

TRU Ξ MAX

COPENHAGEN ACADEMY
GAMES, ANIMATION & VISUAL EFFECTS

3D Digital Artist - Study Programme

1. marts 2019
TRUEMAX COPENHAGEN ACADEMY
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Introduction

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, movies and 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.

Truemax Academy 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. The students at Truemax Academy will constantly be challenged both on a personal and a professional level, as it is the philosophy of Truemax Academy that only by pushing the students towards new and difficult challenges, will they realize their full potential. A true 3D Digital artist never stops learning, and an education at Truemax Academy is the first step on a long and exiting road.

Effective date

This program will take effect for all students starting from 1st of August 2019.

Name of education and title of graduates

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

A graduate from Truemax Academy has the right to be titled '3D Digital Artist'. Upon graduation, the students will receive a diploma from Truemax Academy and all individual grades from all exams, both when given based on the 7-scale and as passed/not-passed.

Programme objective

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 Truemax Academy is under constant development in close cooperation with representatives from the industry to ensure the highest possible standards. Furthermore, the objective of the 3DDA education is to qualify the students technically, creatively and artistically to develop, organize and produce 3D based graphics. The 3DDA education will prepare the students to take part in production-oriented teamwork by supporting their personal development, as well as giving them the tools to become valuable colleagues. The ambition of Truemax Academy is that our graduates are able to take interest and be a part of the continued growth of the Danish industry.

The graduates of the 3DDA education at Truemax Academy will be able to:

- Combine and balance art and technology.
- Master different 3D technologies and implement these in productions and projects on the basis of an all-round knowledge of production and application.
- Raise the bar in all aspects of 3D based productions through their technical and artistic skills in relation to 3D graphics and animation.
- Work creatively, innovatively and analytically with productions within a wide range of industries, such as the entertainment industry (TV, film and games), advertising, publishing, architecture and engineering which all use 3D graphics in one way or another.
- Have a broad/general basic knowledge in all aspects of a CGI pipeline.

Admission to the 3D Digital Artist education

Acceptance to 3DDA requires a completed youth education, HTX, HF, Technical School or the equivalent. Basic knowledge of either 3D/ CGI/ Animation/ Computer games/ Digital image processing techniques/ Programming. Presentation of a portfolio supporting the above qualifications which includes works showing the applicants artistic and technical skills. Applicants are also recommended to have good collaborative skills, experience with group-work as well as understand and speak English (B level). Applicants also need to write a motivated application.

Application procedure

Applicants fill out a form on www.truemax.com. They insert a link to their portfolio (Vimeo, YouTube, or Dropbox, or other cloud storage). Along with the application they must also upload a letter of intention/motivation in which the applicant states his/her interest and motivation for applying for the education.

If there is any doubt or need for extensive questioning in regard to the application, a select few of the applicants will be invited in for an interview with the entry commission. Following this

interview, the commission will give its final evaluation on whether the applicant will be allowed admission.

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

The applicants who are offered a spot, will receive a form to be filled out and signed in order to confirm their acceptance and spot at Truemax Academy. When this form is signed *and* the registration fee is paid, the agreements on the form are activated and the spot is reserved.

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

Knowledge

The 3D Digital Artist has acquired knowledge of:

- Practice, applied theories and central concepts
- Methods and tools of animation production, including both traditional as well as most recent methods.
- The historical development of game, animation and visual effects as well as film and game history and its modern cultural relevance.
- Production planning and its relation to the economic conditions of the animation/VFX/game industry, nationally as well as internationally.
- Fundamental principles of physics as a form of expression and understanding how to apply these within character animation.
- Applied methods and essential techniques within post-production.
- Applied methods and essential techniques within 3D arts, including modeling, rigging, texturing, shading, light and rendering as well as compositing.
- The principles of design, including lines, form, colour, texture, etc.
- The development and production of 3D games. E.g. the balance of artistic sensibilities, and technical understanding needed in order to make sure that everything works in accordance with the game concept.

