

The Multimedia Study Programme

Admission requirements

In order to be accepted into the study programme at the School of Multimedia, students have to have completed a matriculation examination or the equivalent, have finished the basic courses within the information and media studies or completed a study programme within art or information technology. In addition they must have a good basic knowledge of working with computers as well as English. If the applicant has an extensive experience within multimedia or related fields, it will be taken into consideration. The school can accept an applicant on the condition that he complete certain prerequisites as well as general academic subjects.

It is preferable that students who want to specialise in animation have completed courses in freehand drawing, equivalent to SJL103 and MYL103.

At the end of each semester students must re-apply to continue at the school and it depends on the results of their studies whether the school will accept them into the following semester. If a student fails in 10 credit units one semester, or two courses, he has to repeat the whole semester. There are no exceptions from this rule. If a student fails in 5 credit units, or one course, a special committee will decide whether the student will be allowed to continue the next semester and base the decision on the student's attendance and work in that particular course as well as the reason for him failing the course.

Organisation of the study

Courses in the first three semesters are organised according to a class based system where the students attend the same classes at the same time. In the first three semesters students take four five-unit courses each semester. The teaching takes place from Monday to Thursday from 8:10 until 11:55 and from 12:35 until 16:00. Fridays are workdays where students are expected to work on their projects.

In the fourth semester everyone takes a course of 20 credit units which is a workshop of the final project which students are expected to do independently in their chosen field. There is no formal teaching in the fourth semester, however, students are expected to be at school on all weekdays from 8:10 until 16:00. Various lectures are held by the teachers, specialists from outside the school and various companies. Every student has a supervisory teacher who assists the student and they meet at a formal meeting once a week. In addition the students turn in their projects on a blog, where they describe the progress of the final graduation project. They also have presentations regularly where all the supervisory teachers and the students meet.

The following courses are offered:

ZHO = Design

ZMF = Multimedia studies

ZVF = Web design and multimedia

ZHM = Animation and Film production

All courses taught in the first semester have the number 105, all courses in the second semester have the number 205 and courses taught in the third semester the numbers 305 and 315. The course taught in the fourth semester has the number 420.

Students of the School of Multimedia can take courses in sports along with their multimedia courses.

At the end of the fourth semester or when the required 80 credit units have been completed, the student graduates with a leaving certificate stating that he/she has completed a study in multimedia.

Methods of instruction

Each course is a separate unit but the study can be organised in integral projects that touch the subject of many courses or divide the subject of certain courses into smaller units, all depending on the needs of the students as a group. However, the final objectives of the study and the objectives of the individual courses must always be respected and the name and number of the courses must be correct on the students' diplomas.

When organising the teaching in multimedia it is important that the teacher respects the objectives of the curriculum and focuses on developing a sense of professionalism within the student as well as training technical work methods. Jobs in the field of multimedia are very varied and demand knowledge and skills in technology, design, communication, project management, production and social issues. It is important to train the students in the skill of tackling real projects where there may be job descriptions or instructions as well as projects where the solution is not obvious. Looking for solutions demands ingenuity and analytical thinking and it is important to train these qualities within the students. In the final project the focus is on the student being able to: Manage projects, assess information based on various prerequisites and viewpoints; criticise his own work as well as that of others in a constructive way and work at projects from preproduction to release. Study requirements such as these include training the students in working independently as well as in cooperation, including working in groups. Project work as a form of organisation of studies combines most of the aforementioned factors.

The demand for better quality and service in the field of multimedia is steadily increasing and therefore it is important that students are well aware of their professional responsibility and the value of lifelong learning.



Assessment

The purpose of the assessment is among other things to give guidance during the study and to examine if the student has learnt and adopted the objectives in the respective courses. The teachers must define the objectives of the courses in more detail than is done in the curriculum guide in order to be able to assess more definitely if these objectives have been reached. Teachers are encouraged to assess the students' work in multitudinous ways but make sure that the extent and the content is according to the teaching in the relevant courses.

