

TRUEMAX

COPENHAGEN ACADEMY
GAMES, ANIMATION & VISUAL EFFECTS

3D Digital Artist (3DDA)

Study Programme

Version 1.2 2017

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Introduction

Computer Generated Imagery (from now on CGI) and 3D are subject fields in constant development which require skilled professionals. The last few years the field has expanded rapidly, 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 come to 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 that the industry place on the 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 CGI 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 2017.

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 7 semesters, both when giving 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.
- Having a broad/general basic knowledge in all aspects of a CGI pipeline.

Admission to the 3D Digital Artist education

Admission to the 3DDA education requires that the applicant has a secondary education (In Danish called 'ungdomsuddannelse' e.g. tenth grade, gymnasium, Technical College (Teknisk Skole) or similar, and possesses a basic understanding of 3D graphics and animation as well as experience in applying this knowledge in practice. It is also required that students are competent in cooperation and team work. Furthermore, they have to be able to follow instructions in English and have minimum level B in English or similar.

Application procedure

Applicants fill out a form on www.truemax.com. They insert a link to their portfolio (Vimeo, YouTube, or Dropbox, Wuala 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

The applicants who are evaluated to be qualified, will be invited to an interview with the admission board. Based on their qualifications the top 35 (or less) will then be offered a spot. 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 in 3D graphics and animation is designed to develop the creative skills of the student, and 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 history and its modern cultural relevance.
- Production planning and its relation to the economic conditions of the animation 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 and its significance for character development.
- Applied methods and essential techniques within 3D arts, including modeling, rigging, texturing, shading, light and rendering as well as composition.
- The principles of design, including lines, form, color, 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:

- Analyse animation film medium and animation products using relevant vernacular and frame of reference.
- Analyse game medium and gaming products using relevant vernacular and frame 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 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 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 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 media, and within related subject areas.
- Navigate flexibly, actively and innovatively in the professional field in an international and commercialised market and undertake responsibility within the framework of the professional ethic.

Structure

The 3DDA education consists of 7 semesters, each lasting 20-22 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 fulltime education. There is mandatory participation at the education. Each semester is completed with an exam, or a number of exams, which gives 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 exam. The content of each semester is illustrated below:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
sem1				3D basics						moving image							game character							autumn	
	box	box	texture	lighting	animation	simulation	rendering	drawing	concept	mayaIntro	model	texture	render	comp/AE	concept	model	uv tex	rigging	rigging	posing					
sem2	Animation			10 sec. short film						20-30 sec. short film							45 sec. short film			exam			spring		
production	basics	hit/punch	walk/run	acting	acting	acting				group project, full production from idea to final film								group project, production, with the filmscho			ex/Censur				
sem3	sculpting			rigging			animation			sim.			compositing			vfx exam projec							autumn		
	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	individual or group of	Filmskolen	ex/Censur		
sem4	short film production at Truemax																					exam	spring		
production	Filmskolen afgangsfilm																								
sem5	game production at Truemax/KE																			exam		autumn			
production	DADIU (Danske Akademi for Interaktiv Uddannelse)																			Filmskolen midtvejs/afgangsfilm					
sem6	speciale																	exam		spring					
speciale	school internship option																	ex/Censur							
sem7	internship																			exam		autumn			
	school internship option																			ex/Censur					

Showreel

During the education the student will be continuously working on perfecting his or her showreel, showing the productions the student has participated in during the education. The showreel lasts 1-2 minutes and presents the best work produced during the last 3,5 years.

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 choose 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 minimum the 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-exam 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. If the student fails the 6th semester exam (“bachelor” project) the re-examination will be arranged the following year (June). If the student fails the exam again, he or she may apply to the administration for a dispensation in order for him or her to retake the exam for the 3rd time. The nature of the re-examination depends on the exam in question, and is described below under the semester descriptions. Should this not be granted, the student will be offered to redo the entire semester (with a discount on the tuition fee). The same semester can only be taken twice.

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 for 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 7th semester examination, as there may be problems with public display of projects made by the employer.

All exams in Truemax Academy will be graded either by the 7-point grading scale or passed/not-passed. The students own the copyright to the products that are being 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, in writing, well in advance to the course coordinator.

The Educations Manager, the teacher in question and the Course Coordinator will in each case make the decision whether the student may be granted a dispensation of 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

It is obligatory that the student is present for a minimum of 20% of the classes.

If absence is more than 20% (no matter the cause of the absence) the student will not be allowed to take exams. If the absence is to any disturbance to other students and the student's environment, Truemax Academy holds the right to expel the student, if the student does not react accordingly to received notices and written warnings.

