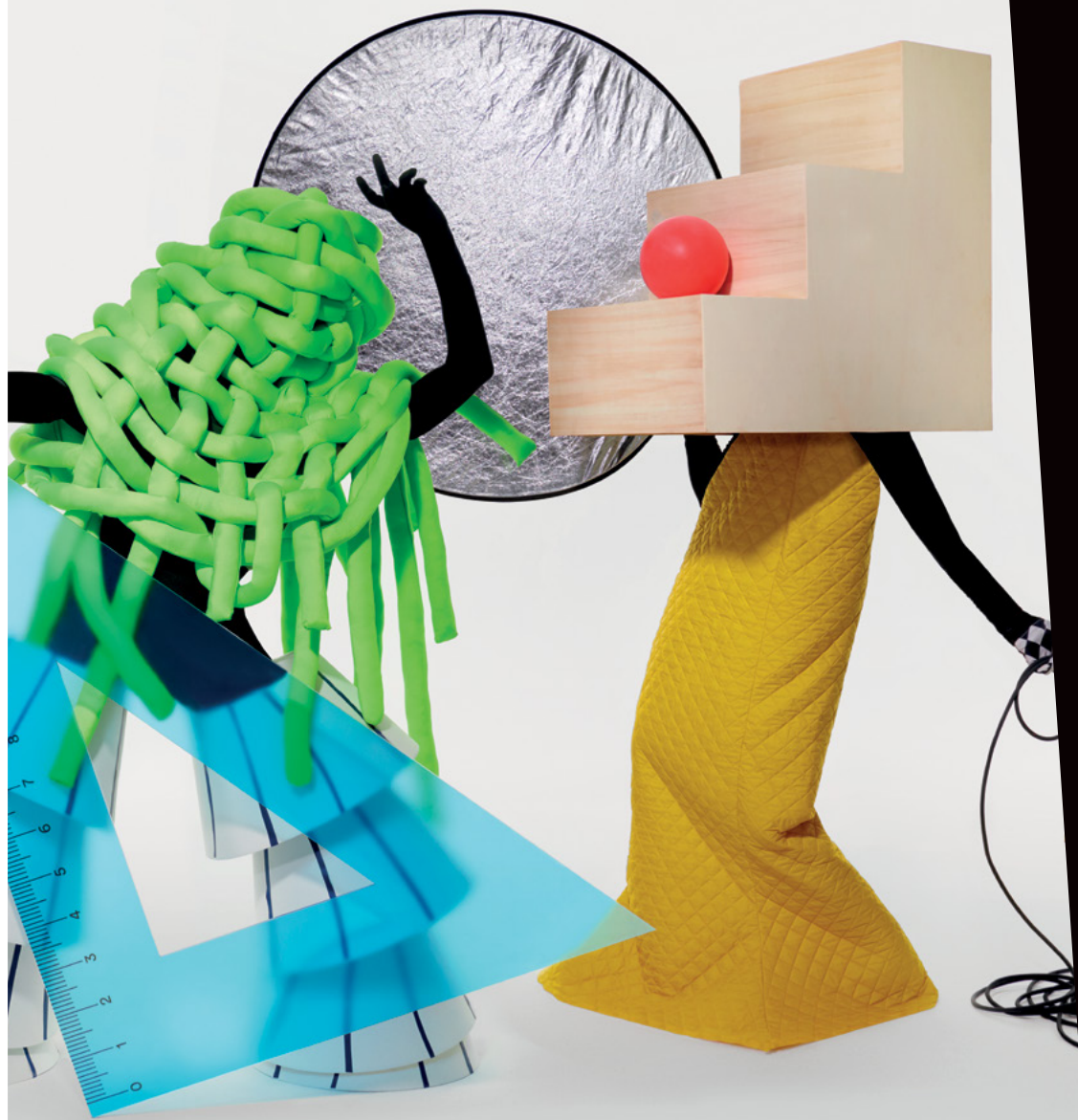UNDERGRADUATE \ CREATIVE TECHNOLOGIES

CURRICULUM

INTERNATIONAL ACADEMY
OF ART & DESIGN

design
mundo
afora

NABA

bachelor of arts in
CREATIVE TECHNOLOGIES

AREA
Media Design
and New Technologies

AREA LEADER
Milan | Rome
Vincenzo Cuccia

COURSE ADVISOR LEADER
Milan
Andrea Maggiolo

The BA in Creative Technologies (First Level Academic Degree in New Technologies for Applied Arts) explores the world of CGI and aims at growing professional figures in the fields of Game, VFX and 3D. Over the whole programme the students learn the most innovative digital techniques: from virtual production to develop VFX in real time, to character design and animation with the use of motion capture systems, from the development of videogames to the design of virtual reality experiences.

