

## 3D Digital Artist & Game Artist TRU**E**MAX academy Study Program

### **Introduction**

Computer Graphic Imagery (from now on CGI or CG) 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 CG professionals with various skills is ever increasing. CGI is today one of the most widely used effects 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 the everyday life of ordinary people, who come to expect an ever-increasing level of complexity in the imagery and effects they encounter in their day-to-day lives. As a result the tools for CGI and 3D are under constant development and the demands that the industry place on the CG and 3D artists are continuously raising the bar for what is to come.

TRU**E**MAX academy strives to be at the forefront of the development, educating CG and 3D artists who will take an active part in developing the field of CGI and 3D in new and exciting directions. The students at TRU**E**MAX academy receive tuition from some of the best artists in the world, and will constantly be challenged both on a personal and a professional level.

It is the philosophy of TRU**E**MAX academy that only by pushing our students towards new and seemingly difficult challenges, will they realize their full potential. However, it is important to stress that a true CG artist never stops learning, and that an education at TRU**E**MAX academy is only the first step on a long and exiting road.

### **Effective Date**

This program will take effect for all students from 1 August 2015.

### **Name of Education and Title of Graduates**

The name of the education at TRU**E**MAX academy is “3D Digital Artist & Game Artist” abbreviated to 3D DA & GA. A graduate from TRU**E**MAX academy has the right to call himself 3D Digital Artist & Game Artist.

Upon graduation, the students will receive a diploma from TRU**E**MAX academy with all the grades from the 6 semesters are specified.

### **Program Objective**

The program objective of the 3D DA & GA education is to develop and offer a long-term education program 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 3D DA & GA education is to qualify the students both technically, creatively and artistically to develop, organize and produce 3D based graphic processes. The 3D DA & GA 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 be a valuable colleague. It is the ambition of TRUEMAX academy that our graduates are able to take an interest and be a part of the continued growth of the Danish industry.

The graduates of the 3D DA & GA 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 relations 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 CG pipeline.

## Admission to the 3D DA & GA Education

Admission to the 3D DA & GA education requires that the applicant has an ungdomsuddannelse and possesses a basic understanding of 3D graphics and animation as well as experience in applying this knowledge practically. Furthermore, TRUEMAX academy requires that students are competent in cooperation and team work. Furthermore, they have to be able to follow instructions in English and have at least B level in English.

The procedure is as follows:

Applicants fill out a form on [www.truemax.com](http://www.truemax.com). They write a link to a 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 admission board screens the portfolio and invites applicants to a 3D exam in a 3D program of their own choice

Those who are evaluated to be qualified will then be invited to an interview with the admission board

All the applicants are numbered and the top 25-28 (or less) will be offered a spot. A wait list will be created with applicants on stand-by should admitted students withdraw their application.

## Objectives for Learning Output

The professional cornerstone for the education consists of a focus on the technical and the artistic aspects of 3D graphics as well as an all-round knowledge of a production. This will make the student capable of working in both the movie and the gaming industry when the education is finished.

The education in 3D graphics and animation is designed so that it develops the creative skills of the student and give each student solid working experience from real productions, in order that the student will be able to work with all aspects of 3D productions directly after the education is finished.

## Knowledge

- The 3D Digital Artist & Game Artist has the acquired knowledge of:
- Practice, applied theories and central concepts as well as knowledge of methods and tools of animation production, including both traditional as well as most recent methods
- The development in animation film history and its modern cultural relevance
- Production planning and the relation to the economic conditions of the animation industry, nationally as well as internationally
- Fundamental principles of physics as forms of expression and understanding how to apply these within character animation
- Applied methods and central techniques within post-production and the significance of this for character development.
- Applied methods and central 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 Game Artist develops and produces the 3D world of the game. A Game Artist must have a balance of artistic sensibilities, and technical understanding to make sure that everything works in accordance with the game concept.

## Skills and competencies

The 3D Digital Artist & Game Artist will be able to:

- Analyze the animation film medium and animation products using the relevant vernacular and frame of reference
- Analyze the game medium and gaming products using the 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 the 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 commercialized market and undertake responsibility within the framework of the professional ethic.

## Structure

The 3D DA & GA education consists of 6 semesters, each lasting 22 weeks including the examination period. Completion of each semester is awarded with 30 ECTS-points, giving the entire 3-year education a value of 180 ECTS points. The 3D DA & GA is a fulltime education. Each semester is 30 ECTS points.

There is compulsory participation at the education except the 6th semester.