During the teaching there are many opportunities to review and assess the students' educational performance and efficiency. Examples of possibilities of assessment are various projects that the students do individually or in cooperation with others, as well as written and practical tests. Presentations by individual students or student groups, of projects in different stages of process, are also a part of the assessment.

The knowledge that comes from the assessment helps the teachers to make new objectives and is often a motivation for changes in the emphasis in the subject of the course and ways of work. The assessment also gives the students an opportunity to monitor their own studies.



The student's status after having completed the studies

After finishing the multimedia studies the student graduates formally and receives a certificate attesting the student's completion of the studies and specifying which courses the student completed and the grade he received in each of them.

Following graduation the students are qualified for jobs in web design, animation, three dimensional design as well as in making promotional material, commercials, films, post productions of films etc. The study offered is diverse and covers a wide variety of fields and jobs that are still in the process of being formed in society. Therefore it is difficult to point out one particular job that is suitable for a student who has completed the multimedia studies. The student should have sufficient knowledge to enter the field of multimedia, to make a niche for himself and continue pursuing his specialisation in the field. Experience shows that as a result of their studies our students have worked with editing and post production of films, making commercials and worked at three-dimensional design for films as well as commercials. In addition the students have been employed by large companies where they have worked in the PR departments and made multimedia material, among other things. Students can establish their own companies to do work such as web design and promotional material for printing and/or digital media, etc.

The study programme emphasizes concept work, initiative and independent methods of work that in addition to learning to use new technology, can easily lead to the creation of new ideas and innovation in society. The school focuses on graduating students with creative thought and willingness to try new things.

Our students have pursued further studies in this field abroad in order to specialise even more. Due to their studies at the School of Multimedia the students have been accepted in many renowned universities that are known for setting high standards.

The multimedia study

(First to third semester)

The multimedia study programme gives the students wide knowledge and skill, a stable foundation for project work and study in most areas within the field of multimedia.

Final objectives:

After the third semester the student will:

- Know the history of multimedia, films and animation.
- Know the most common terms used in the field of multimedia
- Have basic knowledge of the work environment in the fields of design and multimedia
- Have basic knowledge of the business environment of multimedia companies and understand that every employee is responsible for the quality and success of the company
- Be able to handle all matters concerning companies' advertising and public relations
- Be able to design logos, stationary and posters for companies
- Know how to prepare material for printing
- Understand programming
- Know how to design web interface
- Know how to design animation for the web
- know how to use sound, recordings and be able to transfer material into electronic form, mix and edit sound, etc. and zip for various types of media
- Be able to write a script for a short film, commercials and animation as well as make a screenplay and use it to film their work
- Know how to transfer filmed material from a digital camera to a computer and edit and post produce the material.
- Know how to zip multimedia material for different media
- Be able to make three dimensional forms and characters and animate them
- Be able to configure lighting and work with shading in a three dimensional program
- Know how to make a multimedia disc and prepare for release
- Be able to make a project schedule and a financial budget for a multimedia project
- Be able to manage a project in multimedia
- Know the opportunities for further education as well as jobs when the basic study programme in multimedia has been completed

Workshop of the final project

(Fourth semester)

Students can specialise in three dimensional design, animation, multimedia, multimedia programming or rotoscoping. The students prepare, define and work on their final project with help from the teacher.

The main objective with the final project is for the student to specialize in the field of multimedia that he chooses to work and which is of the greatest interest to him. The general idea is that the students get an extensive experience in designing and preparing projects in multimedia, learn how to make scripts and screenplays, obtain an extensive experience in the field they find the most interesting and can take on independent projects to work on them themselves and prepare them for the intended medium such as the net, television, DVD discs, palm computers and mobile phones. The projects can be very different such as short films with a mixture of three dimension for a regular film, animation and post production. The making of multimedia material, two dimensional animation, stopmotion animation or designing computer games.

The students themselves define their final objectives with help from the teacher.

