CADA
COPENHAGEN ACADEMY OF DIGITAL ARTS

STUDY PROGRAMME
3D Digital Artist

Class 2025

Copenhagen Academy of Digital Arts, March 2025

CADA, Nyropsgade 23, 4th floor, 1602 Copenhagen V, Denmark
Phone: +45 70 27 77 87. Email: info@cada-edu.com. https://www.cada-edu.com/

Contents

Introduction

Welcome to the study programme for the 3D Digital Artist education.

Computer Generated Imagery (from now on CGI), Visual Effects (from now on VFX) and 3D are subject fields in constant development which require skilled professionals. The field is rapidly expanding, and the demand for CGI professionals with various skills is ever increasing.

CGI is today one of the most widely used techniques in industries such as advertising, architecture, game design, film production and graphic & industrial design, and is becoming more and more accepted as a functional alternative to photography and 2D graphics. This means that CGI and 3D productions are becoming more and more visible in everyday life, and consumers expect an ever-increasing level of complexity in the imagery and effects. As a result, the tools for CGI and 3D are under constant development and the demands set by the industry upon CGI and 3D artists, are continuously raising the bar for what is to come.

Copenhagen Academy of Digital Art strives to be at the forefront of the development, educating 3D Digital Artists who will take an active part in developing the field of CGI and 3D in new and exciting directions.

Name of education and title of graduates

The name of the education is '3D Digital Artist' abbreviated to 3DDA.

A graduate from the 3D Digital Artist education has the right to be titled '3D Digital Artist'. Upon graduation, the students will receive a diploma from CADA with all individual grades from all exams, both when given based on the 7-scale and as passed/failed.

Authority

The 3D Digital Artist education is offered by CADA, a private education provider operating in Denmark. As a private education provider, CADA is not eligible for accreditation in Denmark, and the 3DDA degree is therefore not awarding a degree that is officially recognized in Denmark.

The 3DDA education, however, has been approved by The Danish students' Grants and Loans Scheme (SU) and has been level assessed by the Danish Accreditation Institution under the Ministry of Higher Education and Science, and has been placed at level 6, the same level as a bachelor's degree.

At CADA we continuously put a large effort into quality assuring the education to provide the highest level of education possible. This includes systematic involvement of leading production houses, industry professionals, collaboration with international educational institutions and research centres as well as a rigorous evaluation policy.

Programme objective

The programme objective of the 3DDA education is to give the student the qualifications to achieve relevant employment in the digital visual industries (DVI) immediately after graduation.

The objective is achieved by:

- Giving the student a theoretical understanding of the creative, artistic, and technical processes within production of 3D based visual products.
- Giving the student a practice-oriented methodical understanding within development, planning and production of 3D based visual products.
- Giving the student a solid grounding for continuous development of their artistic talent, thereby enhancing their value in the work field.
- Strengthening the student's ability to innovate through multidisciplinary collaborations.

The programme objective of the 3DDA education is to develop and offer a long-term education programme that meets the demands of the industry for properly trained employees, both now and in the future. The unique education at CADA is under constant development in close cooperation with representatives from the industry to ensure the highest possible standards. It is the ambition of CADA that our graduates will be not only a workforce, but also a contributing part of the continued growth and development of the Danish visual industries.

Admission to the 3D Digital Artist education

Applicant requirements

To be accepted to CADA, the applicant must

- Have completed an upper secondary level of education, e.g. Danish *studentereksamen* or the equivalent.
- submit a portfolio in pdf-format, after which the school assesses whether the applicant can be admitted. It is expected that the portfolio demonstrates artistic process as well as classic drawing skills and ability to develop own ideas.
- Submit a motivational letter describing engagement, area of interest and artistic/creative focus.

Applicants to 3DDA are expected to have a basic knowledge of either 3D / CGI / animation / computer games / digital image processing techniques / programming.

Applicants are also recommended to have sufficient collaborative skills and experience with group work as well as the ability to speak and write English at an adequate level.

Applicants also need to write a motivated application.

Application procedure

Applicants fill out a form on www.cada-edu.com, where they also upload their portfolio.