Each semester is finished with an exam 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 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	still image			game character			Animation				10 sec. short film				exam	autumn						
	concept	maya/intro	model	texture	render	concept	model	uv tex	rigging	rigging	posing	basics	jump	hit/punch	walk	facial anim	acting	acting	acting	acting	exam/pre	ex/Cencur
sem2	30-45 sec. short film						45 sec. short film						30-45 s. short continued		poster	showreel	exam	spring				
production	group project, full production from idea to final film						group project, production, with the filmschool															
sem3	sculpting		rigging		animation		sim.		compositing				vfx exam project				exam	autumn				
	lectures	lectures	assignm	lectures	lectures	assignm	lectures	lectures	assignm	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures	lectures
sem4							short film production at Truemax										exam	spring				
production							EUCROMA (the European Cross Media Academy)															
							Filmskolen afgangsfilm															
sem5							game production at Truemax										exam	autumn				
production							DADIU (Danske Akademi for Interaktiv Uddannelse)										ex/Cencur					
							Filmskolen midtvejs/afgangsfilm										ex/Cencur					
sem6							internship										exam project	exam	spring			
speciale							school internship option										speciale					

## 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 will last app. 1½-2 minutes and presents the best work produced during the last 3 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 chose whether to do the exams in English or in Danish.

If the exam is a set oral or written exam, the student must be on time for the exam. If the student is late, the exam will be considered failed. If an upload of a file or presentation is later than the set deadline, the exam will also be considered failed and the grade -3 will be given.

Each semester exams must be passed with the grade of 2 in order to move on to the next semester. If the grade (or the average grade as it is in some exams) is less than 2, the student must take a re-exam following the same rules and directives as a failed exam. See below.

If the 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 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 third time. 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.

The nature of the re-examination depends on the exam in question, and is described below under the semester descriptions.

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 student covers the expenses to the doctor.

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 program.

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 by the 7-point grading scale.

If a student

Copyright: The students own the copyright to the products that are being used for the exam.

## Exemptions

TRUEMAX academy strives to be a flexible institution which takes our students abilities and personalities into consideration when making decisions. Therefore exemptions can be made to most rules if the circumstances mitigate it. All applications for dispensation must be handed in well in advance and in writing to the course coordinator.

The Educations Manager, the teacher in question and the Course Coordinator will in each case make the decision whether a 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 complain 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>

## Semester 1: Foundation Theory

In the 1<sup>st</sup> semester, students begin to work with Maya which is the main software program used throughout the entire education program. 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 students, who are expected to work independently and productively.

### Contents

Subjects covered during the semester:

<b>Animation/10 sec shortfilm (8 ECTS)</b>	<b>Still image(8 ECTS) (Maya)</b>	<b>Game Character (8 ECTS) (Maya)</b>
12 principles of animation	Drawing	Concept
Cycles	Concept	Modelling
Action anim.	Maya intro	UV / Texturing
Lipsync and Dialoge	Modelling	Rigging
Acting animation	Texturing	Posing
	Render/Light/comp.	

The curriculum covers 3 areas: Theory, Practical and Self-study. The students are asked to hand in 3 main assignments during the semester (a 3D Basic production (movie clip), a still image, and one rigged Game Character, including 5 different poses.)

### Exam Description

1st semester ends with 2 exams. One practical and one oral.

There is both internal and external censorship on this exam. For all parts of the exam the 7-point grading scale will be used.

The practical exam is in modeling, rigging or animation (5 ECTS). This is a 6-hour set exam which takes place in TRUEMAX academy. The students draw 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 premade 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; 1 day for each subject. All 3 exams must be passes with the grade of at least 2. The average of these 3 exams is the 1. semester final grade.

The oral exam is a presentation and analyse of a subject (CG/animation related)the student choose. There is 15 minutes for the presentation and 10-15 minutes for discussion after this (10 ECTS).

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

The semester assignments described above make part of the final examination grade. The student will receive a grade for each of the 2 assignments and the average of these 2 grades must be at least 2 to pass 1st semester.

The final grade for the semester is calculated by average, and the principle for round-off is as follows: the average grade will be rounded to the closest grade on the scale, either upwards or downwards. If the grade is in the middle between 2 grades, the highest grade will be given.

## **Semester 2: Short-film Production**

This semester deals with more advanced work on topics such as 2D drawing skills, character modeling, texturing, lighting, rendering, compositing, animation and production pipeline.

Students conclude the semester by completing 1 individual project and 2 group projects consisting of short animated films (app. 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 feedback 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.