After the completion of the final project the student will:

- Be able to do a flawless project within the field of multimedia
- Be able to work with preproduction in a systematic and organised way
- Have acquired experience in compiling material and doing research
- Know how to make a project schedule, time plan and cost estimate
- Be able to work independently and follow own plans
- Know how to prepare all materials necessary for the project
- Have good knowledge of the tools necessary to implement his ideas
- Use professional skills to execute the project
- Be able to introduce in a well-defined way the preproduction and the implementation of the project



The Multimedia Study Programme

80 credit units

1st semester

- ZMF105 The theory of multimedia
Preproduction, multimedia and marketing
- ZHO105 Design
Image processing, computer drawing and graphic design
- ZHM105 Animation
Script, filming and post production
- ZVF105 Web design and multimedia
Web editing and the fundamentals of multimedia

2nd semester

- ZMF205 The theory of multimedia
Making advertisements, group work and project management
- ZHO205 Design
Three dimensional design
- ZHM205 Animation
Cartoon production, animation and post production
- ZVF205 Web design and multimedia
User friendly web design and multimedia

3rd semester

- ZMF305 The theory of multimedia
Multimedia programming, research and development
- ZHO305 Design
Designing three dimensional multimedia- and computer games
- ZHM305 Animation
Characterisation and animation
- ZHM315 Animation
Post production and rotoscoping

4th semester

- ZMF40AK The theory of multimedia
Workshop

Course descriptions – First semester

ZMF105 The theory of multimedia
Preproduction, multimedia and marketing

ZHO105 Design
Image processing, computer drawing and graphic design

ZHM105 Animation
Script, filming and post production

ZVF105 Web design and multimedia
Web editing and the fundamentals of multimedia

All these courses must be taken simultaneously.

ZMF105 The theory of multimedia

Preproduction, multimedia and marketing

Prerequisite None

Course description

Introduction of the fundamentals of preproduction, from the first idea to implementation and review. Methods of preproduction are introduced and the students are helped to improve their perception of themselves as creative individuals. They take a close look into what inspires them and nourishes their creativity.

The different kinds of animation and cinematographic films are introduced, focusing on what inspires the development of projects.

The emphasis of this course is to open up the students' minds about what is behind all things in multimedia and to prepare them for future work within that field. Therefore the students' participation in objective discussions are required in the lessons.

The marketing and prefabrication of large projects within multimedia (P. D. D.) is presented. Projects are developed without implementing them technically, i.e. students only define their project in writing and do work relating to its prefabrication.

Course objectives

The student will:

- Know the different ways of working with preproduction
- Know all the media used for production within the multimedia
- Be able to design and implement projects within the multimedia
- Understand and be able to explain terms used within the field of multimedia in a professional way
- Know the different kinds of cinematographic- and animated films.
- Know the fundamentals of marketing of multimedia projects
- Be able to do project definition documents for projects within multimedia

Topics

Preparation work, preproduction, marketing, the history of animated films, P.D.D., sound, three dimension, animation.

Assessment

Students turn in reports and projects that are rated towards a grade.



ZHO105 Design

Image processing, computer drawing and graphic design

Prerequisite None, but must be taken with ZHM105

Course description

Computer drawing is introduced as well as layout, setup, image processing and editing for printing as well as in preparation for web design. An emphasis is on the use of drawing-, image processing- and layout programs in the designing process and the whole process being presented, from preproduction to release for the digital- or printing media. The students will be taught the main methods to develop graphical presentations of the preproduction to the final product, for printing, airwaves or the web. The major advantages of the most common programs are presented and how they can be used in most areas of study or work. The major fundamentals of graphical design will be presented as well as interface design and looked at design as a special process or methodology and great emphasis is on preproduction.

Course objectives

The student will:

- Know the interfaces of drawing-, image processing and layout programs
- Know how to use the programs to simplify and advance the presentation of own ideas
- Know how to use the most common drawing- and image processing tools and how they can be used for innovative creativity
- Know how the major colour systems in programs work and the difference in their effects
- Be able to set up a page layout using colours, a text, a drawing and an imported image
- Learn the various options that the software offers in order to develop and research graphic forms with regards to layout design, use of colour and general presentations
- Know the major methods in sharing different programs and file formats in order to meet demands
- Be able to take an image from a scanner or a digital camera
- Know the importance of the dot in presentations
- Learn what kind of images/graphics to use for printing and laser printer
- Know how to prepare material for printing
- Know graphic design

Topics

Using fonts, colours, toolbar, templates, master pages, finish for printing, editing, image processing, colours, scanning, digital photographing, resolution, dots, dot density and rasterizing. Masks, blending modes, colour correction, web images, soft copies, print images, drawings, drawing tables, sketching.