Skills and competencies

The 3D Digital Artist will be able to:

- Analyze animation film medium and animation products using relevant vernacular and frame of reference.
- Analyze game medium and gaming products using relevant vernacular and frame reference.
- Analyze VFX film medium and VFX products using relevant vernacular and frame of reference.
- Plan and deliver the 3D part of a game production.
- Carry out animation processes in media productions where the interaction between animation, dramaturgy, acting, music, graphics and aesthetics on one hand, and productivity and technology on the other hand, create the visual expression.
- Employ the theories, work methods and techniques of the profession, including being able to integrate traditional work methods with current digital practices and relating them to relevant and related subject areas.
- Plan and deliver a production within a defined quality and budget framework.
- Assess practice-related and theoretical problems in connection with animation/VFX/game and production processes as well as substantiate and choose relevant solutions.
- Communicate practice-related and professional problems and solutions in the different stages of an animation/VFX/game production using the relevant vernacular as well as establishing professional communication with both users and customers.
- Independently and in cooperation with others manage the development of concepts, ideas and new graphic expressions within the animation/VFX/game media and reflect upon their own intentions with the visual communication.
- Independently form part of a professional and cross-functional collaboration, including giving and receiving professionally substantiated and constructive critique with regard to both work procedures and product.
- Identify their own learning needs and further develop their own skills and competencies within the various forms of expression and subject areas of the animation/VFX/game media, and within related subject areas.
- Navigate flexibly, actively and innovatively in the professional field in an international and commercialized market and undertake responsibility within the framework of the professional ethic.

Structure

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

The teachers and the administration will set the specific terms of the exam e.g. deadlines, which must be met in order 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 exams must be passed with the minimum grade of 02 in order 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. See below.

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 going up for 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 may be allowed to retake the 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 in Truemax Academy will be graded either by the 7-point grading scale or passed/not passed. The students have copyright to the products used for the exam.

Exceptions

Truemax Academy strives to be a flexible institution which takes the student's abilities and personalities into consideration when making decisions. Therefore exceptions can be made when the school board consider it needed. All applications for dispensation must be handed in well in advance and in writing to the course coordinator.

In each case the Educations Manager, the teacher in question and the Course Coordinator will make the decision on whether the student may be granted a dispensation based on the regulations written above.

Complaints

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 Course Coordinator.

If the student wishes to complain about an examination, the student is referred to the Ministry of Education's Executive Order no. 1061 on Tests and Exams for Vocational 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.

The decision regarding the complaint must be written and justified. For further information see <https://www.retsinformation.dk/Forms/R0710.aspx?id=142708#Kap10>

Rules of absence

See student hand book

1st semester: Foundation theory and practice

The students will be introduced to the fundamental subjects within 3D pipeline during the first semester, such as modeling, 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

Subjects covered during the semester:

3D Basics 14 ECTS	Still image 8 ECTS	Game Character 8 ECTS
<ul style="list-style-type: none">- Box modelling- Texturing- Lighting- Animation- Simulation- Rendering- Basic prod. workflow	<ul style="list-style-type: none">- Production Design- Basic Cinematography- 3D pipeline- Modelling- Texturing- Render/Light/comp	<ul style="list-style-type: none">- Concept- Modelling- UV/Texturing- Rigging

2. semester: Character animation and production

This semester is split into 3 parts. A character animations 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 they realize their theoretical knowledge, while working on a practical production course together with others, gain insight into the similarities, as well as the respective 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. In the short movie project, the students learn how to work from a given concept, manuscript, storyboard etc. in collaboration with an outside director, e.g. student directors of animation from the Danish Film School. For both projects the focus is more on the process rather than the end product.