LANGUAGE
Italian - English

CAMPUS
Milan

DEGREE AWARDED
First Level
Academic Degree

CREDITS
180 CFA

LENGTH
Three years

SPECIALISATIONS

Game VFX and 3D

CAREER OPPORTUNITIES

Creative technologist

Technical artist

VFX artist

Compositor

Game designer

3D artist

Character designer

CGI animator

Game developer

Colourist

LEARNING OBJECTIVES

To produce Visual Effects and use innovative techniques and technologies (Mocap, AI, Virtual Production)

To create 3D characters and environments

To design and develop video games and interactive experiences

CURRICULUM

FIRST YEAR

SEMESTER	COURSES	CFA
1	History of modern art	6
1	Multimedia dramaturgy	8
	Storytelling	4
	Screenwriting foundations	4
1	Linear audiovisuals	6
	Linear audiovisuals	3
	Camera operation techniques	3
1	Audio and mixing	6
	Sound theories	2
	Sound design foundations	4
1	Mandatory IT training activities	4
TOTAL CREDITS 1ST SEMESTER		**30**
2	Integrated new media techniques 1	10
2	Digital cultures	8
2	Digital applications for art 1	6
2	Additional training activities	2
2	Mandatory training activities English and additional language skills	4
TOTAL CREDITS 2ND SEMESTER		**30**
TOTAL CREDITS FIRST YEAR		**60**

SECOND YEAR

SEMESTER	COURSES	CFA
3	Creative writing	8
3	Multimedia communication	6
3	1 specialisation course to be chosen by the student:	
	Digital video (VFX-3D Spec.)	6
	Computer games 1 (GM Spec.)	
3	1 specialisation course to be chosen by the student:	
	Integrated new media techniques 2 (VFX-3D Spec.)	8
	Integrated new media techniques 2 (GM Spec.)	
3	Additional training activities	2
TOTAL CREDITS 3RD SEMESTER		**30**
4	1 specialisation course to be chosen by the student:	
	Digital applications for art 2 (VFX-3D Spec.)	8
	Digital applications for art 2 (GM Spec.)	
4	1 specialisation course to be chosen by the student:	
	Multimedia design 1 (VFX-3D Spec.)	6
	Multimedia design 1 (GM Spec.)	
4	1 specialisation course to be chosen by the student:	
	Design culture (VFX-3D Spec.)	10
	Production	5
	Development 1	5
	Design culture (GM Spec.)	10
	Production	5
	Development 1	5
4	1 course to be chosen by the student:	
	Illustration	6
	Digital modelling techniques	
TOTAL CREDITS 4TH SEMESTER		**30**
TOTAL CREDITS SECOND YEAR		**60**

COURSES

THIRD YEAR

SEMESTER	COURSES	CFA
5	1 specialisation course to be chosen by the student:	
	Digital applications for art 3 (VFX-3D Spec.)	10
	Applied digital media	4
	Development 2	6
	Digital applications for art 3 (GM Spec.)	10
	Applied digital media	4
	Development 2	6
5	1 specialisation course to be chosen by the student:	
	Integrated new media techniques 3 (VFX-3D Spec.)	6
	Computer games 2 (GM Spec.)	
5	1 course to be chosen by the student:	
	Multimedia installations	6
	Art semiotics	
5	New media aesthetics	6
5	Additional training activities	2
TOTAL CREDITS 5TH SEMESTER		**30**
6	Career development	6
6	1 specialisation course to be chosen by the student:	
	Final workshop (VFX-3D Spec.)	12
	Final project tutoring	6
	Workshop	6
	Final workshop (GM Spec.)	12
	Final project tutoring	6
	Workshop	6
6	Final project	10
6	Additional training activities	2
TOTAL CREDITS 6TH SEMESTER		**30**
TOTAL CREDITS THIRD YEAR		**60**
TOTAL CREDITS BACHELOR OF ARTS		**180**

FIRST YEAR

HISTORY OF MODERN ART
This course looks at art as a key for the interpretation of contemporary phenomena: the language contexts and scopes of art, the manipulation and consumption of images from the early stages of the industrial era to the technology and communication media development that characterise the contemporary scenario.

MULTIMEDIA DRAMATURGY
Two are the main goals of this course: providing the basic elements of the audiovisual language through an accurate analysis of narrative techniques and strategies in the contemporary audiovisual production, and developing theoretical-practical skills in order to produce scripts based on logics and forms of audiovisual narration. A further goal of this course is to introduce the students into production dynamics and teach them to meet deadlines and keep up to the work pace.