Assessment

The assessment is based on the students' projects and how they present them in class. The students' enthusiasm, attendance and work is also taken into account as well as the projects' implementation and finish.



ZHM105 Animation

Script, filming and post production

Prerequisite None, but must be taken with ZHO105

Course description

Working with preproduction and processing in an organised script in order to produce a good presentation of the material in an effective and graphic way. Narration techniques are introduced as well as work procedures and –methods in animation and film scripts. The fundamentals of filming, working with concepts, using a video camera and lighting. Various methods of filming are introduced as well as editing and special effects and how the image area demarcates the angle of the viewer. The basics of digital video processing are presented. Editing and basic terms are explained. The structure of items is introduced, different angles, composition and flow. The fundamentals of sound processing and working with sound, such as audio compression, refinement, editing and isolation, sound effects and release. All major terms, tools and work procedures are explained. Sound editing is presented and the conjunction of sound and image. Work procedures are introduced, compression methods and standards as well as different characteristics of released material. Image processing, compression, releasing and distribution in various media, such as multimedia discs, DVD, television and web pages. Introduction of programs that are used in the post production of television material, films and three dimension.

Course objectives

The student will:

- Know the work procedure and methods of animation and filmmaking
- Be able to make a digital film script
- Know how to use a video camera
- Have gained knowledge of image composition
- Know how to use the right lighting for recording
- Be able to use different angles
- Be able to edit material in a computer and process for release
- Be able to zip filmed material for different media
- Know how to refine, edit and isolate sound and work with various sound effects
- Be able to dub digital material
- Know all the major compression standards, their advantages and disadvantages
- Know the options and limitations of each medium
- Gain an understanding of post processing with various programs
- Gain a wide understanding of how the programs are to be used in real projects
- Know how various tools are used in the multimedia industry and when to use which tool

Topics

Organisation, preparation, script, film script, creative process, preproduction, processing, presentation of material, narration techniques, work procedure, methods of work, use of video camera, audio recording, lighting, responsibility, special effects, editing, composition, flow, audio refinement and isolation, sound effects, sound editing, conjunction of sound and image, compression, release.

Assessment

Projects during the semester 50%

Final project 50%

ZVF105 Web design and multimedia

Web editing and the fundamentals of multimedia

Prerequisite

None. Must be taken with ZHO105 and ZMF105.

Course description

The history of the Internet and its development presented briefly as well as the major web browsers. The interactivity in webpages is introduced, their internal connections, layout, setup and stylesheet. The fundamentals of interface design are presented, how the user finds his way on the interface and how he can be helped to find his way on the web. Standards and regulations in presenting material are introduced.

The whole process of design is presented, from setting goals, organising, basic drawing and project management to design, development and maintenance. Interface design from the user's point of view, what he is looking for and how.

The course starts looking at the fundamentals of multimedia programs and how sound, image and text can be composed on a multimedia web.

Course objectives

The student will:

- Be able to design and make a web tree (navigation, organisation), both in a flow chart and text
- Be able to design a web look in a text taking into consideration different preconditions
- Know the structure of XHTML
- Be able to use a text editor when writing and correcting web pages
- Be able to use stylesheet (CSS)
- Be able to place material with charts on a web page
- Know the fundamentals of multimedia programming

Topics

Design, processing, review, web tree, web organisation, flow chart, editing, fonts, headings, backgrounds, colours, web look, connection between look and content, narration, text standards on the web, text editor, site illumination, HTML, charts, webpages, stylesheet, CSS, the web, website, web server, the World Wide Web, the Internet, HTTP and FTP, timeline, buttons, scenes.

