



SAE COURSE DETAILS

Version 48 EN

THE DIDACTIC CONCEPT

In contrast to most other academies, the SAE Institute is very focused on ‚learning by doing‘, because you can only understand what you have found out for yourself. The courses consist mainly of intensive practical training that is relevant for the industry: Using top-modern, generously equipped state-of-the-art workplaces the students can independently work on a multitude of production processes, starting with simple exercises up to professional projects.

The didactic SAE studying concept is derived from long-term experience which has proven that in complex learning programs it is never the case that all students learn, process and implement information at the same speed. That is why in all of SAE's courses there are not only fixed theory lectures but also freely accessible practical exercises on offer, which can be individually chosen for different time slots. The time needed per week for the different courses is on the following pages, but is only the average amount which has become obvious during the years.

Course Structure

SAE's course structures are focused on the fact that a career must be planned flexibly for the media sector. Technical-manual skills are taught in single units, as well as the qualifications needed to prepare for the job. These are also practically acquired. The courses are always a mixture of theory and practice; 2/3 of the course duration is made up of practice, starting with guided seminars and workshops, through self-study, up to the implementation of own productions that are ready for the market. The theoretical and practical tests are close to the topic and real practice so as to prepare the candidates ideally for the demands of the later professions.

The SAE Diploma conveys technical qualifications, the Bachelor-level adds the economic factor; these together lead to the Bachelor Degree. In the so-called ‚Bachelor-Program‘ the Diploma and Bachelor are offered in combination to be able to reach the Bachelor Degree in the optimum sequence and in the shortest time possible. After graduating successfully with a Bachelor's Degree the student has the option to carry on studying at the Master level.

The following degrees are offered in five subject matters:

Audio:

- Audio Engineering Diploma
- Bachelor of Arts/Science (Hons.) Audio Production*

Film:

- Digital Film & VFX Diploma
- Bachelor of Arts/Science (Hons.) Digital Film Making*

Web:

- Webdesign & Development Diploma
- Bachelor of Arts/Science (Hons.) Web Development*

Cross-Media:

- Cross-Media Production & Publishing Diploma
- Bachelor of Arts/Science (Hons.)
Cross-Media Communication & Publishing*

Games:

- Game Art & 3D Animation Diploma
- Bachelor of Arts/Science (Hons.) Interactive Animation*
- Game Programming Diploma
- Bachelor of Science (Hons.) Games Programming*

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Tell me and I will forget.

Show me and I will remember.

Let me do it and I will understand.

Confucius

“

Bachelor Program

The Bachelor Program combines the SAE Diploma and Bachelor contents and leads to the internationally accepted Bachelor Degree, using time efficiently and a didactically optimal subject matter combination. The Bachelor Degree is to be seen as a pre-profession qualification that prepares both for menial, as well as leading tasks and is often seen as a prerequisite by employers, as often team, organizational or marketing abilities are expected. SAE's Bachelor Program is therefore an extensive course for the respective subject matter.

The standard course duration up to the Bachelor Degree is 96 weeks (24 months). This contains the SAE Diploma. Because of the compressed course duration, without breaks in the term, it is possible to obtain the Bachelor Degree after only two years. Depending on the research method it is possible to become a Bachelor of Arts (Honours) or a Bachelor of Science (Honours). The title ‚Bachelor of Arts / Science (Honours)‘ (BA / BSc) is awarded in cooperation with the state Middlesex University in London which validates and monitors the courses. The title ‚Honours‘ is hereby an additional qualification that the students can achieve by submitting a written final paper.

In the Bachelor Program the student can enjoy the optimum ratio of theoretical knowledge and practical exercises and tasks throughout the whole time period of two years. Theoretical knowledge and the corresponding practice are worked on in nine topic areas.

Aims of the courses are:

- Sustainable and broad operative-technical knowledge
- Command of all working process in professional productions
- Obtaining technical job training: SAE Diploma
- Introduction to scientific methods and approaches
- Acquiring further and interdisciplinary experts' knowledge
- Preparing for starting in leading positions
- Obtaining an academic degree: BA / BSc (Honours)

Prerequisite for participating in the Bachelor Course are either the Abitur or the completion of the 18th year of age and a middle school leaving certificate.

If the interested party doesn't or doesn't yet fulfill the prerequisites for the Bachelor Program, he or she can immediately complete parts of the study (Diploma) and then later obtain the Bachelor Degree (Progression Bachelor).

<h2 style="text-align: center;">BACHELOR PROGRAM</h2> <h3 style="text-align: center;">Bachelor of Arts/Science* + Diploma</h3> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <h4 style="text-align: center;">Diploma</h4> <p>The SAE Diploma conveys to you theoretical and practical knowledge for starting to work in the media sector. It is highly recognized in the industry and prepares you ideally for your dream profession.</p> </div> <p>The Bachelor of Arts/Science enables you not only to learn the theoretical and practical knowledge, but also teaches you the organizational and commercial skills and abilities for a career as a leading personality in the media sector. It's highly respected in the industry and prepares you ideally for a leading position in your dream profession.</p>	<h3 style="text-align: center;">Master of Arts/Science* Professional Practice (Creative Media Industries)</h3> <p>The extra-occupational SAE Master Program is distinguished by its enormous flexibility and knowledge of the sector. Depending on the individual structure it can take 12 to 24 months. The coordination takes place via SAE Online and is especially tailored to fit you and your needs.</p>		
<h1 style="font-size: 2em;">18</h1> <p>MONTHS</p>	<h1 style="font-size: 2em;">24</h1> <p>MONTHS</p>	<h1 style="font-size: 2em;">+12</h1> <p>MONTHS</p>	<h1 style="font-size: 2em;">+24</h1> <p>MONTHS</p>

Diploma

The Diploma Degree is to be seen as a pre-professional qualification which prepares for menial tasks and is the minimum requirement to be able to start working in the media sector.