LINEAR AUDIOVISUALS
This course covers different expressive languages used in linear audiovisual products, as well as their related methodological tools as they are essential to the critical analysis and further implementation in the projects the students will develop over the subsequent months. The course provides the cognitive knowledge for the analysis of audiovisual texts starting from the basics of semiotic reading and psychoanalysis of cinema. Also, the main techniques of audiovisual filming will be covered.

AUDIO AND MIXING
This course introduces the students to the complex world of sounds, critical listening and audio in the media. Through practical exercise and theoretical-practical contents, the students will study the main steps of the audio production process for video: production, sound design, editing, mixing and mastering. Special attention will be paid to the design method and workflow, in order to create professional-quality audio products, and lay the foundation for good sound management in future projects.

INTEGRATED NEW MEDIA TECHNIQUES 1

The project lab introduces the students to the practice of 3D modelling, digital lighting, shading, and texturing, through the learning of the fundamental design tools. The theoretical notions are conveyed through practice (learning by doing).

DIGITAL CULTURES

The course explores the scenarios, disciplines, trends, action fields, festivals and production centres that, through the digital world, move among creativity, design, art and technology. Several areas of interest will be covered through the analysis of case studies: nets and data visualisation, generative software, VR, game, interaction design, product design, game platforms, DIY culture, arts, science, robotics and artificial intelligences.

DIGITAL APPLICATIONS FOR ART 1

This course introduces students to the theory and practice of concept art through the study of visual language and the application of its representation, familiarising students with the fundamental elements of signification and composition of images: from manual to digital drawing. All cultural aspects of image communication will be studied and analysed.

SECOND YEAR

CREATIVE WRITING

This course introduces the students to conceiving multimedia works characterised by a strong relationship between storytelling and visual development, where a crucial role is played by structure of the image and of the frame. In particular, the students approach the creation and writing of stories, through the build-up and development of characters and scenarios ready for the previsualisation of both interactive and linear storytelling elements.

MULTIMEDIA COMMUNICATION

This course analyses the historical-social phases concerning the evolution of mass-communication media through the study and analysis of basic ideas such as writing, communication and media. After the historical analysis, the focus shifts mainly on the modern and contemporary age, exploring critically the most important media-related phenomena such as social media, television, cinema, music, gaming. The course follows the main historical-evolutional phases of the digital revolution, and aims at providing critical discussion about today phenomena connected with technology, communication and media productions.

DIGITAL VIDEO (VFX-3D Spec.)

The course focuses on theoretical-practical fundamentals of digital video. The goal is for the students to reach awareness and maturity in identifying suitable technical solutions on a movie set as VFX supervisors. The project lab aims to introduce students to the world of compositing and to understand the basic principles of visual postproduction practices. Moreover, students will learn the basic functions of the software Nuke through the use of selected shots and practical training.

COMPUTER GAMES 1 (GM Spec.)

Starting from the basic elements that define game mechanisms, subsequently translated into metrics to shape characters and environments, this course's goal is to introduce the students to game design, and to provide them with the necessary tools to carry out their personal projects.

INTEGRATED NEW MEDIA TECHNIQUES 2 (VFX-3D Spec.)

The project lab aims to further 3D modelling skills to an intermediate level, through polygon modelling techniques for humanoid characters and/or animals and dedicated props. Students will learn advanced functions of the software Maya through the use of chosen projects and practical training, as well as understanding the principles of character design.

INTEGRATED NEW MEDIA TECHNIQUES 2 (GM Spec.)

The course aims at deepening the students' competencies in the use of Unity software: advanced techniques as well as basic elements of programming will be presented, that will enable the students to carry out projects starting from the assets acquired over the course.

DIGITAL APPLICATIONS FOR ART 2 (VFX-3D Spec.)

Building on the fundamentals acquired during Digital video, this course furthers compositing knowledge through the implementation of 3D tools and techniques into the working pipeline. The second part of the course, strongly project-oriented, will introduce student to the world of colour correction. The course aims to offer a complete overview of theoretical elements and practical tools. The project lab will cover the understanding and use of DaVinci Resolve.

DIGITAL APPLICATIONS FOR ART 2 (GM Spec.)

Starting from the basic principles related to the world of level design, this course introduces students to the management of graphic assets within Unity. During the course, students will learn to control characters, environments and props developed in 3D and to apply the basic principles of animation to them.

MULTIMEDIA DESIGN 1 (VFX-3D Spec.)

The lab introduces students to the world of character animation, teaching basic character modelling techniques, inverse kinematics and motion capture, addressing the fundamentals of character animation and the subsequent activities.