Flash, animation forms, tweening, morph, layering, masks, flags, symbols, frames, names of frames, sound processing, image processing, file compression, multimedia web programming.

Assessment:

The assessment is based on the student's work with design and analysis and its presentation on a web site and a CD. The student's attendance and work in the classroom is also considered.



Course descriptions – Second semester

ZMF205 The theory of multimedia
Making advertisements, group work and project management

ZHO205 Design
Three dimensional design

ZHM205 Animation
Cartoon production, animation and post production

ZVF205 Web design and multimedia
User friendly web design and multimedia

All courses have to be taken simultaneously

ZMF205 The theory of multimedia

Making advertisements, group work and project management

Prerequisite

ZMF105, ZHO105, ZMH105 and ZVF105

Course description

In this course the focus is on the importance of project management and making a project schedule, whether the students implement it themselves or follow someone else's management; the value of good communication with the clients, the significance of professionalism, how conflicts can arise, the benefits of making a progress report and assess the outcome at certain intervals and at the end of a process. How good work methods can affect the cost and thereby increase the chances of getting more work. Students will make an interactive project in multimedia. The course consists of an integral group project where the students work in small groups, organise their work and follow the plan, constantly reviewing the plan and reorganising it as the project progresses. The course looks into the design of multimedia projects and the use of animated images in interface, their setup, organisation, release and post production.

Course objectives

The student will:

- Become skilled in preparation, production and finish of larger projects within multimedia
- Become skilled in professional work methods
- Become skilled in division of responsibilities and working in a group
- Understand the importance of project management
- Learn to do a project schedule
- Understand the value of good communication with the customer
- Understand the importance of professional work
- Understand how conflict can come up and how to resolve it
- Understand the benefits of making progress reports
- Be able to measure progress at intervals as well as at the end of a project
- Understand how good work methods can influence cost
- Have developed his/her ability for creative and critical thinking
- Be able to present his/her ideas in a simple and clear manner
- Be able to participate actively in discussions about his/her projects as well as that of other students.

Topics/ basic terms

Preparation, project description, project and time schedule, cost estimate, organisation, division of responsibilities, work reports, project manager, cooperation, setup, multimedia project, flow chart, script, presentation with images, sound processing, composition, user tests.

Assessment

Students work in groups and do an independent multimedia project. It's a project for a real customer and the project shall have to do with the country's culture, teaching or charity work. Students run a homepage throughout the semester, turn in a project plan, a time schedule, etc.

ZHO205 Design

Three dimensional design.

Prerequisite

ZHO105

Course description

In this course all fundamental aspects of three dimensional drawing are presented, terms and methods. How does a computer work with three dimensional things and how are they viewed in a three dimensional world? The main methods of modelling are introduced. The process in creating three dimensional images, from preproduction and script to rendering and release. Lighting, finish and actualisation is studied in-depth. The fundamental characteristics of different methods of actualisation are also studied in order to make images as realistic as possible. Various special effects and tricks in three dimensional design are introduced.

Course objectives

The student will:

- Know the structure of three dimensional models
- Know several varieties of materials and be able to compose materials from different factors.
- Know how to set up lights and create the appropriate lighting
- Be able to actualise images in various file formats
- Be able to use various methods of actualisation
- Gain experience in reviewing the image composition and design of own projects as well as those of others

Topics

Subdivision surfacing, vertex, edge face, segment, polygon, surface, material, normal, diffuse, bump, specular, raytrace, refraction, arrays, lights, shadows, cameras, lenses, file formats, zipping, colour adjustments, lighting, finish, image composition, rendering, light-tracer, radiosity, mental ray, compositing, global illumination, final gather, caustics, toon shaders.

Assessment

The assessment is based on the student's project work, participation in discussions and a final project.



ZHM205 Animation

Cartoon production, animation and post production

Prerequisite

ZHM105, ZHO105 and ZVF105

Course description

The structure of animation for advertising is presented and its various characteristics. Trends in the production of advertisements, with a focus on television commercials. Students learn to design an advertising animation project with different media and paste them together in the post production.

