NYU | TANDON SCHOOL OF ENGINEERING

# UX DESIGN PRINCIPLES FOR AR & VR

# OVERVIEW

From VR theaters and entertainment experiences to AR apps like IKEA's Place, which allows you to virtually try out their products in your home, augmented reality and virtual reality are making their way into our everyday lives.

**AR & VR technologies to grow to $160 billion by 2023 from the current value of $16.8 billion.**

*Source: Statista

Staying ahead in this rapidly evolving market requires understanding how to design for these burgeoning technologies. **So, what are the design rules in this new frontier of extended reality?** UX Design Principles for AR & VR goes beyond teaching UX design and concepts and shows you how to apply UX principles to AR & VR design.

Developed by New York University's Tandon School of Engineering, this two-month course will allow you to explore how current UX design principles apply to new technologies that merge the real world with the digital one—and help you stay ahead of the market.

# WHO IS THIS COURSE FOR?

The course is designed to provide UX designers, UX architects, and product managers with an understanding of how to design UX for AR & VR technologies. Other professionals across industries who use or plan to use or implement AR & VR technologies will also benefit from the course.

# Course Fees

**USD 1,400**

The course requires a VR headset, such as Google Cardboard (to be procured by participants; available at approx. $7.88 on Amazon). Instructions for making your own headset will also be provided.

# Duration

**2 Months, Online**
**2-4 hours per week**

*GST applicable to Singapore residents

# COURSE HIGHLIGHTS

Both experienced and new UX designers, product designers or managers will learn how the UX is different with extended reality (XR) technologies like AR and VR than with a digital screen, and the key points to consider when designing UX for these new formats. Further, they'll learn to:

**01**

**Define**
human-computer interaction and how it impacts UX design for XR

**02**

**Describe**
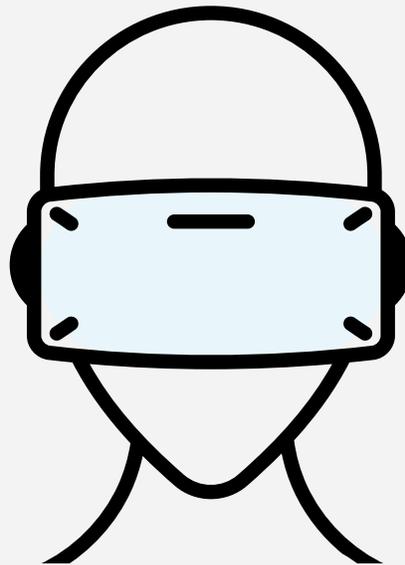best UX design practices for XR environments

**04**

**Define and analyse**
tools and techniques for prototyping and designing XR apps

**03**

**Identify**
opportunities and challenges in the field of XR design

# MODULES

Through video lectures, expert interviews, software demos, and hands-on projects, participants will learn to apply their current knowledge and understanding of UX design to create new and dynamic AR & VR experiences.



**MODULE 1**
**What are HCI and XR?**
Discuss the various ways humans and computers can and will interact and what that means for design



**MODULE 2**
**Building XR: Space and Senses**
Describe best practices for applying sensory details to XR experiences



**MODULE 3**
**Building XR: Storyboarding the UX**
Describe techniques and best practices for storyboarding for XR experiences



**MODULE 4**
**Designing UX: Tools and Techniques**
Discuss common tools, processes, and techniques for creating 3D assets



**MODULE 5**
**Applying UX: Interactions with XR**
Understand the basics of applying interactions to XR experiences



**MODULE 6**
**The XR Industry: Present and Future**
Identify opportunities and challenges in the field of XR design

# REAL-WORLD EXAMPLES

Throughout the course, the instructors will shine the spotlight on new AR & VR products through brief product demos, including:

VR painting with **Google Tilt Brush**

Sculpting, modelling, and painting with **Medium**

Creating 3D models with **Google Blocks**

Experiencing the hit VR game **Beat Saber** in action

Illustration and animation with **Quill**

An **AR retail app** in development by a major brand

# FACULTY

## Todd Bryant

**Adjunct Professor and Research Scientist,
NYU Tandon School of Engineering**

In addition to his work in academia, Todd Bryant is also an award-winning screenwriter, director and producer of narrative video work. Todd earned a master's degree in Interactive Telecommunications from NYU's Tisch School, and he continues to employ those innate proclivities through creative coding and the construction of tangible interfaces for video art. **His work explores the intersection of empathy, knowledge, and the sublime with a focus on energy conservation and reused/ recycled parts.** Todd helped to design Relevant Motion, a motion-capture and VR platform that provides low-cost, in-home and in-clinic occupational therapy, which was awarded first prize at the 2018 NYC Media Lab Summit.

## Regine Gilbert

**Industry Assistant Professor,
NYU Tandon School of Engineering**

Regine Gilbert is a user experience designer, educator, and international public speaker with over 10 years of experience working in the technology arena. **She has a strong belief in making the world a more accessible place—one that starts and ends with the user.** At NYU Tandon, she teaches UX design to students in the Integrated Digital Media Program. She's also worked with companies and organizations including Disney, JP Morgan, Four Seasons Hotel and Resorts, Ralph Lauren, Columbia University and Vitamin Shoppe. In 2020, her first book, Inclusive Design for a Digital World: Designing with Accessibility in Mind (Design Thinking), will be released through Apress publishing.

# CERTIFICATE

Upon successful completion of the course, participants will be awarded a verified digital certificate by NYU Tandon.

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THIS IS TO CERTIFY THAT

## YOUR NAME

HAS ATTENDED AND SUCCESSFULLY COMPLETED

## UX DESIGN PRINCIPLES FOR AR & VR

YEAR

**Nasir Memon**
*Associate Dean for Online Learning*
*NYU Tandon School of Engineering*

# THE LEARNING EXPERIENCE

The course is spread over two months and includes video lectures, interviews, assignments, discussions, polls, and AR & VR product demos.

## ORIENTATION

The first week is orientation week. During this week you will be introduced to the other participants in the class from across the world and you will learn how to use the learning management system and other tools provided.

## GOAL SETTING

In other weeks, you have learning goals set for the week, including watching the video lectures and completing the assignments. All assignments have weekly deadlines.

## VIDEO LECTURES & INTERVIEWS

The recorded video lectures and interviews are conducted by course faculty and also feature industry experts sharing their UX design for AR & VR expertise.

## DISCUSSIONS & POLLS

Course discussions and polls make the course highly interactive and allow you to share your perspectives with UX designers, product designers, and product managers from around the world.

# ABOUT

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**ABOUT NYU TANDON**

The NYU Tandon School of Engineering empowers people to use science and technology as tools to build a better society. Dedicated to creating solutions that can tackle tomorrow's problems today, the school focuses on invention, innovation, and entrepreneurship.

As an institution that traces its origins back to 1854, NYU Tandon School of Engineering is rooted in tradition and opportunity. The school was, quite literally, the birthplace of the American Dream; it was their alum James Truslow Adams who coined that phrase in 1931. Just as it was then, Tandon is a place where ambitious students from all walks of life get the solid education they need to launch their careers.

Invention, innovation, and entrepreneurship suffuse every aspect of Tandon as it strives to carry the school's great history forward with a shared goal: To generate ideas and build solutions for a healthier, safer, better-connected, and more sustainable world.

## About Emeritus

New York University is collaborating with online education provider Emeritus to offer executive education courses. An Emeritus Certificate course created in collaboration with New York University is based on syllabus approved by New York University, and contains video content created and recorded by New York University faculty, combined with assessments, assignments, projects, cases, and exercises delivered by Emeritus. Upon successful completion of the course, learners will be awarded a certificate by New York University.

### Schedule a call with a Program Advisor to learn how this course can help you

**SCHEDULE A CALL**

### Apply for the program here

**APPLY NOW**

**E-mail: nyu@emeritus.org**
**Call: +1 315 871 0015**
We attempt to respond to queries in 24 hours or less. However, over weekends and holidays, our responses may take up to 72 hours.