Along with the application they must also upload a letter of intention/motivation in which the applicants state their interest and motivation for applying for the education.

Qualified applicants will be offered enrolment in the order that their applications have been received. A waiting list will be created with applicants on standby, in case admitted students withdraw their application.

Objectives for learning output

The professional cornerstone of the education is based on the technical and the artistic aspects of 3D graphics as well as an all-round knowledge of a production. This makes the student capable of working with 3D within several different industries, such as the movie industry, the gaming industry, visualization and more.

The education is designed to develop the creative skills of the student, to give each student solid work experience from real productions, and to make the student able to work with all aspects of 3D productions directly after the education is completed.

Knowledge

The 3D Digital Artist has knowledge of:

- Complex knowledge of methods, theories, and principles used in 3D production for film, games, visual FX, and XR formats.
- Complex knowledge of the design and development of pipelines within 3D production for games, film, visual FX, and XR formats.
- Complex knowledge of project planning and management within 3D production for games, film, visual FX, and XR formats.
- Understanding and reflection upon their own knowledge and its application within the digital visual industry, creatively, artistically, and technically.

Skills

The 3D Digital Artist can:

- Apply methods, tools, and skills to produce 3D digital art for animation, visual FX, games, and XR formats in a professional context.
- Assess theoretical and practical issues within 3D digital art production and justify chosen solutions.
- Plan and manage the production of 3D assets and evaluate standard production practices in a given context.
- Communicate professional issues and solutions to peers and non-specialists, including users and collaborators.

Competences

The 3D Digital Artist can:

- Independently participate in discipline-specific and multidisciplinary collaborations, clearly identifying personal responsibilities in professional contexts.
- Independently manage the development and production of 3D digital art for games, film, visual FX, and XR.
- Identify personal learning needs and develop their own knowledge, skills, and competencies in 3D digital art across various learning environments and contexts.

Structure and exams

The 3DDA education consists of 7 semesters, each lasting approximate 20 weeks including the examination period. Completion of each semester is awarded with 30 points, giving the entire 3,5-year education a value of 210 points.

The 3DDA is a full-time education. There is mandatory participation during the education, except for shorter time periods within each semester and the majority of the 6th semester. Each semester is completed with an exam (except 1st semester), or a number of exams, which give access to the next semester. It is a requirement that the student passes one semester before advancing to the next.

However, in case a student fails an exam, it will be possible to take a re-examination.

General information about exams

Students must meet all specific terms, set by the school, to pass the exams. Students must retake an exam if they fail, and they are allowed to retake an exam in case of documented illness and alike.

The teachers and the administration will set the specific terms of the exam, e.g. deadlines, which must be met for the student to pass the exam. The student chooses whether to do the exams in English or in Danish. If the student is late, the exam will be considered failed. If a file or presentation is uploaded later than the set deadline, the exam will also be considered failed and given the grade -3.

Each semester exam must be passed with the minimum grade of 02 to move on to the next semester. If the grade (or the average grade) of an exam is less than 02, the student must take a re-examination following the same rules and directives as the failed exam.

- If a student fails an exam, a re-examination will be arranged as soon as the administration can arrange it, and preferably before the start of the next exam term. The student has the possibility of taking 2 re-examinations. If none of these are passed redoing the semester will be required.

- In case of illness on the day of the examination, the student is allowed a re-exam. This requires a written statement from a doctor, certifying that the student was indeed unable to attend the exam. The price of the written statement is paid by the student.

- Personal reasons, such as a tragic event in the student's close relations, accidents, and such, are considered on equal terms with illness, however the student must be able to produce evidence of the event.

- If a student cheats at the exam, he or she will get a -03 and receive a written warning. If it happens again during the education, he or she will be expelled from the programme.

- All exams are public/open except the 6th semester examination, as there may be problems with public display of projects, in which the student has developed his thesis in collaboration with a corporate company / studio and the thesis includes private corporate information.

- All exams at CADA will be graded either by the 7-point grading scale or passed/failed.