The fundamentals of making animated cartoons and various methods of animation are presented and practised.

In this course animation is presented and various methods are tested.

Simple two dimensional forms are used to create a simple 2D,3D world. Material with acting (i.e. green screen or animated) added into that world.

The methods and the technology used in the different types of animation films are studied.

The main tools and equipment is presented and tested.

The rules of animation are taught and tested.

The methods and narrative style of cartoon films are examined. Students make a cartoon film.

Various styles of backgrounds are tried from sketch to finished films.

Course objectives

The student will:

- Be able to categorise animated advertisements according to target groups
- Be able to design an animated advertisement, working from a target group of a product or company
- Become skilled in freehand drawing
- Learn the fundamentals of making cartoons
- Understand the characteristics and structure of animated films
- Understand two dimensional animation
- Experiment with different methods of making animated films
- Know the nine principles of making cartoons, how they can be applied and in which circumstances they are not used
- Know the history of animation from ancient times to the present
- Know the possibilities for animation in different media
- Understand a film script and how it is used and be able to make a script Be able to show the advantages of an animated storyboard

Topics

Measurements, perspective, animation, body language, the image, free hand drawing, cartoons.

Assessment

The assessment is based on the students' projects and their ability to present and explain their work.



ZVF205 Web design and multimedia

User friendly web design and multimedia

Prerequisite

ZVF105 and ZHO105

Course description

Students learn the process involved in web design, from the initial setup to release, working environment, tools and equipment with an emphasis on organised work and web managing, the setup of web pages and connections with web servers. A further look into the design of interactive webs that use animated images in interface, their setup, organisation and release. Emphasis is on the role of programming in order to increase interactivity. Real projects are addressed and looked into the concept behind them, their organisation, process and finish.

Students work at integral web design for companies as well as multimedia projects. A special emphasis will be on the importance of good interface design and numerous projects will be done in order to increase the students' understanding of the fundamentals of designing interactive webs.

Course objectives

The student will:

- Know how to make interactive material with emphasis on flash and work with 2D, 3D, video, images, texts and sound
- Get a basic idea about how databases work
- Know how to use XML
- Learn to use tools for web designing
- Be able to design a web and vary its organisation and look according to different demands
- Be able to work with ideas in order to find solutions to projects that meet the customers' needs
- Be able to use the main terms connected to web organisation and design.
- Know how to use stylesheets for layout on webpages
- Know how to use web- and multimedia programming language
- Be able to setup templates and work with information from them

Topics

Review, the customers' needs, compression standards, hosting, zipping, data format, software for web design, advertising, web connection, compilation of data, data security, firewalls, interface design, enquiry, form, templates, data transfer standards, means of communication, web system, web server, action script, objective programming, variables, conditioning, characteristics, functions, if ... then, lists, functions, variables, expressions, loops, matrix, strings.

Assessment

The assessment is based on the student's project work and participation in discussions, the student's skill in using tools and software is also taken into account as well as his/her ability to make web material and animated material. In addition the student's participation in the group work is also a part of the assessment.

Course descriptions – Third semester

- ZMF305 The theory of multimedia
Multimedia programming, research and development
- ZHO305 Design
Designing three dimensional multimedia- and computer games
- ZHM305 Animation
Characterisation and animation
- ZHM315 Animation
Post production and rotoscoping

ZMF305 The theory of multimedia

Multimedia programming, research and development

Prerequisite

ZMF205, ZHO205, ZVF205

Course description

Students work with multimedia programming and three dimensional interactivity. The fundamentals of database management theory is introduced and how to work with advanced programmers. Students study how databases are used in connection with multimedia projects.

The fundamentals of designing computer games are studied and the experience of the user, organisation of projects and three dimensional connection.

The students work with concepts and do research for the fourth semester's final project. A research essay is done with emphasis on technical problems in the student's final project.

Course objectives

The student will:

- Understand research- and preproduction
- Be able to work with three dimensional interactivity
- Know the fundamentals of database management theory
- Be able to organise computer game design
- Know how to write a research essay
- Turn in elaborated suggestions for his/her final project
- Turn in a thorough job description of the final project

Topics

Three dimensional interactivity, database management theory, computer game design, preparation, research essay, preproduction, project schedule.