If a student receives more than 3 warnings during the course of the semester (see "Student handbook"), the student might be assigned the full curriculum for the final exam. This entails that the student must produce a complete Gameworld and/or an animated short movie without any assistance from a group. The framework for the two productions will be determined by instructors

and will contain all aspects of the production. During the course of the exam the student will receive no help or training. However, it will be possible to ask questions during the “student workshops” (see student handbook)

Contents

During the 2nd semester, the student learns about the various stages of the production pipeline and its optimal organization as well as:

Animation/10 sec. shortfilm 4 ECTS	Gameworld 9 ECTS	Animation Shortfilm 7 ECTS	Exam 10 ECTS
<ul style="list-style-type: none"> - 12 principles of animation - Posing - Cycles - Action animation - Lip-sync and dialogue - Acting for animators 	<ul style="list-style-type: none"> - 3D game pipeline - Pre-production - Production 	<ul style="list-style-type: none"> - Animation pipeline - Working with a director. (Possibly also a producer, scriptwriter, sound engineer etc.) - Production - Post production 	<ul style="list-style-type: none"> - Practical exam - Oral examination

Exam procedure and censorship:

The semester concludes with two exams with an external censor. (10 ECTS)

The first exam is a practical exam, where the student draws one out of three subjects: Modelling, rigging or animation. The student has 5,5 hours to complete the assignment.

The second exam is an oral examination. The student is expected to present and explain the five main hand-ins which he/she produced during the first two semesters: still image, game character (1st semester), character animation, Gameworld and short movie (2nd semester).

Both exams are graded using the 7-point grading scale. Students must score a minimum average of 2 in order to graduate.

3. semester: Mastering Theory and practice

In this semester the students will be taught the following topics: Sculpting, Animation, Rigging, Simulation, Scripting, pre-visualization, texturing, compositing.

The material will be taught during master classes which will vary in duration from one to three weeks.

Contents

The student has the opportunity to enhance their artistry and technical skills in one or more 3D areas. Topics can include:

Part 1 7 ECTS	Part 2 7 ECTS	Part 3 4 ECTS	Exam 12 ECTS
<ul style="list-style-type: none">- Sculpting (4 ECTS)- Animation (3 ECTS)	<ul style="list-style-type: none">- Rigging (4 ECTS)- Simulation (3 ECTS)	<ul style="list-style-type: none">- Scripting (1 ECTS)- Pre-visualization (1 ECTS)- Texturing (1 ECTS)- Compositing (1 ECTS)	<ul style="list-style-type: none">- The project- Written process evaluation

Exam procedure and censorship

The semester concludes with a three-week long exam project (12 ECTS). The student will choose one subject, which must be based on at least one of the subjects covered during the semester. The project, together with a written process evaluation is to be handed in. They will be marked by a teacher as well as an external censor using the 7-point grading scale. The project counts for $\frac{2}{3}$ and the process evaluation counts for $\frac{1}{3}$.

4. semester: Production 1

The whole class is divided into two groups. Each group will work on a production, which will be setup like a “real” production. Every student will be assigned a primary role/job title, as in a real production. It will involve a storyboard, manuscript, communicating the story, composition, camera techniques and figurative languages.

The production will primarily work within a traditional movie pipeline with a “waterfall” structure. Additional emphasis is strongly focused on teaching the student how to communicate and collaborate; focus is also on work discipline, planning and adherence to deadlines.

Contents

Throughout the project the student will also have the opportunity to work with:

Production 1 + Exam 30 ETCS
<ul style="list-style-type: none">- Pre-production: planning, production flow, deadlines- Storyboard- Manuscript- Communication skills: working with producers, directors, supervisors and leads- Understanding how the pipeline works and the student's role within the pipeline- Working with professional CGI supervisors on a daily basis- Post-production: Compositing & Color Correction- Exam

