



istitutomarangoni



**SHORT COURSES
EXTENDED REALITY FOR DESIGN**

Online Option



General Introduction

Over the past 80 years Istituto Marangoni has grown and developed alongside the thriving Italian fashion and design scenario. Through an exciting curriculum aimed to develop practical, creative, business and management skills which are subject specific, and relevant to the international fashion, design or art industries, Istituto Marangoni short courses prepare students in the principles of subjects such as Fashion Design, Accessories and Footwear Design, Fashion Styling, Fashion Business and Communication, Visual and Multimedia Design, Interior Design, Product Design, Art Management and Art Curation.

1. Certification Attained

Istituto Marangoni Certificate

Course Information**2. General info:**

- Duration: 6 Weeks (3 days per week)
- Total Hours: 45
- Course Delivery mode: full online
- Lesson Duration: 2h30

3. Short Course Description

This is a short introductory course to fast track the working knowledge and practical skills in extended reality (XR) technology. This new wave of mass media offers unlimited freedom to create products and artwork without the limitations of space and resources and allows for a more human design process (avoiding code, keyboards and years of training).

With a special focus on experimenting with hands-on practical skills that can be used straight away, this course equips participants with the tools to start building ideas in 3D space.

Focusing on Virtual Reality and Augmented Reality, each class covers a new topic with take away exercises and homework to practice and present for feedback from the experienced lecturer. Students also discover ways to create 3D models, floorplans and visual concepts in 3D using readily available tools to build virtual worlds, capture real world objects, share their work to new audiences and visualise ideas to create exciting new experiences.

The overall aim of this course is to broaden the opportunities for students to develop new and desirable skills in a new medium that is growing exponentially. This course offers a foundational understanding of the concepts, theory and practice of using extended realities in a professional and industry-focused context.

Educational Aims

- to develop flexible approaches to programme delivery and student support, which reflect the needs and expectations of our learners;
- to provide a supportive and inclusive learning environment which will enable success for all learners;
- to develop the students' intellectual abilities, creativity, independence, critical self-awareness, imagination and skills that will enhance global employment opportunities on completion from all courses;
- to establish a culture of constant improvement in learning, teaching and assessment that is anticipatory, enabling, supportive, rewarding and fully aligned with the Institutions vision and strategic objectives;
- to provide a learning experience that is informed by research, scholarship, reflective practice and engagement with fashion and design industry and the professions.

Course Learning Outcomes

Upon completion of this short course, you will be equipped with the knowledge and skills to:

- Build a broad understanding of immersive XR technology (AR, VR and MR) and possible use cases/applications.
- Build practical and transferrable skills in XR technology to other mediums (build in VR for use in traditional applications/pipelines).
- Learn skills to pursue different XR avenues (teaching core principles of the technology while allowing room for specialisation after course) applicable to design, filmmaking, advertising, fashion, architecture and many more.
- Focus on practical learning with homework given after each class and reviewed with feedback from lecturer.

4. Course Structure

Week by Week Description

Week 1

Introduction to XR and Design - Theory week - An introduction to XR technology, use cases and potential for Extended Reality to change the way we design. Design using Virtual Reality - Explore the virtual world with open source platform Mozilla Hubs - learn to build collaborative worlds from scratch and use them to hold virtual meetings, pop-up stores, product launches, art/fashion shows or conferences with avatars all within VR on a mobile device or computer.

Week 2

Designing assets for 3D using VR - Learn to create designs using your hands and controllers in place of a traditional desktop design process. Live demonstration from lecturer will explore tools used to sculpt, paint, animate, design and communicate using a digital spatial medium such as Google Tiltbrush and Gravity Sketch. Reality capture - Learn to capture 3D objects using your smartphone camera or DSLR - with a process called photogrammetry using Autodesk Recap Photo. Explore the new generation of smartphone to easily and quickly capture floor plans for exporting into Sketchup, preserving historical objects and 3D printing reproductions of products.

Week 3

Introduction to AR / MR - Theory week - Introduction to Augmented Reality and Mixed Reality. Focusing on the equipment and the implementation in industry, we will focus on how Augmented reality is being used and how a shift in how we interact with computers may in the future make this technology ubiquitous. Getting started AR + Web AR - Get your hands into creating simple immersive scenes with marker-based AR, starting with 2D images and video via Artivive, and explore web-based AR application XR+ to create Augmented Reality experiences without the need for a downloaded app.

Week 4

AR as a design tool - Use Augmented Reality platforms that allow you to create immersive overlays in real locations using your smartphone. Learn to build prototypes that incorporate 3D models, basic interactivity and world tracking using your smartphone as the primary tool. Display your immersive design - Learn to host your own virtual spaces to display, sell and experience your designs quickly and easily with Sketchfab.com. Allow audiences to play and experience your design on social media platforms such as Snapchat. Display and share your AR concepts with audiences via social media or a website.

Week 5

During this week, students will explore some of the latest projects and research in industry and work on their own individual projects with the tutors on the course. Theory week - Looking to the future of XR and ways to further your knowledge of this exciting new medium.

Week 6

Finishing touches and extensions for XR - Review of homework projects, feedback from students and lecturer. A demonstration of the ways we can extend XR design into other mediums and applications such as post rendering, Unity game engine, 3D printing and much more. Outro, Q&A and student work presentation.

Subjects

Introduction to AR

Introduction to VR

Introduction to hardwares and softwares in Design

3D modelling

Immersive experience design

Virtual Collaboration

Seminars (if relevant or available for the specific course)

- Gravity Sketch
- Immersive design

5. Learning Activities

Short Courses are taught via:

- Online Frontal lessons
- Online Workshops / Seminars (where relevant to specific course)

6. Course materials

Students will be required to have with them:

- Personal Pc/Laptop/Tablet to attend online classes
- Smartphone

7. Student Support Strategy

Istituto Marangoni's departmental policies ensure that various mechanisms are in place to enhance the student experience:

- a. the use of online resources (where available) to reach the skills and knowledge expected on the course;
- b. Tutors guide students during their studies.

Student & Academic Services

Istituto Marangoni provides Student & Academic Services, who act as the first point of contact for students.

The Student Support Officers help students in:

- manage their time;
- get the best from their course;
- understand and applying the School's rules for online lessons;
- anything else the officers can advise on.

8. Student Feedback

Student feedback is essential for future course development and improvement.

Student comments are used to evaluate and enhance both the successful management of their study experience, and course contents.

Upon completion of the short course Istituto Marangoni collects feedback through an online questionnaire where students will be invited to reflect on their overall experience at the School.