Assessment

Technical practices throughout the semester

Preparation for the final project

Research essay

Projects done in cooperation with other courses of the semester



ZHO305 Design

Designing three dimensional multimedia- and computer games

Prerequisite

ZHM205 and ZHO205

Course description

This course is about creating material for films, computer games and multimedia material.

The student's understanding of modelling, shading, lighting and movement is increased. The limitations of the various media are studied, such as films, multimedia material and computer games as well as ways of eluding them. Students are taught how characters are modelled and unwrapped for the finishing work. Several procedures to make a normal map and a displace map are examined and the reasons for using them. The use of motion capture in films as well as in computer games is introduced. A study is made of the difference in these media when movement is recorded. The main methods in setting up models, lights and shading that is to be compositioned with life footage. Three dimensional interface design is taught and how to allow for interactivity and interplay between different media.

Course objectives

The student will:

- Be able to choose which methods to use when producing, depending on the final medium
- Know how to use 3D and the conjunction of medium for interface design
- Know the main methods in using normal and displacement mapping
- Know the main methods to record motion capture material
- Be able to make a three dimensional scene for compositioning with live footage.
- Be able to make an unwrapped character for shading.

Topics

Modeling, shading, motion capture, sculpting, normal map, displacement map, morph, matte painting.

Assessment

The assessment is based on the student's project work and participation in discussions,



ZHM305 Animation

Characterisation and animation

Prerequisite

ZHM205 and ZHO205

Course description

In this course the student will develop an understanding of the multicoloured world of animation. The basis of animation and what principles have to be respected in order to make an animated film work. Following ZHM205 there is a deeper understanding of the principles of animation in making animated films. The theory of how an animated film is developed from preproduction to release, is introduced. Methods will be presented and a few of them tried.

The setup of bone structures for characters in a three dimensional environment will be introduced. The students will learn how to use ready-made structures and they will be shown how they can make their own, both for bodies and faces.

Different kinds of animation will be studied, looking at their composition, movement, shading etc. Various small experimental projects will be done along with the material and at the end of the year students will turn in a large final project as well as a sketchbook about the development of the project.

Course objectives

The student will:

- Understand the characteristics and structure of animation
- Get a deeper understanding of the principles of animation and how they can be used
- Understand how prototypes can be used in animation
- Understand the importance of theatrics and expression
- Understand how to organise larger cartoons in a three dimensional environment
- Be able to work with dubbing and animation of facial expressions
- Be able to make an animatic storyboard (animatic/block test)
- Be able to tie a bone structure to a character model
- Know the setup of bone structures

Topics

Preproduction, graphical thinking, animatic storyboard, animation, rhythm and timing of movements, dubbing, content, finish, organisation and preparation.

Assessment

A sketchbook that the students work at throughout the semester, sketching exercises, preproduction, animation.



ZHM315 Animation

Post production and rotoscoping

Prerequisite

ZHO205 and ZHM205

Course description

This course looks into how to go further with the various media with advanced compositing. The conjunction of three dimension and two dimension is studied. How to use three dimension to add to clips, acted or animated and vice versa. Green screen used in an interactive three dimensional environment. The conjunction of different media studied and how to use compositing in order to save work when working with three dimension. Looked at how three dimensional things are placed in a life clip and how actors (video) are placed into three dimension.

Course objectives

The student will:

- Be able to mix different media (three dimensional, two dimensional, video).
- Be able to do rotoscoping
- Know how compositing is used with the three dimension
- Be able to organise filming, taking into account the post production
- Know when to use 2D and when to use 3D
- Learn to work with matte painting in clips

Topics

Composition, three dimension, two dimension, video, compositing, particles, rpf, actualisation, tracking, masking, cameras, light and keying.

Assessment

Projects done throughout the semester in cooperation with other courses. Technical exercises. Final project in cooperation with other courses.