Complaints regarding exams

If the student wishes to complain about an examination, the student is referred to the Ministry of Higher Education and Science executive orderno. 18 on Tests and Exams for Vocational Higher Educations, chapter 10, which, among other things, states that any complaint about an exam must be handed in to the school no later than 2 weeks after the result of the exam has been made known to the student. The complaint must be written and the reasons for the complaint must be clearly outlined. The school must answer the complaint within 2 weeks of receiving it, and when the student has received an answer, he or she has one week to make further comments to the answer from the school.

Detailed programme

1st semester - Foundation theory and practice

The students will be introduced to the fundamental subjects within 3D pipeline during the first semester, such as modelling, texturing, lighting, simulation, rigging, simple animation, rendering, as well as pre- and post-production. This semester focuses both on technical and artistic issues. The subjects will be worked on independently with several hand-ins during the semester. There are no final exams in the 1st semester. However, at the end of the semester, there will be a one-day practical assignment which summarizes all covered subjects.

Contents:

Visual Literacy

Introduction to 3D

Style Matching

Game Character

2nd semester - Character animation and production

The 2nd semester evolves around three major headlines: A character animation course, a gameworld production course, and the production of a short movie.

Character animation is an individual course, which involves two productions created in a team.

The goals for the students are how to utilise their theoretical knowledge, while working on a practical production course together with others, gain insight into the similarities, as well as the differences between producing a game and an animation. In game production the students are solely responsible for the entire pre-production, from concept and manuscript to storyboard. The short film production can be either a collaborative production with an external director – or done entirely as an internal production.

Contents:

Animation 1

Game Engine Intro

Film production

Game production

2nd Semester Exam

Type of Exam
Art Work and Oral Exam.

Scope
Art Work
A personal project grounded in the education of this semester. The project should feature one, or more, of the subjects that have featured in the first semester: modelling, texturing, animation, rigging, lighting, sculpting, grading etc.

Oral Exam
This is a 20 minute exam. 10 minutes a presentation of the artwork, focusing on process. 10 minutes defense of the work.

Assessment
External

Grading
7 Point Scale. 50% for the hand-in. 50% for the exam.

Regulations for Group Exams
The Exam is single student only

Exam Language
English

3rd semester - Mastering theory and practice I

During the 3rd and the 4th semester students will be taught several specialised subjects, of which a lot are taught by highly specialised guest teachers from the industry. The actual order of the subjects can change, as availability of industry professionals can affect the planning of the semesters. Therefore subjects can switch place between 3rd and 4th semester.

The subjects will be taught as modules consisting of specialized classes and practical assignments within the subject.

Contents:

- Introduction to procedural art and simulation
- Lighting, Rendering & Compositing
- Mechanical rigging
- Animation II
- Rigging II
- Portfolio

3rd Semester Exam

Type of Exam
Showreel and Defense

Scope
Showreel
The showreel is to consist only of work conducted at school, during this semester. No outside work can be included.

Students are to select their best work for the reel, which can be no longer than 60 seconds.

Defense
The defense consists of an accompanying document – either a voice over, or a paper – that details the process of putting together the reel, as well as the reasons for choosing the work displayed.

Assessment
Internal

Grading
7 Point Scale. 50% for the work. 50% for the Defense

Regulations for Group Exams
The Exam is single student only

Exam Language
English

4th semester - Mastering theory and practice II

During the 3rd and the 4th semester students will be taught several specialised subjects, of which a lot are taught by highly specialised guest teachers from the industry. The actual order of the subjects can change, as availability of industry professionals can affect the planning of the semesters. Therefore subjects can switch place between 3rd and 4th semester.

The subjects will be taught as modules consisting of specialized classes and practical assignments within the subject.

A large part of the semester revolves around a film production project made in collaboration with external partners, typically from partnering education institutions. During the production students will partake as 3D Digital Artists applying and expanding their knowledge in the subjects taught prior to the production.

In the last part of the semester the students will make a practical as well as written hand-in focusing on a selected subject, that has been taught during 3rd and 4th semesters modules.