Aims of the Diploma are:

- Sustainable and broad operative-technical knowledge
- Command of the working processes in professional productions
- Obtaining a technical professional training: SAE Diploma

The Diploma's duration is 72 weeks (18 months). After the theoretical lessons the students go through a far more intensive processing and implementation phase (practical time) with free time allocation. The students hereby put their learning and exercise times together according to their own wishes and work independently under the supervision of experienced media professionals.

The practical time covers several practical exercises and independent professional project work and productions. Prerequisite for participating in the SAE Diploma are either the Abitur or the completion of the 17th year of age and a middle school leaving certificate. The SAE Diploma courses are supported by the Work Agency (Agentur für Arbeit) according to the AZAV.

Progression Bachelor

The Progression Bachelor is the name for the chance to visit the Bachelor lectures only after a successful SAE Diploma degree and therefore, in retrospect, to be able to acquire the Bachelor Degree. During the course of 12 months the successful Diploma graduate goes to all modules of the Bachelor Program that were not part of his or her Diploma, sits theoretical and practical tests and works on his or her final project. The combination of the lectures and exam appointments are individually defined at the respective site with the Academic Coordinator or the school's Head.

Master

The SAE Institute offers two different Master courses in Germany. Since 2003 there has been a co-operation with the state Middlesex University in London, with the chance to obtain the academic degree of 'Master of Arts' (MA) or 'Master of Science' (MSc). The course lasts between one and two years, depending on the individual set up of the course: In the Work-based-professional-master-program, the student specializes and qualifies him or herself within the scope of their regular job for scientific tasks. The master-program is coordinated by SAE Online and is individually tailored to the student. This course can also be started several years after the Bachelor degree. <http://online.sae.edu>



In partnership with
Middlesex University
London

Since 2010 there has been a co-operation with the Folkwang Universität der Künste in Essen, within the scope of which it is possible to become a Master of Arts in Professional Media Creation. The Folkwang Universität der Künste is a training facility for music, theatre, dance and science that has existed since 1927. In co-operation with the SAE Institute Germany, there is now a post-graduate master course on offer that is interesting for Bachelor graduates both with technical as well as with an artistic background. The 'Master of Arts in Professional Media Creation' contains additions in technical and in creative sectors, as well as marketing, communication and management skills. Graduates of this Master Program should be able to sell themselves and be able to independently and professionally realize projects in the media sector. More information at: www.sae.edu/folkwang

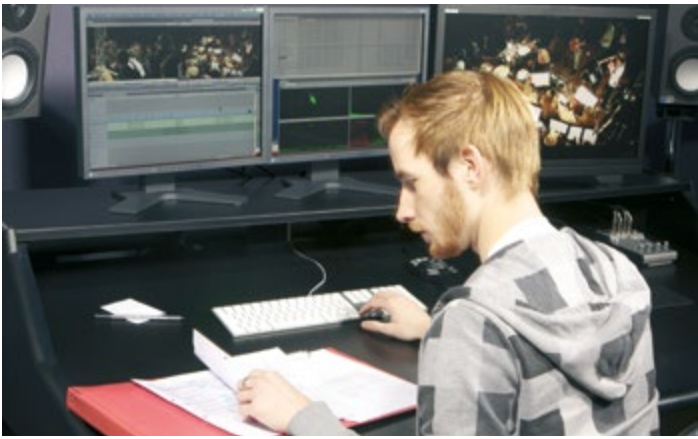


Folkwang
Universität der Künste

Aims of the Master-Courses are:

- Obtaining the academic degree MA / MSc
- Specialization in the respective subject matter
- Learning to independently work scientifically
- Qualify for higher leading positions and to teach academically

Pre-requisites for an extra-occupational SAE Master Course are normally a Bachelor Title. Bachelor graduates from other academies than the SAE Institute can also participate in the course if similar pre-courses can be proven.



The Audio Engineering Bachelor Program is made up of these 9 areas



..... M01

Aural theory, acoustics and technical principles

Acoustics: spectral analysis, reverberation radius, oscillations, interference, comb filters, absorption and reflection, studio construction concepts, architectural acoustics, measuring techniques

Psychoacoustics: functionality of human hearing, biology and psychology of perceiving sound events, residual effects, auditory masking, Haas effect

Electroacoustics: transducer principles of microphones and loudspeakers, directional characteristics, frequency response, impulse response, crossovers, tonal analysis of microphones and loudspeakers

Calculating levels and metering: mathematical foundations, levels and dB, studio and radio levels, dynamics and headroom, VU meter, peak meter and Real Time Analyser

Electrical engineering: current, voltage, resistance, impedance, active and passive filters, studio cabling

Analogue signal flow (hands-on): signal flow, communication, insert and send effects, MIC recording, headphone mixes, record – bounce, mixdown, free recording, free mixdown

Microphone use: microphone selection, sound formation, proximity effect, cross-talk

Stereo microphone technology: intensity, runtime and equivalence stereophony, binaural microphones, main and support microphones MS technology, artificial heads

Digital audio technology: digital audio workstations, native versus DSP, delay compensation, time-stamping, dithering and noise shaping, error correction systems, destructive and non-destructive working, online versus offline editing, automation, stereo and surround mixing

Digital editing (hands-on): 2TK editing exercises, quantification of drum recordings, timing correction, voice editing, arrangement editing, remixes

Sound recording: mechanical sound recording, direct metal mastering, magnetic sound recording, BIAS, playback equalisation

Server and network technology: network topologies, network hardware, server-client models, TCP/IP, WLAN, RAID systems