Course descriptions – Fourth semester

ZMF40AK The theory of multimedia *Workshop*

In the fourth semester the students work only at their final project which they choose according to their specialisation in the third semester. Supervisory teachers assist the students and watch the progress of the project.

Projects that the students can choose from to do as a final project:

- Three dimensional animation made with pure 3D or mixed technique
- Animation made with two dimensional animation and/or stopmotion animation
- Short film or music video where the images are handled in postproduction
- PR- and/or teaching material for the web, kiosk and multimedia disc
- Web design and multimedia programming

ZMF40AK The theory of multimedia *Workshop*

Prerequisite

Students have to have completed all units in the first to the third semester, 60 units in all, before they start their studies in the fourth semester.

Course description

In this course the students choose a speciality with help from the teachers and do a final project within that speciality. The speciality must be within the field of multimedia, animation or three dimension and be a natural continuation of the student's studies at the school. The student can choose for example to do a final project in three dimensional design, animation, designing computer games and multimedia programming. The students themselves define the objective and the purpose of the final project with help from the supervisory teacher.

The role of the supervisory teacher is to watch the progress of the student's work, meet him regularly and assist as needed. The students must report to the supervisory teacher on a regular basis as well as participate in presentations that take place with regular intervals where students and teachers discuss ideas, organisation, the progress of their projects and give advice. The student's work consists of correct preparation, organisation, design, project- and time schedule as well as making a project report about the progress of the project and collecting all data connected to the work, which could be scripts, image scripts, animation scripts, flow charts, content lists etc.

The supervisory teachers of the course provide lecturers who work within various fields of multimedia. They may also have lectures about marketing, establishing companies, business operations etc. The purpose of inviting such lecturers is to give the students an insight into the fields of work of multimedia companies.

Description of the speciality: Three dimensional design

Students study basic concepts behind characterisation, how a person should look, considering certain characteristics. How will the character behave in certain circumstances, how will he/she react? The student makes a progress plan for the project and a script which is compared to the final outcome of the time schedule. The setup of the network rendering is studied, which makes it possible to use more than one computer to work on the same image sequence. The file structures of such systems are also studied.

With the help of the supervisory teacher the students must set their own phase objectives, which is based on the speciality they choose.

Phase objectives for three dimensional design can be for example:

The student can:

- Produce a short film from his/her own ideas
- Work at characterisation
- Do modelling
- Do shading
- Work with lighting
- Work with movement
- Work with cameras
- Do image output with many computers
- Set up network rendering
- Organise file systems in networking

Description of the speciality: Animation

Students study basic concepts behind characterisation, how a person should look, considering certain characteristics. How will the character behave in certain circumstances, how will he/she react? The student makes a progress plan for the project and a script which is compared to the final outcome of the time schedule. Timing is looked at as well as the rhythm of movement, the content and shading. The nature and the expected use of the project is studied to decide which production method should be used. The importance of organisation and preparation is emphasised.



With the help of the supervisory teacher the students must set their own phase objectives, which is based on the speciality they choose.

Phase objectives for animation can be for example:

The student can:

- Produce a short film from his/her own preproduction
- Make a project schedule and a progress report
- Work at characterisation
- Make a script
- Make animation
- Post produce

Description of the speciality: Multimedia

Communication of information in digital form to use on the Internet, for projectors and for distribution of CDs. Students emphasise the interface design and using different methods to solve problems and integrate different media. The communication opportunities for the user are also emphasised, depending on the nature of the multimedia project.

With the help of the supervisory teacher the students must set their own phase objectives, which is based on the speciality they choose.

Phase objectives for multimedia can be for example:

The student can:

- Make a project schedule
- Classify and organise contents
- Make an organisation chart/web tree
- Make a flow chart for the project's interactivity
- Design the interface of the project
- Make a script for dubbing
- Do sound editing
- Do image processing
- Compose the project in a composition program
- Program the project
- Take care of finish and usability testing

Assessment

The assessment is based on the student's project work, discussions, meetings and presentations at regular intervals, attendance in lectures, a project web page and a web page for the final project that he works on during the whole time of the course and finally presents at a grand, final presentation event.