Contents

- Anatomy for 3D Artists
- Hair & Fur
- New Technology
- Studio project
- Exam project

Exam procedure and censorship

4th Semester Exam

Type of Exam
Art work, Mini Thesis and Defense

Scope
The mini thesis is a project based on the 4th Semester Education. There are 3 components – The Work, a report and a defense of that work in the exam.

Art Work
This is a project grounded in the education of the 4th Semester only. The project needs to have a synopsis that is presented to the 2nd year teacher for approval before work is permitted to start.

Mini Thesis
The thesis is a reflective, written report focusing on process and decisions made to complete the project.

Defense
The defense consists of a presentation and Q&A with examiners on the work, and your process.

Assessment
External

Grading
7 Point Scale. Each of the submissions are equally weighted and comprise one third of the final grade.

Regulations for Group Exams
The exam can be taken individually or as a group with individual assessment. The thesis, and oral defense, is assessed individually.

Exam Language
English

5th semester - Game Production / Virtual Production

The whole class will be divided into smaller groups, potentially in collaboration with external partners, e.g. DADIU, the Danish Film School, Aalborg University or an industry partner.

The production will primarily be focused on cross-disciplinary iterative/incremental production pipelines, e.g. games, virtual production, world-building, animation or game-cinematics using a game engine.

Contents

Game Production & Virtual Production + Exam

As each production varies a perfect set of topics cannot be presented, but the following is exemplary of what can be expected:

- Development and production of a 3D game or realtime production. A 3DDA must have a balance of artistic sensibilities and technical understanding to make sure that everything works in accordance with the overall creative concept.
- Character production
- Production of the necessary 3D models from 2D design in collaboration with the director, the art director, the animators, the game designer and the level designer
- Collaborating with programmers to ensure that the 3D models function inside the game engine
- Collaborating with film professions to ensure creative vision.
- Cooperation with directors to produce character models that function in relation to the animation
- The 3DDA works with the art director, visual designer, and level designer to texture the 3D models

Exam procedure and censorship

5th Semester Exam

Type of Exam
Show Reel, Reflective report and Seminar

Scope
Reel
The student submits a show reel of their work completed that semester, if appropriate. Those in managerial positions provide examples of that work.

Reflective Report
In the report, the student reflects on the process of completing the work, and their part in it. They look at some of the decisions they made and how they contributed to the finished work. They also

look at some of the difficulties they had – either/both hard and soft skill issues – and how they overcame them. If they didn't, what they learned from that process.

Seminar
Finally students in Art Teams discuss, and defend, their work in the project.

Assessment
Internal

Grading
7 Point Scale. Each of the submissions are equally weighted and comprise one third of the final grade.

Regulations for Group Exams
Due to the nature of Semester 5 it is assumed that the work has been completed by a group.

The report and reel are graded individually, and while the seminar is with the entire team, each student's contribution is assessed separately.

Exam Language
English

6th semester – Thesis Project

The 6th semester is dedicated to the thesis project and is a semester that requires a high level of independence from the student. During the semester, the student works on a chosen subject from within the course, immersing in a single discipline, or with a broader focus, by including different disciplines and work in depth with a subject during the whole semester.

The student describes a project, synopsis/disposition, which must be completed within the framework of 20 weeks.

Every student has the right to meet 10 hours with a mentor.

The project is a practical project and can be done both individually and as group work. The project will always be evaluated and judged individually. In addition to this project the student is required to hand in a written assignment, containing a description and discussion of the workflow. This project will be included in the final evaluation.

To facilitate interdisciplinary collaboration with other educational institutions and the industry, the thesis can be done in partnership with relevant professional groups from the above-mentioned places, for example media students from Aalborg University, animation directors or photographers from the Danish Film School or businesses working within the subject field.

Contents

Thesis Project

- Project development and description
- Practical and written project
- Process evaluation
- Creation of presentation

Exam procedure and censorship

6th Semester Exam

Type of Exam
The exam is a hand-in of a piece of practical work and a written report as well as an oral defense.

Students spend a semester working on a self-directed project.

Scope
Artwork
The student submits work representative of the self-directed project they undertook.

Thesis
In this report students identify decisions they took during their project and reflect on how that impacted their final work.