..... M02

Information and entertainment (podcasts, radio plays, audio books, adverts, multimedia)

Advert production: layout, TV versus radio, typical mixing requirements, broadcast copies

Adverts (hands-on): exercises involving various radio adverts and trailers

Radio plays/audio books/podcasts and dramaturgy: radio play studio, typical production process, narrative styles, dramaturgy and suspense, character development, the interaction of image and sound

Radio plays/podcasts (hands-on): narrate a radio play scene in accordance with the script

Broadcasting operations: transmission technology, digital broadcasting studios, production studios, self-op studios, broadcasting automation

..... M03

Music production

Instruments: types of instruments, dispersion patterns, microphone positioning, ambient effects

Signal flow: mixing desk concepts, recording and mixdown signal flow, channel strip composition, mixing desk automation, level adjustments, routing and patch bays

Effects: hardware versus plug-ins, compressors, equalizers, limiters, expanders, gates, phasers, chorus, hall, delays, flangers, exciters, technical and artistic use

FX programming (hands-on): creating effects using templates

Insert exercises: drum EQs, summing EQs, compression of bass, vocals and drums, gated reverbs, bass ducking, voice-over sends

Production studios (hands-on): signal flow, communication, multitrack, insert and send effects, MIC recording, headphone mixes, record – bounce, mixdown, free recording, free mixdown, scene management, automated mixing, drum recording, free music production, free choice of own automated mix

MIDI and sequencing: MIDI versus audio, MIDI protocol, MIDI interfaces, MIDI cabling, rewires, software instruments, sound libraries

MIDI/sequencer (hands-on): MIDI - basics, sequencing, vocal correction, remixing

Sound synthesis: additive synthesis, resynthesis, subtractive synthesis, frequency modulation, physical modelling, granular synthesis, wavetable synthesis

Sampling: hardware versus plug-ins, one shots, drum kits, loops, Recycle, triggering

Synthesis/sampling (hands-on): free choice of production of own electronic music, time code synchronised sequencing, synthesiser programming, sound design

Music theory: harmonies, rhythm

Remixing: arrangement, handling, setups, software, legal and financial matters

Production process and production psychology: guide-track variants, headphone mixing, coaching, studio daily reports, schedules, mixdown technology

Mastering: mastering equipment, mastering working methods, technical versus artistic mastering, Red Book standard

Music business: copyright law, GEMA (German society for musical performing and mechanical reproduction rights), GVL (German collecting society for neighbouring rights), KSK (German artists' social insurance scheme), distribution channels, labels, contracts, music law, contract law

.....M04

Film and cinema mixing, film post-production, TV audio

Synchronisation: SMPTE and EBU time codes, frame rates, VITC, LTC and MTC, word clock

Film and television audio: electronic broadcasts, quotes, automatic dialog replacement, Foley recordings, IT nix, final Mix, cinema

Multi-channel audio: surround formats, downmixing, THX

Film/multi-channel dubbing (hands-on): multiple films including audio material to be dubbed

DVD authoring: DVD formats, decoding and encoding, bit budgeting

.....M05

Events, live performances, theatre, musicals, TV shows

Lighting and stage: stage construction, trussing, rigging, power, lighting technology, DMX, projection technology, health and safety

Live event technology: studio sound versus live sound, technical rider, PA systems, FOH and monitors, safety provisions

Wireless audio transmission: VHF/UHF, modulation principles, interference, True Diversity, frequency management, noise cancelling

.....M06

Free audio production (final project)

Practical final project – final production: free choice of own production including recording, mixdown and mastering

.....M07

Business, legal & history

Basics of accounting, drawing up business plans, founding an agency or studio

Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing

Media history, historical development of the media in the audio sector

.....M08

Marketing & presentation

Marketing models, product life cycles, advertising campaigns, press releases, target group analysis, advertising channels

Portfolios, professional placements, job descriptions

Specialist presentations, presentations to large groups (expert/multidisciplinary/individual/in groups), discussions, role plays, professional presentation techniques

.....M09

Advanced industry production

Jobs in the media sector, current trends in the media industry, facts vs. popular opinion

Interdisciplinary group project: project management, team management, division of tasks and teamwork. Making industry contacts, budgeting and sponsoring, advertising own projects.

Production of a group media item relevant to industry or a competition, reporting, critical self-evaluation, final/result presentation

Project-specific audio specialist training

AUDIO ENGINEERING BACHELOR PROGRAM			Audio Engineering Diploma	
Bachelor of Arts/Science (Hons.) Audio Production* + Audio Engineering Diploma				
24 MONTHS			18 MONTHS	
COMMENCEMENT: April & September			April & September	
EFFORT: 35-40 h/week thereof 7,5 h theory			20-25 h/week thereof 5 h theory	
REQUIREMENTS:			REQUIREMENTS:	
<ul style="list-style-type: none"> •Secondary school certificate or Minimum age 18 years, intermediate educational qualifications and aptitude test •high performance notebook (check with the location for minimum specifications) •evidence of intact hearing required 			<ul style="list-style-type: none"> •Secondary school certificate or Minimum age 17 years and intermediate educational qualifications •high performance notebook (check with the location for minimum specifications) •evidence of intact hearing required 	
	PLAN A	PLAN B	PLAN A	PLAN B
	PREPAYMENT	STANDARD	PREPAYMENT	STANDARD
REGISTRATION FEE:	200,- €	200,- €	200,- €	200,- €
CURRENT COST:	4 x 5.640,- €	24 x 975,- €	3 x 4.650,- €	18 x 800,- €
TOTAL:	22.760,- €	23.600,- €	14.150,- €	14.600,- €