MULTIMEDIA DESIGN 1 (GM Spec.)

The lab takes game design to an advanced level, teaching students the most contemporary techniques and technologies in the fields of virtual reality and augmented reality. During the course, the programming concepts acquired the previous semester will be reviewed and explored more in-depth.

DESIGN CULTURE (VFX-3D, GM Spec.)

The course aims at showing the theoretical foundations of design, as well as the main methodologies of design thinking for the creation and development of concepts. Starting with a historical overview of what ideas and projects mean, the students will learn how to manage a project in 4 phases: research, synthesis, conception, implementation. Parallel to this theoretical-project based path, the acquired competencies will be applied to the CGI work pipeline.

ILLUSTRATION

The course follows up the in-depth study of concept art techniques acquired in the Digital applications for art 1 course, with a focus on the different applications to the entertainment industry: video games, advertising, events, films, and animation. The students will widen their traditional and digital drawing skills, in order to better develop and visualise their ideas.

DIGITAL MODELLING TECHNIQUES

This course focuses on the professional use of digital technologies in the field of 3D modelling. With the study of the Houdini software, the students will be introduced to parametric 3D modelling and the management of fluids and physics.

THIRD YEAR

DIGITAL APPLICATIONS FOR ART 3 (VFX-3D, GM Spec.)

The project workshop introduces the students to working in 3D design, VFX and game design, through cross-discipline work paced by the development of a common project. An open window on the production world, made of different professional roles and specialisations that the students will get to know in-depth also through possible collaborations or simulations.

INTEGRATED NEW MEDIA TECHNIQUES 3 (VFX-3D Spec.)

This strongly project-oriented course focuses on the understanding of advanced 3D modelling techniques. The syllabus includes a complete overview of all tools and multi-platform workflows for high-end productions.

COMPUTER GAMES 2 (GM Spec.)

Starting from the acquired competencies in character design, level design and interactive storytelling, the course provides for advanced game programming. The course offers the students technical competencies in rapid prototyping, for the fast development of mock-ups and levels.

MULTIMEDIA INSTALLATIONS

The course introduces the students to the design of multimedia installations, that is systems capable of interacting with the visitors both at a sensory and at a content level. Students will acquire technical and theoretical tools in order to simultaneously manage different media, with a focus on CGI.

ART SEMIOTICS

The object of this course is the analysis of the communication processes of art, of which it aims at analysing and dismantling the mechanisms, using the methods of semiotics in their various currents (structuralist, interpretative, generative), also focusing on its interaction with other media.

NEW MEDIA AESTHETICS

Theoretical-philosophical course that focuses on beauty and on the perceptive effects associated with the use of new media as new means of artistic expression. Starting from the phenomenological and hermeneutic tradition, it observes the impact of new technologies on the aesthetic scenario - images, sounds, space - generating new cultures and sensitivity.

CAREER DEVELOPMENT

This course, developed and held in collaboration with the Career Service, aims at providing the students that are about to graduate with a number of skills that are indispensable to enter the professional world. The course will cover general topics, such as work types and contracts, elements of business economics, intellectual property and related rights, as well as more specific themes connected with different topics, such as the study of the most important players in the industry and of the dynamics that rule the access to certain professional markets. The goal is to make students aware of the possibilities as well as of the rights and duties connected with the professional activity in their industry.

FINAL WORKSHOP

This strongly project-based activity aims at supporting the students that are about to graduate in the management of the practical part of their degree thesis. Rather than actual teaching, the synthesis workshop is a compound of activities that are designed and planned around the thesis projects themselves. The students will have the opportunity to attend classes, in form of lectures, that relate to the thesis project they have chosen, as well as to have lecturers in their reference field reviewing their work. The planning of such activities follows the approval of the thesis projects, in order to customise as much as possible the lecturers' contribution and to offer the students highly targeted support, thus maximising outcomes and quality. According to the individual cases, group lectures and individual reviews will alternate.

FINAL PROJECT

The final project is the high point of the entire Three-year programme. The exam consists of a written part, where students analyse, with a critical and/or reflexive approach, a complex topic agreed upon with a supervising lecturer. In order to develop the theoretical part, students must carry out attentive research, not only bibliographical, and contextualise their opinions with suitable arguments. The final project also includes a project that depends on the kind of study course and that, through the discipline's own design method, reflects the complexity of thoughts and ideas expressed in the written part. The relation between the two components and the kind of research and project are largely based on the decisions and dispositions of the students, who will agree upon all practical ad conceptual aspects with their supervisor. Each study course contains general advice about the kind of work that should be undertaken. Throughout the Academy, specific norms are enforced that the students should be familiar with.