Seminar
In the oral defense students present their work and then answer questions on it, and their thesis, during a Q&A with examiners.

Assessment
External

Grading
7 Point Scale. Each of the submissions are equally weighted and comprise one third of the final grade.

Regulations for Group Exams
The Artwork can be completed within a group, but the thesis and the defense are undertaken individually.

The report and reel are also graded individually, and while the seminar is with the entire team, each student's contribution is assessed separately.

Exam Language
English

7th semester - Internship

The 7th semester is based on internship.

The student must participate in an internship of 12-21 weeks in one or more national or international businesses. During this time the student must gather material for his or her showreel. It is an important criterion that the student receives valuable experiences during the internship. The internship can begin immediately after the conclusion of the 6th semester and must be completed two weeks before the end of the semester. Finding an internship is the student's responsibility. In the event of free time during the student's involvement in an internship during the 7th semester the student will be required to prepare his/her showreel/portfolio.

After concluding the internship, the student will work on a showreel.

Contents

Practical internship

- Internship
- Showreel

Exam procedure and censorship

7th Semester Exam

Type of Exam
Show Reel

Scope
Reel
Students present a show reel that is designed to demonstrate the best of their work. This is, in essence, their professional reel they take into the industry.

Assessment
Internal

Grading
Pass/Fail
The students receive feedback on their reel with a view to improving it.

Regulations for Group Exams
This is an individual exam.
Exam Language
English

Diploma of Graduation
Upon graduation, the student will receive a diploma of graduation from CADA with specification of all grades from all exams. A graduate from CADA has the right to be titled 3D Digital Artist (3DDA).

Learning outcomes per semester

Semester 1

Knowledge

At the end of the semester the student can demonstrate:

- Basic knowledge of theories and techniques within art and design.
- Basic knowledge of principles, methods, and concepts within modelling, texturing, lighting, and rendering in 3D.

Skills

At the end of the semester the student can:

- Apply visual design concepts to evaluate their own work.
- Create 3D models.
- Create 3D environments.
- Use fundamental artistic skills to sketch visual expressions.

Competencies

At the end of the semester the student can:

- Contextualize and reflect upon their own work.
- Design basic workflows and build basic pipelines using introduced skills and software.

Semester 2

Knowledge

At the end of the semester the student can demonstrate:

- Basic knowledge of principles, methods, and concepts within animation production.
- Basic knowledge of principles, methods, and concepts in designing and developing interactive digital 3D environments.
- Basic knowledge of concepts and principles within spatial storytelling.

Skills

At the end of the semester the student can:

- Create 3D animations.
- Create interactive 3D environments.
- Apply standard methods and workflows in an industry-standard real-time game engine.

Competencies

At the end of the semester the student can:

- Select software to build specific pipelines according to desired 3D outcomes.
- Create short animated films from concept to final visuals.
- Create interactive environments in a real-time game engine from concept to final product.

Semester 3

Knowledge

At the end of the semester the student can demonstrate:

- Advanced knowledge of principles, methods, and concepts within node-based procedural production methods, rigging, animation, and rendering pipelines.
- Basic knowledge of standard industry presentation formats.
- Advanced visual design understanding.

Skills

At the end of the semester the student can:

- Create simulations and procedural workflows.
- Create character animations at an advanced level.
- Apply and design rendering pipelines at an advanced level.
- Apply rigging techniques at an advanced/complex level.
- Create a portfolio based on aesthetic and communicative considerations.

Competencies

At the end of the semester the student can:

- Create complex pipelines using diverse methods within 3D production.
- Identify personal learning needs and find appropriate solutions.
- Integrate new software into existing pipelines and build new pipelines according to needs.

Semester 4

Knowledge

At the end of the semester the student can demonstrate:

- Advanced knowledge of anatomy and its role in creature design.
- Complex understanding of procedural tools for hair and fur production.
- Advanced knowledge of methods and principles within digital sculpting.
- Complex knowledge of collaborative processes within 3D production.