The Digital Film & VFX Bachelor Program is made up of these 9 areas

M.01 Foundations for producing digital films	M.02 Producing documentaries	M.03 Scenic productions
M.04 Producing adverts	M.05 Music videos	M.06 Final project (short film, music video, advert)
M.07 Business, Legal & History	M.08 Marketing & Presentation	M.09 Advanced Industry Production

.....M01

Foundations for producing digital films

Chromatics, optics, types of cameras, light as a medium for composition, colour perception, image composition, picture detail, formats;

Drawing techniques, perspective construction, creating and reading storyboards, shot composition;

Image editing, non-destructive working, retouching and colour correction, filters;

Montage theory; editing composition, image rhythm, editing dramaturgy, editing sequences, rough and fine cuts, capturing;

2, 3 and 4 point editing, online/offline editing, effects, filters, transitions, exporting data;

Digital and video technology, video basics; image resolution, interlaced scanning, video signals, signal guidance and processing, colour standards, data reduction and compression, storage media;

Cinematographical recording, dramaturgical realisation; arm mount/camera system, picture angles, apertures, shutters, white balance. Time code and audio settings, export and data security; dramatic lighting and resolution, light fittings;

.....M02

Producing documentaries

Script development, research, dramaturgy, script/scripting: finding ideas, compilation, drafting, drama, epics, lyrics, 3 act structure, exposés, treatment, characterisation, dialogue;

Choice of theme, character development, dramaturgical realisation with regard to information aspects, conflict levels, lighting and editing technology;

Neutral report, narrative techniques, directing, camera techniques, illumination, editing and post-processing;

3 point lighting, set design, questioning techniques and editing an interview;

Digital photography and digital imaging editing, shutter speeds, light intensities, objectives, exposure times, focal lengths, illumination, flash techniques, filters, workflows, colour profiles, file/image formats, RAW data, non-destructive image editing, masks, tonal value/colour correction, paths;

Production preparation for documentaries/reporting; shot lists, outlines, calculations, location, constructing scenes, implementation, post-production, process, production team, costs;

.....M03

Scenic productions

Camera and light; cinematic history, film analysis;

Shooting preparation, camera settings, focal lengths, objectives, recording format, white balance, camera filters and light foils, illumination, film look, combination of picture detail and light, daylight/artificial light/mixed light, camera movement and perspectives;

Audio technique/editing and quotes;

Acoustic foundations (sound, reflections, background noise), audio cables, microphones, levels, sampling rates, recording media, recording audio and post-processing, audio editing and effects, reporting mixing, booms, radio links, windscreens, signal chains, audio tasks in films;

Set seminars, procedure on set, jobs on set, equipment, studio versus shooting outside;

Non-linear editing, match cut, trim tools, Composite Modi, capturing, motion FX & transitions, rendering and media management, EDLs, online/offline editing;

.....M04

Producing adverts

Conception, marketing strategies, promoting products and services, CG content, typography, pack shots, motion graphics;

On air screen design; screen content, creating moving graphics and script (openers, teasers, closers, trailers, commercial bumpers, blurbs), programme teasers, layer based compositing techniques, animation and effects, 3D space integration, handling DSLRs, framing, exposure times, lighting, image design and scouting locations;

3D modelling and texturing; 3D programs, tools and settings, coordinate systems, polygon objects, modelling, NURBS, subdivisions, shaders, texturing, 2D/3D textures, UV mapping;

3D animation; motion sequences, rigging, binding, skinning, weighting, character animation, animation controls, keyframes, constraints, path animation, expressions, kinematics, hierarchical animation;

3D camera and light & 3D rendering; camera attributes, light and shadow types, motion blur, indirect lighting, image based lighting, renderer, render layers and passes, caustics;

.....M05

Music videos

Scene based film sequence, assembly techniques, dramaturgical storytelling, sound synchronisation;

Compositing, keying and colour grading; program architecture, passes, animations, expressions, tracking, filters, masks, audio editing, greenscreens/bluescreens, colour quantification;

Dolly with jib arm; steering modes, trail settings, adjustments, cabling, protection and division of weight, safety precautions;

.....M06

Final project (short film, music video, advert)

Producing a short film, music video or advert, using skills learnt in directing and camera technique skills, lighting, editing and post-processing. Purely computer animated projects or a combination of actually filmed and CG material are possible;

3D visual FX; dynamics, particle simulation, fluids, texturing;

DVD/Blu-ray authoring; audio/video standards, menu structure, pop-up menus, usability, workflow, Blu-Ray;

Grip; requirements, dolly & crane set-up, uses and handling;

Steadycam; set-up, adjustment of vest and swivel arm, adjustments and balancing the camera, walking, safety measures;

Camera crane; set-up, cable length, parallelogram catenary mounting, anchoring pins, safety measures, manual camera handling; film formats, HD formats, signal types, colour sampling, broadcasting, production workflow, film promotion;

In addition to the exercises various seminars, workshops and excursions will take place, e.g. storyboarding, editing techniques, set seminar, 3D animation, camera & lighting, compositing, advanced DVD/Blu-Ray authoring, 3D special FX, excursions to various film production companies;

.....M07

Business, legal & history

Basics of accounting, drawing up business plans, founding an agency or studio

Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing

Media history, historical development of the media in the audio sector

.....M08

Marketing & presentation

Marketing models, product life cycles, advertising campaigns, press releases, target group analysis, advertising channels

Portfolios, professional placements, job descriptions

Specialist presentations, presentations to large groups (expert/multidisciplinary/individual/in groups), discussions, role plays, professional presentation techniques

.....M09

Advanced industry production

Jobs in the media sector, current trends in the media industry, facts vs. popular opinion

Interdisciplinary group project: project management, team management, division of tasks and teamwork. Making industry contacts, budgeting and sponsoring, advertising own projects.