Semester 1: Foundation theory

In the 1st semester, the student starts out by working with 3D studio Max. Later on the semester, Maya is taken into use - which is the main software programme used throughout the entire education programme. This semester places a great deal of emphasis on the technical aspects of 3D graphics but also focuses on the creativity and self-discipline of the student, who is expected to work independently and productively.

Contents

Subjects covered during the semester:

3D basics (3DS Max) 14 ECTS	Moving image (Maya) 8 ECTS	Game Character (Maya) 8 ECTS
Box modelling	Drawing	Concept
Texturing	Concept	Modelling
Lighting	Maya intro	UV/Texturing
Animation	Modelling	Rigging
Simulation	Texturing	Posing
Rendering	Render/Light/comp.	
Basic prod. workflow		

The curriculum covers three areas: Theoretical, practical and self-study. The student is asked to hand in three main assignments during the semester (a 3D Basic production (movie clip), a moving image (movie clip), and one rigged Game Character, including five different poses.) The assignments is a passed/not passed grade. If the student does not pass an assignment he/she will receive a written warning.

If the student receives three written warnings, including warnings of absence, the student will not pass 1st semester and has to redo the entire semester.

Semester 2: Short-film production

This semester deals with more advanced work on topics such as character design and -modeling, texturing, lighting, rendering, compositing, animation and production pipeline.

Students conclude the semester by completing one individual project and two group projects consisting of short animated films (approx. 30-45 secs) within a set subject (for instance: create a new version of a fairy tale). Each group consists of 3-6 students. The student/group will receive a passed/not passed for each short film /project. When evaluating the group projects, both the quality of the film and the team work in the group will have effect on the grade (50% each). These grades will not affect the passing of the semester. If a group or student dont't pass they will get a written warning.

If the student receives three written warnings, including warnings of absence, the student will not pass 2nd semester and have to redo the entire semester.

The semester is divided into three parts: 10 sec. short film (character/acting animation), 30 sec. short film, 45 sec. short film (full production, except pre-preproduction. Possibility of working together with students from the Danish Filmschool).

Contents

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

Animation/10 sec. shortfilm 3 ECTS	30 sec. shortfilm 7 ECTS	45 sec. shortfilm 5 ECTS
12 principles of animation Cycles Action animation Lipsync and dialogue Acting animation	Pre-production Production Post production	Working with a director. (Possibly also a producer, scriptwriter, sound engineer etc.) Production Post production

Exam description

2nd semester ends with two exams, the 1st year exams.

There is both internal and external censorship on these exams.

For all parts of the exam the 7-point grading scale will be used.

Practical exam

The practical exam is in modeling, rigging or animation (5 ECTS). This is a 6-hour set exam which takes place at Truemax Academy. The student draws the subject on the morning of the exam and work on their school computer. The use of all sorts of material including the internet is allowed. For the rigging exam, the student rigs and skins a pre-made character and makes it ready for the animator to work on. In the animation exam the student hands in a walk cycle with a specified expression (for instance: happy). The modeling exam consists in modeling a hard surface model (for instance a toy plane).

Should a student not pass the practical exam, he or she will be given an exam in both rigging, modeling and animation to be held at the school; one day for each subject. All three exams must

be passed with the grade of at least 02. The average of these three exams is the final grade of 1st semester.

Showreel exam

The student must edit a showreel, that needs to show all the major subjects from both 1st and 2nd semester. The exam takes the form of a 15-minute conversation between the student and the teacher during which the teacher and censor gives feedback on the showreel, and informs the student of the final grade. The showreel must be 1-2 minutes long (10 ECTS).

Should a student not pass the 1st year exams, he or she will not be able to continue the education.

Semester 3: Mastering theory

The 3rd semester has focus on master classes. The master classes cover some specific and unique areas with emphasis on expertise within the chosen subject. The overall focus is VFX and the semester will end with a production that includes one or a combination of the topics learned during the semester.

Contents

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

- Sculpting
- Rigging
- Animation
- Simulation
- Compositing

Exam description

This exam has internal and external censorship, and is evaluated according to the 7-point grading scale. The 3rd semester exam consists of an evaluation of the student's VFX Project, which has been handed in to evaluation. The exam takes the form of a 20-minute conversation between the student and the teacher during which the teacher and the censor gives feedback on the VFX project, and informs the student of the final grade.

Should a student not pass the exam, or hand in the VFX project too late, a re-exam will be given.