Skills

At the end of the semester the student can:

- Methodically approach and apply new technologies.
- Apply complex production methods and identify their dependencies within a 3D production pipeline.
- Organize and present work to external clients.
- Identify personal learning needs and design learning processes that meet those needs.

Competencies

At the end of the semester the student can:

- Design workflows and build pipelines for an entire team.
- Integrate complex workflows into pipelines.
- Apply iterative production methods when collaborating with external clients.

Semester 5

Knowledge

At the end of the semester the student can demonstrate:

- Complex knowledge of methods for organizing digital media production, including game or virtual production.
- Complex understanding of multidisciplinary collaboration within digital media production.

Skills

At the end of the semester the student can:

- Methodically apply their skills when collaborating with disciplines outside their own field.
- Methodically articulate their own needs and challenges when collaborating with disciplines outside their own field.

Competencies

At the end of the semester the student can:

- Identify and describe needs and dependencies within complex real-time engine pipelines and design and develop accordingly.
- Reflect on their own knowledge and understanding in interactions with disciplines outside their own field.

Semester 6

Knowledge

At the end of the semester the student can demonstrate:

- Development-based knowledge within one or more subject areas, including understanding and reflection on theory, method, and practice within 3D digital art.
- Ability to understand and reflect upon the discipline's knowledge, theory, and methods and relate them to practice and development.

Skills

At the end of the semester the student can:

- Apply methods and tools and master relevant skills to solve complex and practice-oriented problems within 3D digital art.
- Evaluate theoretical and practical issues and justify choices of relevant solutions.
- Communicate professional issues and solutions clearly to both peers and non-specialists—including users and collaborators.

Competencies

At the end of the semester the student can:

- Independently handle the development and production of 3D digital art for games, film, visual FX, and XR.
- Independently research and evaluate software solutions within 3D digital art production.

- Identify personal learning needs and structure their own learning across various learning environments and contexts.

Semester 7

Knowledge

At the end of the semester the student can demonstrate:

- Knowledge of methods, theories, and practices within 3D digital art and their application in a professional context.

Skills

At the end of the semester the student can:

- Apply theories, methods, and practices within 3D digital art in a professional context.

Competencies

At the end of the semester the student can:

- Independently participate in discipline-specific and multidisciplinary collaborations, taking responsibility in professional contexts.
- Identify personal learning needs and develop their own knowledge, skills, and competencies within 3D digital art.

General rules and regulations

Registration for classes and exams

At semester start CADA automatically register students for classes and exams. Registration for classes is mandatory and can only be omitted in special cases as described in the Student Handbook.

Evaluation

Evaluations are a crucial part of the quality assurance process at CADA and is approached in a systematic manner. A detailed description of the evaluations and the regulations around them can be found in CADAs evaluation policy, which is available on our website.

Attendance

There is compulsory attendance to all classes at the 3D Digital Artist education, except for 6th semester and partially 7th semester. Rules and regulations regarding attendance and failure to comply can be found in the Student Handbook.

Credit

Students can request credit for previous studies. The headmaster, head of education, and relevant teaching personnel evaluates requests for credit transfer. The evaluation will be based on the learning outcomes and study activities in relation to the 3D Digital Artist programme.

Language

All classes at the 3D Digital Artist education are taught in English. It is expected that the student can understand and speaks English on a level that does not hinder participation in the classes. Written assignments can be handed in in either English or Danish unless otherwise noted.

Complaints about teaching

General complaints of any kind should first be taken up with the teacher. If, for some reason, the student does not feel that he or she will get a fair hearing with the teacher, a written complaint should be sent to the study administration. The decision regarding the complaint must be written and justified. Further information can be found in the Student Handbook.

Suspension and expelling

Students can be suspended, or in worst case expelled, from the education. The rules and regulations are described in the Student Handbook.

Exceptions to general rules

CADA strives to be a flexible institution which takes the students' abilities and personalities into consideration when making decisions. Therefore, exceptions can be made when the school considers it needed.

All applications for dispensation must be handed in well in advance and in writing to study administration.

In each case the head of education, the teacher in question and the study administration will make the decision on whether the student may be granted a dispensation based on the regulations written above.