



UNIVERSITÀ
DI PAVIA

Ph.D. Program in Electronics, Computer Science and Electrical Engineering

COURSE

3D Computer Graphics

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Alessandro Gaggia, PhD, beSharp

OBJECTIVES: This course aims to give an overview of 3D Computer Graphics (CG) and of its current applications in both research and industry. Participants will learn the fundamental principles of 3D CG and gain hands-on experience through practical exercises using Unity.

PROGRAM

Duration: 14 hours (6h theory, 8h practice) + final exam

Credits: 3 CFU

- Lecture 1 – Introduction and Rendering Pipeline
- Lecture 2 – Geometry, Transformations and Animation
- Lecture 3 – Lighting, Shading and Texturing
- Exercitation 1 – Introduction to Unity, 3D environment setup and interaction
- Exercitation 2 – Development of a cross-platform 3D application in Unity
- Final exam – Presentation of a Unity project or a critical review of a research paper

ATTENDANCE: The course will be held in person in the Green Seminar Room (Aula Seminari Verde), Floor D. Attendance of at least **80% of the sessions** is required to pass the course.

SCHEDULE:

- September 7th from 10:00 to 12:00 – Lecture 1
- September 8th from 14:00 to 16:00 – Lectures 2
- September 9th from 14:00 to 16:00 – Lectures 3
- September 10th from 9:00 to 13:00 – Exercitation 1
- September 11th from 9:00 to 13:00 – Exercitation 2
- September 18th from 10:00 to 12:00 – Final exam

Ph.D. Coordinator

Prof.ssa Ilaria Cristiani

Course in English

Website: https://vision.unipv.it/corsi/CG_2026/

For information write to piercarlo.dondi@unipv.it