Production of a group media item relevant to industry or a competition, reporting, critical self-evaluation, final/result presentation

Project-specific film specialist training

DIGITAL FILM & VFX BACHELOR PROGRAM		Digital Film & VFX Diploma	
Bachelor of Arts/Science (Hons.) Digital Film Making* + Digital Film & VFX Diploma			
24 MONTHS		18 MONTHS	
COMMENCEMENT: April & September		April & September	
EFFORT: 35-40 h/week thereof 7,5 h theory		20-25 h/week thereof 5 h theory	
REQUIREMENTS:		REQUIREMENTS:	
<ul style="list-style-type: none"> Secondary school certificate or Minimum age 18 years, intermediate educational qualifications and aptitude test high performance notebook (check with the location for minimum specifications) 		<ul style="list-style-type: none"> Secondary school certificate or Minimum age 17 years and intermediate educational qualifications high performance notebook (check with the location for minimum specifications) 	
	PLAN A	PLAN B	
	PREPAYMENT	STANDARD	
REGISTRATION FEE:	200,- €	200,- €	
CURRENT COST:	4 x 5.640,- €	24 x 975,- €	
TOTAL:	22.760,- €	23.600,- €	
	PLAN A	PLAN B	
	PREPAYMENT	STANDARD	
	200,- €	200,- €	
	3 x 4.650,- €	18 x 800,- €	
	14.150,- €	14.600,- €	



The Webdesign & Development Bachelor Program is made up of these 9 areas

M.01 Creating and editing images	M.02 Website development with HTML	M.03 Development of dynamic websites with PHP and JavaScript
M.04 Server-side programming and databases with PHP & MySQL	M.05 Web animation	M.06 Dynamic websites with database connection (final project)
M.07 Business, Legal & History	M.08 Marketing & Presentation	M.09 Advanced Industry Production

..... M01

Creating and editing images

Editing images: techniques of digital image editing (including cropping, using masking and colour channels, non-destructive working);
 Creating text, image and layer effects, using filters, tone and colour correction;
 Creating montages and collages, fields of application and carrying out retouching;
 Knowledge of colour profiles, file and image formats;
 Using scanners and interactive graphics tablets;
 Targeted image design and visual language;
 Vector graphics: vectorisation of illustrations and photos, editing illustrations;
 Creating graphic elements/logo development;
 Screen and graphic design: knowledge and use of rules of design, typography and text placement;
 Colour/format, composition, golden section;
 Planning and creating graphical advertising (online and offline) such as posters, web layouts and advertising banners;
 Foundations of desktop publishing and various printing methods;
 Creating flyers (e.g. Leporello, folding flyers etc.), creation of print-ready PDFs;
 Digital photography: professionally handling digital SLRs;
 Knowledge and use of exposure times, objectives, focal lengths, light intensities and filters as well as focus and focus depths;

..... M02

Website development with HTML

Concept/project organisation: various website concepts;
 Aspects of performance, knowledge of version control and various systems;
 Time planning techniques;
 HTML/CSS: conception, screen design and implementation of websites with (X)HTML and HTML5;
 Structure and composition of HTML documents, knowledge and implementation of semantic tagging;

CSS formatting (CSS2 and CSS3), including colours, graphics, animations, positioning and arrangement models
 Validation of websites, adhering to web standards, W3C conformity;
 Functionality of search engines, search engine optimisation and accessibility techniques;
 Additional technology: basics of servers and networks;
 Foundations of and issues with mobile content publishing, including mobile tagging, location based services;

..... M03

Development of dynamic websites with PHP and JavaScript

Web programming techniques: creating dynamic websites with Javascript, knowledge of DOM and DOM manipulation;
 Using AJAX and JavaScript/AJAX frameworks (including jQuery);
 Creating dynamic websites with PHP, use and functionality of libraries, APIs, plug-ins
 Setting up RSS feeds, newsletter distribution, chat functions;
 Development of professional applications (e.g. dynamic navigation, guest books, news and image management, logins with cookies, sorting and activation options, paging functions, RTF text, mod_rewrite, SMTP emails, creating PDF, form validation);
 Foundations of object orientated programming with PHP and JavaScript;
 Digital publishing: creating and embedding professional podcasts and video casts;

..... M04

Server-side programming and databases with PHP & MySQL

PHP & MySQL: foundations and advanced knowledge of database languages (SQL);
 Creating and implementing complex database systems;
 Developing your own content management system (CMS) to administer website content (inserting, altering, deleting content) with PHP & MySQL;
 Conception/realisation of applications using object orientated programming;
 Using object orientated programming principles (inheritance, classes etc.);

Implementation and use of available content management system (CMS) such as Typo3, Drupal, Joomla;

Server technology/security: server and network technology;

Installation and configuring web servers;

Data protection, preventing data manipulation, techniques for optimal encryption when transferring data;

E-commerce: basics of marketing and business strategies, knowledge of the legal foundations of e-commerce;

Analysis of shop systems, payment models and processes; building shop systems;

.....M05

Web animation

Flash and Action script: creating animations with Flash (timeline animation, using various types of tweening, path and mask animations) and Actionsript (e.g. programming with image and filter effects, mouse tracking, drawing functions etc.);

Conception and implementation of complex interactive multimedia Flash applications (rich media applications) such as music and video players, online browser games, development of standalone (offline) applications;

Implementation of complex Flash applications with database communication (using PHP and XML) and development of own Flash CMS;

OOP/Flash: foundations and advanced techniques of object orientated programming (Actionscript 3.0) for use in various rich media applications;

Video editing and motion graphic design: video and sound editing techniques (viewing and editing footage), use of effects, fades, masks and colour correction, basics of keying and tracking;

Animation and compositing, imbedding sound and text;

Optimisation for embedding videos in websites (data formats, plug-ins etc.);

DVD production: technical foundations regarding CDs, DVDs, Blu-Ray; Creation (design, animation and programming) of own interactive DVD menu for presentation and marketing purposes;

.....M06

Dynamic websites with database connection (final project)

Practical final project – final production: development and implementation of a website supported by a database, optimised for search engines and usability and the associated content management system; development and implementation of contemporary and targeted functions for users (e.g. user generated contents via blogs or forums, social media functions etc.) and administrator (e.g. management of the content, structure and/or various permission levels) of the website.

