vice president of global compliance and business standards, and as chief privacy officer—supervising global compliance, business ethics, privacy, government relations, environmental compliance, and other areas.

- **Rik Bair** is associate dean of the University's Division of Continuing and International Education and executive director of the Distance Learning Institute. Bair has more than two decades of experience as an instructional designer in both K-12 and post-secondary environments and now serves as an instructor in the University's teaching and applied learning doctoral program. In the past, Bair served as chair of an online Doctor of Education in Educational Leadership track specialized in educational instructional technology at Frostburg State University.
- **Allan Gyorke** is associate vice president for information technology, chief academic technology officer, and assistant provost for educational innovation. In these roles, Gyorke explores and implements new educational tools to help the institution's students, faculty, and staff work more efficiently on and off campus. Previously, Gyorke worked at Penn State University, where he built some of the first online courses and massive open online courses (MOOCs), worked closely with faculty on the integration of technology into traditional on-campus classes, and led course redesign efforts to include student-generated media, podcasting, blogs, online social networks, and flipped learning models.
- **Samuel Martín-Barbero** is a Presidential Distinguished Fellow and academic innovator, with a keen appreciation for interdisciplinarity, entrepreneurship, and globalization in higher education. As a Presidential Distinguished Fellow at the University, he takes part in strategic initiatives on educational innovation, continuous learning, and core curriculum. He has been an active member of the Global Agenda Council on Informed Societies and of the Knowledge Advisory Group at the World Economic Forum.

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