Should a student not pass the 3rd semester exam, he or she will have to redo the entire semester.

Semester 4: Short-film production

During the 4th semester the student will work on a group production. The student can apply to:

1. A production at Truemax Academy in collaboration with an external client and professionals from the business. This might be a short-film, a complex 3D scene or some such.
2. The Danish Filmschools "Animations afgangsfilm"

Through this project the student will strengthen his or her individual skills in order to reach a higher level of specialisation within his or her chosen field, but still have focus on the whole pipeline.

Contents

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

- 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

Furthermore, one of the focuses during this semester is that the student learns to communicate in a clear language in group-work as well as work on real productions with all the challenges and set-backs a production can bring. The production will set high standards for the student's compliance with deadlines as well as being able to receive constructive criticism.

Exam description

The 4th semester (30 ECTS) exam has two parts, but takes place in one session with the duration of 20 minutes. Graded as passed/not passed. There is internal censorship on this exam.

Evaluation of the production

The student will receive an evaluation of the work he or she has produced during the production, both with regard to motivation and productivity in the project, but also with regard to team work, flexibility, giving and receiving feedback, work ethics, punctuality etc.

Showreel evaluation

The student receives feedback and evaluation of the showreel that has been handed in prior to the examination.

When calculating the final semester grade, the production weighs 2/3 and the showreel 1/3.

Should the student not pass the exam, they will be given another opportunity at improving their showreel, with the aim of getting the average grade of the project evaluation and the showreel to reach the required level.

Should a student not pass the 4th semester exams, he or she will have to redo the entire semester.

Semester 5: Game production

During the 5th semester the student will partake in a game-production (If the student participated in a game production in 4th semester, the student can choose a film production at the filmschool). The student will work as a CGI-artist and/or animator, and be involved in the game production from start to finish. This means that the student will gain insight into every part of the process of game creation, giving him or her a good understanding of the different challenges and tasks a game production presents.

The student can apply to:

- Game production at Truemax Academy.
- DADIU.
- The Danish Filmschool's animations midterm/graduate movie or -game.

Contents

Some of the challenges during this semester will be:

- Development and production of a 3D game world. 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 the animators 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 description

The exam on the 5th semester is an 30 minutes oral exam. There is internal censorship, and the passed/not passed grading scale will be used.

The student is required to create a presentation answering a given question about his or her involvement and production during the game-production (for instance: “Demonstrate your part in the game production in a form selected by you”). The student prepares a presentation and hand it in before the oral exam. The student must choose one or more elements that he/she has been responsible for during the game production, and present them thoroughly. The student is expected to be able to explain his/her choices professionally and argue the methods used in the production. It is mandatory to be able to show his or her work in Maya or 3ds Max or any other 3D programme during the presentation.

Should a student not pass the 5th semester exams, he or she will have to redo the entire semester.

Semester 6: “Bachelor” project

The “bachelor” project is a chosen subject within the field of study. The goal is to work in depth with that subject during the whole semester. In collaboration with a teacher the student formulates a “bachelor” project which he or she will execute within a time frame of 20 weeks. Each student has the right to receive sessions of supervision with a teacher. The “bachelor” project is a practical project and can be made individually or in a group of up to three students. Together with the project the student must hand in an evaluation of the work process. This paper is included in the evaluation, but is not graded alone. The student will have the opportunity to take lectures approximate ones every second week. There will be lectures on both technical and soft subjects.

Exam description

The student hands in the “bachelor” project, including the process evaluation paper and the material to be used for the oral presentation/exam. The student is expected to be able to explain his/her choices professionally and argue the methods used in the production.

The oral exam will last 45 minutes that includes presentation of the project plus questions and discussion. This exam has internal and external censorship, and is evaluated according to the 7-point grading scale. Only one grade is given. The “bachelor” project weighs $\frac{2}{3}$ and the oral exam $\frac{1}{3}$.

Semester 7: Internship

The student completes the last 20-22 weeks of practical work experience/internship in one or more Danish or international companies. During this time the student also puts the finishing touches on his or her showreel. It is a requirement that during the internship, the student receives valuable work-experience. The internship may begin immediately after the 6th semester exams are finished, and must be terminated by December as the student needs time to work on the final project for the graduation exam.

Exam description

The 7th semester’s exam is the student’s final showreel, including work produced during the internship. The exam takes the form of a 20-minute conversation between the student, the teacher and the censor during which the teacher gives feedback on the showreel, and informs the student of the final grade. There is internal and external censorship, and the exam is awarded with a grade according to the 7-point grading scale.

Diploma

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