In addition to the exercises various seminars, workshops and excursions will take place, e.g. screen design, digital photography/retouching, game development, usability/project preparation, e-commerce, careers advice;

.....M07

Business, legal & history

Basics of accounting, drawing up business plans, founding an agency or studio

Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing

Media history, historical development of the media in the audio sector

.....M08

Marketing & presentation

Marketing models, product life cycles, advertising campaigns, press releases, target group analysis, advertising channels

Portfolios, professional placements, job descriptions

Specialist presentations, presentations to large groups (expert/multidisciplinary/individual/in groups), discussions, role plays, professional presentation techniques

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Advanced industry production

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Project-specific web specialist training

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-high performance notebook (check with the location for minimum specifications)			
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Webdesign & Development Diploma			
18 MONTHS			
April & September			
20-25 h/week thereof 5 h theory			
REQUIREMENTS:			
-Secondary school certificate or Minimum age 17 years and intermediate educational qualifications			
-high performance notebook (check with the location for minimum specifications)			
	PLAN A	PLAN B	
	PREPAYMENT	STANDARD	
REGISTRATION FEE:	200,- €	200,- €	
CURRENT COST:	3 x 4.320,- €	18 x 740,- €	
TOTAL:	13.160,- €	13.520,- €	



The Cross-Media Production & Publishing Bachelor Program is made up of these 9 areas



..... M01

Creating images, editing images and photography

Digital photography: analysing and evaluating as well as planning and carrying out portrait, panorama and reporting photography; professionally handling digital SLRs;

Knowledge and use of exposure times, objectives, focal lengths, light intensities and filters as well as focus and focus depths;

Correct use of natural light and artificial illumination, flash techniques;

Targeted image composition and staging;

Photojournalism including deciding on a theme, defining the key message, planning, research, implementation and production, arrangement and post-processing, analysis and evaluation;

Developing a professional workflow;

Image editing: digital image editing techniques, creating montages and collages, fields of application and carrying out retouching;

Targeted image design and visual language;

Screen and graphic design: knowledge and use of rules of design, typography and text placement;

Incorporating graphic elements and logo development;

Colour and format, composition, golden section;

Foundations of desktop publishing and various printing methods;

Planning and creating graphic advertising material such as product features, advertising banners and landing pages;

..... M02

Journalism

Foundations of journalism: finding a theme, research, analysis and definition of the target group;

Script development, rhetoric, use and effect of language;

Presentation formats: analyse and creation of news, reports and reporting as well as commentaries;

Analysis and implementation of features, planning surveys and interviews;

Analysis of 'Glossen' (German satirical or polemic short media pieces) and other stylistic devices which use exaggeration;

Implementing choice of themes in the various presentation formats;

Comparison of print and online journalism, differences when writing for the Internet;

Press law and ethics: issues and background of press ethics and product placement as well as press and copyright law; Insight into media policy and the media sector; Overview of media systems and markets;

..... M03

Podcasts, voice recordings, creating sound effects

Presentation formats: conception and implementation of various presentation formats such as on-site comments, presenting, interviews, surveys, talk shows;

Exercises for speaking into the microphone and interacting and with interview partners:

Foundations of digital audio technology: knowledge of sound, acoustics, levels, signal output, formats and microphone technology; Using and dealing with loudspeakers, headphones, recording devices and mixing decks;

Audio production & post-production: recording and voice recording techniques;

Audio and speech editing as well as arranging and editing contributions;

Dealing with digital audio workstations, with fades and effects;

Audio dubbing, synchronisation, quotes as well as recording sound effects in the field and dealing with booms;

Creating soundscapes;

Podcasting/video casts: choosing a theme and selecting suitable categories;

Using formats, sound and language, streaming;

Dealing with the camera and editing contributions in accordance with the target group;

Planning, implementation and distribution of subscribable media files;

Speaking: basics of professional speaking, breathing techniques, phonation, phonetics, accentuation, tempo, technique;

..... M04

Blogging and online publications

Fields of application for digital reporting: foundations of publishing on the Internet, analysis of various online publication formats:

Knowledge of corporate media and PR;
 Planning and production screencasts;
 Social media/publishing on the Internet: analysis of blogs, microblogs and video blogs as well as social networks;
 Conception and implementation of own blog to accompany your studies, adaption and configuration, ongoing updating and maintenance as well as networking and marketing on social media platforms;
 Knowledge of online viral and guerrilla marketing, basics of search engine optimisation and communication strategies;
 Web programming: foundations of HTML, CSS, Javascript/AJAX, PHP and selected frameworks;
 Using various blog and content management systems;
 Basics of servers and networks;
 Foundations of and issues with mobile content publishing, including mobile tagging, location based services;