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During the 2<sup>nd</sup> semester, students learn about the various stages of the production pipeline and its optimal organization as well as:

<b>30 second shortfilm (7 ECTS)</b>	<b>45 sec shortfilm(5 ECTS)</b>
Pre Production:	Working with a Director, producer,
Story Development	scriptwriter, sound engenieer etc.
Character Development	Production
Concept Art	Post production
Storyboard	
Animatic	
Post Production:	
Compositing	
Editing	

## Exam Description

### Semester 3: Mastering Theory

During the third semester, the focus is on master classes with top instructors from all over the world. The master classes cover some specific and unique areas with emphasis on expertise within the chosen subject.

Instruction is given by a handful of the best 3D artists in the world. The overall focus on 3rd semester is VFX and will end with a production that includes all the topics learned during the semester.

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The students have the opportunity to enhance their artistry and technical skills in one or more 3D areas through working with some of the world's best people in the 3D industry. Topics include

Sculpting

Rigging

Animation

Simulation

Compositing



Each 1 week assignment in sculpting (3ECTS), rigging (3ECTS) and animation (3ECTS) must be passed before the student can take the final vfx exam (that follows the simulation and compositing modules) (21 ECTS).

## Exam Description

This exam has internal censorship, and is evaluated according to the 7-point grading scale. The 3<sup>rd</sup> 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 gives feedback on the VFX project, and informs the student of the final grade. The exam is awarded with a grade according to the 7-point grading scale. 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 3<sup>rd</sup> semester exams, he or she will not be able to continue at the education.

## Semester 4: Short-film Production

During the 4<sup>th</sup> semester the students will work on a group production. The Student can apply to:

1. A production at Truemax 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. EUCROMA (the European Cross Media Academy)
3. 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 specialization within his or her chosen field, but still have focus on the whole pipeline.

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

- Pre-production: planning, production flow, deadlines
- 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
- Storyboard
- Manuscript

Furthermore, one of the focuses during this semester is that the students learn to communicate in a clear language in group-work as well as work on real productions with all the challenges and set-backs such 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 4<sup>th</sup> semester (30 ECTS) exam has two parts, but takes place in 1 session with the duration of 20 minutes, and the 7-point grading scale will be applied for both. 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, 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. A grade of 2 must be obtained in order to continue on to the next semester.

Should students not pass the exam, they will be given another attempt at improving the showreel so that the average of the project evaluation and the showreel reaches at least 2 which is required to continue to the 5<sup>th</sup> semester. Otherwise the semester must be taken again.

Should a student not pass the 4th semester exams, he or she will not be able to continue at the education.

## Semester 5: Game Production

During the 5<sup>th</sup> semester the students will partake in a game-production (they can choose a film production at the filmschool, if they do not have any game productions). For instance as a student on DADIU (Danish Academy for Digital Interactive Entertainment) he or she will participate in a game-production arranged by TRUEMAX academy. The student will work as a CG-artist 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:

1. Game production at Truemax.
2. DADIU
3. The Danish Filmschools "Animations Midtvejs eller Afgangs film/spil"

## Contents

Some of the challenges during this semester will be:

- Development and production of the 3D world of the game. A CG Artist must have a balance of artistic sensibilities, and technical understanding to make sure that everything works in accordance with the game concept.
- Character Design and Production
- Set design 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 game-programmers to make sure 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 CG Artist works with the art director, visual designer and the level designer in relation to texturing of the 3D models

## Exam Description

The exam on the 5<sup>th</sup> semester is an oral exam which is 40 minutes in duration. There is external and internal censorship, and the 7-point 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. Students are expected to be able to explain their choices professionally and argue the methods they have 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 program during the presentation.

Should a student not pass the 5th semester exams, he or she will not be able to continue at the education.

## Semester 6: 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 of the internship, that the student receives valuable work-experience within his or her chosen field of specialization.

The internship may begin immediately after the 6<sup>th</sup> semester exams are finished, and must be terminated so the student has time to work 2 weeks on the final project for the graduation exam.

## Exam Description

The 6th semester exam project is a chosen subject within the field of study. The goal is to work in depth with that subject during 2 weeks. In collaboration with a teacher the student formulates a project which he or she will execute within a time frame of 2 weeks. Each student has the right to supervision sessions with the teacher. The exam project is a practical project and must be made individual. 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.

Only one grade is given. The project (including the paper) weighs  $\frac{2}{3}$  and the oral exam  $\frac{1}{3}$ .

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There is internal and external censorship, and the exam is awarded with a grade according to the 7-point grading scale.

Upon graduation, the students will receive a diploma from TRU**EMAX** academy with all the grades from the 6 semesters are specified.

A graduate from TRU**EMAX** academy has the right to call him/her -self 3D Digital Artist & Game Artist.