Furthermore, one of the focus points during this semester is on how the student learns to communicate in a clear language in group-work as well as works while on real productions with all the challenges and setbacks a production can experience. The production will set high standards for the student's compliance with deadlines as well as being able to receive constructive criticism. If a student receives more than 3 warnings during the course of the semester (see "Student handbook"), the student can risk being assigned the full curriculum for the final exam. This entails that the student must produce a complete Gameworld and/or an animated short movie without any assistance from a group. The framework for the two productions will be determined by instructors and will contain all aspects of the production. During the exam the student will receive no help or training. However, it will be possible to ask questions during the "student workshops" (see student handbook)

Exam procedure and censorship

The exam project is a reel or portfolio showcasing the students work during the semester. Production and exam (30 ECTS). The exam is pass/fail and with an internal censor.

If the student fails the exam, he/she will be able to take a reexamination, corresponding to the full curriculum.

5. semester: Production 2

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

The production will primarily be an interactive production, fx. games, world-building, animation or game-cinematics using a game engine. Pipeline and production are iterative.

Contents

Some of the challenges during this semester are:

Production 2 + Exam 30 ETCS
<ul style="list-style-type: none">- 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 game concept- Character production- Set and production of the necessary 3D models from 2D design in collaboration with the game 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- 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

If a student receives more than 3 warnings during the course of the semester (see "Student handbook), the student might be assigned the full curriculum for the final exam. This entails that the student must produce a complete Gameworld and/or an animated short movie without any assistance from a group. The framework for the two productions will be determined by the instructors and will contain all aspects of the production. During the exam the student will receive no help or training. However, it will be possible to ask questions during the "student workshops" (see student handbook). Group work is a very important part of the course. It is therefore not possible to be assigned the full curriculum, if the student was also assigned the full curriculum in the 4th semester. This can be dispensed by re-examinations.

Exam procedure and censorship

The exam project is a reel or a portfolio showcasing the students work during the semester. Production and exam (30 ECTS)

The exam is pass/fail and with an internal censor.

If the student does not pass the exam, he/she will be able to take a re-examination in an assignment which will cover specifications for the entire curriculum.

6. semester: Thesis

The project is a chosen subject within the course. The goal is to work in depth with a subject during the whole semester. In this project the student will have the opportunity to focus on immersing himself/herself in a single discipline, or broaden the focus, by including different disciplines.

The student describes a project, synopsis/ disposition, which he or she wishes to complete within the framework of 20 weeks. Every student has the right to meet 10 hours with a counselor. 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 work-process. 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 Medialogi students from Aalborg university, animation instructors or photographers from the Danish Film School or businesses working within the subject field.

Contents

Thesis 30 ETCS
- Project
- Process evaluation
- Oral Exam

Exam procedure and censorship

The student hands in the project, including synopsis and a process evaluation. The student is expected to be able to explain his/ her professional choices and discuss the methods used in the production. The oral exam lasts 45 minutes, and includes a presentation of the project, questions and a discussion. The thesis including the defense of the thesis in front of an internal and external censor comprise the final exam and will be evaluated in accordance with the 7-step grading scale. There will only be given one grade. The project and the process evaluation carry $\frac{2}{3}$ and the oral exam/ defense of thesis $\frac{1}{3}$ (30 ECTS)

7. Practical 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 30 ETCS
<ul style="list-style-type: none">- Internship- Showreel- Exam

Exam procedure and censorship

The exam assignment required for the seventh semester is the students final showreel, possibly the work developed during internship (if this material is allowed for public viewing). The assignment is produced and delivered during the second to last week of the semester and will be evaluated pass/ fail by an internal and external censor. Internship and exam (30 ECTS). During the final week of the semester the student will receive personal feedback and be informed by both a censor and a teacher whether the person in question has graduated from Truemax.

Diploma of Graduation

Upon graduation, the student will receive a diploma of graduation from Truemax Academy with specification of all grades from all exams. A graduate from Truemax, Copenhagen Academy of Games, Animation and Visual Effects, has the right to be titled 3D Digital Artist (3DDA).