.....M05

Preparing and shooting video

Foundations of video technology: knowledge of formats, resolutions, video standards, codecs, compression, interfaces, time codes;
 Presentation formats: conception and implementation of various presentation formats such as video documentaries, video reporting, TV features, documentary-dramas, cultural items;
 Analysis and conception of teasers and trailers;
 Film theory: analysis of dramaturgy and basics of cinematic narration and content analysis;
 Production: mastering camera techniques, objectives, white balance, camera work, lighting technology and the targeted use of light;
 Setting up a greenscreen studio;
 Planning, production and publication of an image film on the basis of provided footage;
 Planning, production and publication of own journalistic items e.g. video reporting or video interview;
 Organisation: creating a shooting plan, team organisation, planning equipment use;
 Post-production: video editing techniques and montage theory;
 Using effects, motion graphics and compositing;
 On air screen design, keying and colour correction;

.....M06

Cross media production (final project)

Practical final project - final production: conception and implementation of multiple items in various formats (e.g. photo journalism, image film, video interview, podcast or radio interview) on a topic - published on an interactive DVD as well as on the blog accompanying your course and supplemented by other items created during your studies;

In addition to the exercises various seminars, workshops and excursions will take place, e.g.

digital photography, editing, radio stations, camera and lighting techniques, TV stations, post-production;

.....M07

Business, legal & history

Basics of accounting, drawing up business plans, founding an agency or studio

Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing

Media history, historical development of the media in the audio sector

.....M08

Marketing & presentation

Marketing models, product life cycles, advertising campaigns, press releases, target group analysis, advertising channels

Portfolios, professional placements, job descriptions

Specialist presentations, presentations to large groups (expert/multidisciplinary/individual/in groups), discussions, role plays, professional presentation techniques

.....M09

Advanced industry production

Jobs in the media sector, current trends in the media industry, facts vs. popular opinion

Interdisciplinary group project: project management, team management, division of tasks and teamwork. Making industry contacts, budgeting and sponsoring, advertising own projects.

Production of a group media item relevant to industry or a competition, reporting, critical self-evaluation, final/result presentation

Project-specific journalism specialist training

CROSS-MEDIA PRODUCTION & PUBLISHING BACHELOR PROGRAM		Cross-Media Production & Publishing Diploma	
Bachelor of Arts/Science (Hons.) Cross-Media Communication & Journalism* + Cross-Media Production & Publishing Diploma			
24 MONTHS		18 MONTHS	
COMMENCEMENT: April & September		April & September	
EFFORT: 35-40 h/week thereof 7,5 h theory		20-25 h/week thereof 5 h theory	
REQUIREMENTS:		REQUIREMENTS:	
<ul style="list-style-type: none"> Secondary school certificate or Minimum age 18 years, intermediate educational qualifications and aptitude test high performance notebook (check with the location for minimum specifications) 		<ul style="list-style-type: none"> Secondary school certificate or Minimum age 17 years and intermediate educational qualifications high performance notebook (check with the location for minimum specifications) 	
	PLAN A	PLAN B	
	PREPAYMENT	STANDARD	
REGISTRATION FEE:	200,- €	200,- €	
CURRENT COST:	4 x 5.370,- €	24 x 925,- €	3 x 4.320,- €
TOTAL:	21.680,- €	22.400,- €	13.160,- €
			18 x 740,- €
			13.520,- €



The Game Art & 3D Animation Bachelor Program is made up of these 9 areas

.....M01

Drawing and 2D graphics

- Digital image editing
- Photo and image manipulation, retouching, 2D graphics, game art
- Drawing
- Implementation of concept drawings with assistance from classical drawing techniques
- Storyboarding
- Creating storyboards, set design, image design and dramaturgy
- Typography
- Characteristics of fonts and their use in production

.....M02

3D asset creation

- Principles of 3D
- Basics of 3D techniques and modelling
- Low poly asset creation
- Modelling for real-time environments
- Advanced modelling
- Organic and technical modelling
- High poly modelling
- Modelling for film and game trailers
- Texturing
- Creating textures, unwraps, use in game engines, normal maps, texture baking
- Digital sculpting

- Hard surface sculpting, organic sculpting
- World design
- Planning and creating 3D environments

.....M03

3D animation

- Principles of animation
- Basics of animation, key frames
- Theory of character animation
- Planning and implementing motion sequences for characters
- Rigging
- Planning and manually creating rigs in 3D programs
- Character animation tools
- Software to support and implement animation in games and film productions
- Motion capture
- Using motion capturing hardware and data for character animation
- Advanced character animation
- Advanced character animation techniques

.....M04

Content creation pipeline

- Scripting
- Automatisation and implementation of workflows by creating scripts in 3D programs
- Game pipeline - next-gen asset workflow
- Planning and techniques for the realisation of 3D projects

.....M05

Rendering and visualisation

- Basic rendering
- Foundations of generating images from 3D scenes
- Principles of lighting
- Planning and implementation of illumination in 3D scenes with the assistance of various contemporary techniques
- Shaders
- Planning and using shaders in 3D programs
- Principles of design
- Foundations of graphic design
- Compositing
- Visual effects and post-production
- Advanced materials, lights and rendering
- Consolidation and advanced techniques
- Simulation
- Engine particle effects, engine cloth, simulations, engine dynamic objects
- Advanced rendering (offline/real-time)

.....M06

Game development (final project)

- Principles of game development
- Historical foundations, game design, preparing and giving presentations, agile project management
- Game development
- Use of a commercial game engine in game development
- UI , usability
- Human interfaces – game, design and implementation
- Prototyping
- Use and implementation of prototypes in game development
- Project organisation tools
- Software and tools for realising games projects
- Project organisation workflows
- Team composition, team management, carrying out a game production

.....M07

Business, legal & history

- Basics of accounting, drawing up business plans, founding an agency or studio
- Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing
- Media history, historical development of the media in the audio sector

.....M08

Marketing & presentation

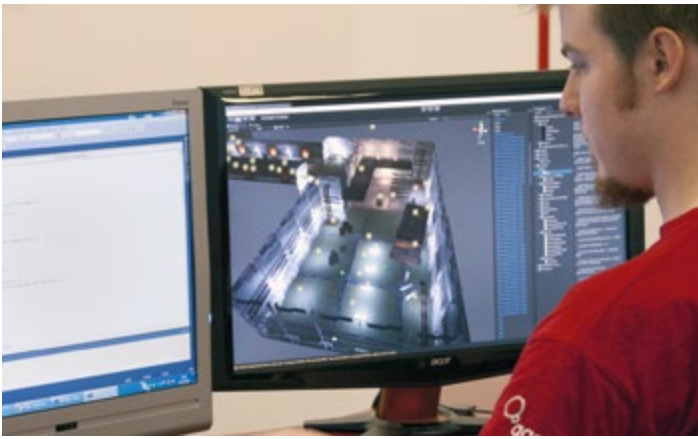
- Marketing models, product life cycles, advertising campaigns, press releases, target group analysis, advertising channels
- Portfolios, professional placements, job descriptions
- Specialist presentations, presentations to large groups (expert/multidisciplinary/individual/in groups), discussions, role plays, professional presentation techniques

.....M09

Advanced industry production

- Jobs in the media sector, current trends in the media industry, facts vs. popular opinion
- Interdisciplinary group project: project management, team management, division of tasks and teamwork. Making industry contacts, budgeting and sponsoring, advertising own projects.
- Production of a group media item relevant to industry or a competition, reporting, critical self-evaluation, final/result presentation
- Project-specific game specialist training

<p>GAME ART & 3D ANIMATION BACHELOR PROGRAM Bachelor of Arts/Science (Hons.) Interactive Animation* + Game Art & 3D Animation Diploma</p>				<p>Game Art & 3D Animation Diploma</p>	
<p>24 MONTHS COMMENCEMENT: April & September EFFORT: 35-40 h/week thereof 7,5 h theory</p>				<p>18 MONTHS April & September 20-25 h/Woche davon 5 h Theorie</p>	
<p>REQUIREMENTS: -Secondary school certificate or Minimum age 18 years, intermediate educational qualifications and aptitude test -high performance notebook (check with the location for minimum specifications)</p>				<p>REQUIREMENTS: -Secondary school certificate or Minimum age 17 years and intermediate educational qualifications -high performance notebook (check with the location for minimum specifications)</p>	
	<p>PLAN A PREPAYMENT</p>	<p>PLAN B STANDARD</p>		<p>PLAN A PREPAYMENT</p>	<p>PLAN B STANDARD</p>
REGISTRATION FEE:	200,- €	200,- €		200,- €	200,- €
CURRENT COST:	4 x 5.370,- €	24 x 925,- €		3 x 4.320,- €	18 x 740,- €
TOTAL:	21.680,- €	22.400,- €		13.160,- €	13.520,- €



The Game Programming Bachelor Program is made up of these 9 areas

..... M01

Object-oriented programming

- Principles of game programming
- Foundations of game programming in C++ and C#
- Algorithms and data structures
- Algorithms, data structures and design patterns important for game development
- Computer architecture
- Current hardware architecture and its influence of programming
- Style & design principles
- Guidelines, practices and methods and their implementation in programming
- Information design
- Reusing information for efficient processing or reproduction

..... M02

Web & mobile development

- Networks
- Network technology and protocols, use of commercial networking engines
- Web basics
- Web technology, web design and current techniques in the area of browser games
- Mobile development
- Developing for modern mobile games platforms
- Databases
- Design, creation and maintenance of databases and their use in game development

..... M03

Application development

- Tool development
- Creation of classic application software, adapting and expanding engine editors
- Software quality assurance
- Using and implementing quality assurance in software development

..... M04

2D game programming

- Digital image editing
- Foundations of digital image editing and the associated techniques
- Mathematics & physics
- Basics of trigonometry, vector algebra, physical principles and implementation in computer programming
- Game programming
- Game development in 2D, using game engines and frameworks
- Sound/audio programming
- Audio data formats and their reproduction

..... M05

3D game programming

- Graphics programming
- DirectX graphics programming, shader programming
- Advanced game programming
- Advanced techniques in game programming, using game engines and frameworks

Game engine design

Composition and components of a current game engine, system architecture for real-time environments and simulations

Artificial intelligence

Principles of AI and use in game development

Advanced mathematics & physics

Consolidate connecting basic principles, vectors, matrices and transformations and 3D space

..... M07

Business, legal & history

Basics of accounting, drawing up business plans, founding an agency or studio

Types of company, copyright law, trademark law, neighbouring rights law, safeguarding contracts, licensing

Media history, historical development of the media in the audio sector

..... M06

Game development (final project)

Principles of game development

Historical foundations, game design, preparing and giving presentations, agile project management

Game development

Use of a commercial game engine in game development

UI, usability

Human interfaces – game, design and implementation

Prototyping

Use and implementation of prototypes in game development

Project organisation tools

Software and tools for realising games projects

Project organisation workflows

Team composition, team management, carrying out a game production

..... M08

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Project-specific game specialist training

GAME PROGRAMMING BACHELOR PROGRAM		Game Programming Diploma	
Bachelor of Arts/Science (Hons.) Games Programming* + Game Programming Diploma			
24 MONTHS		18 MONTHS	
COMMENCEMENT: April & September		April & September	
EFFORT: 35-40 h/week thereof 7,5 h theory		20-25 h/week thereof 5 h theory	
REQUIREMENTS:		REQUIREMENTS:	
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	PLAN A	PLAN B	
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REGISTRATION FEE:	200,- €	200,- €	
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	PREPAYMENT	STANDARD	
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	13.160,- €	13.520,- €	

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