

## Summary of existing qualifications for sound specialists at or around EQF5 in Belgium, the Netherlands, Austria and Germany

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## 1 Introduction

The focus of the ESSENCE project is level 5, live sound training and certification. Historically training and education in the (amplified) sound field is a rather recent development. The field developed from the 1960's and operators were mostly trained on the floor, often in combination with a background as musician and/or electronics.

In education and training, the field emerged bit by bit on level 4, mainly as part of a multi-skilled education and on level 6 in artistic or engineering programs. We identified a missing link on level 5, the operator that is able to set-up systems, operate the system and maintain it. 5

This report, made by the "educational" working group (WP1), is meant to be used as material to compare existing education and training with the results of the "sectoral" working group (WP2) that maps the needs of the sector. This comparison is made during WP3 in a joined working group.

Below you find first a short overview of the more general findings, thoughts and issues that we encountered in the process of gathering and compiling the information. In a second part you will find the detailed information from the different partner countries/regions, enriched with some examples from other countries and projects. 10

## 2 Comparing programs

To compare programs from the different partner countries the partners gathered the available information of different programs and systems that have a sound component. The programs were gathered on all different levels to create a context to read the information.

In the next step, we tried to identify comparable parameters in order to avoid to compare apples with oranges. The issues below show the complexity of this process.

### 2.1 Different outcomes of sound programs

The outcomes of sound programs differ depending on the (combination of) subfields they are focussed on. Each of these subfields require a partly different set of skills.

- **Live music** programs focus on shows, tours and festivals where the core of the performance is (amplified) music.
- **Theater sound** programs focus on sound and music supporting a theatrical or dance performance, including musical.
- **Sound design** programs focus on the creation of a sonic environment for performance, but also for audio-visual, museums, gaming, etc. The sound designer can be seen as the composer of the sonic environment.
- **Sound art** programs focus on a sonic environment that is an independent, autonomous art form.
- **Studio sound** programs focus on the recording of music (and sound)
- **Audio-visual sound** programs focus on the recording and play-back of sound in relation with a moving image.
- **Virtual / immersive sound** programs focus on the reproduction of 3D sound images in specific contexts.
- **System Engineering** programs focus on the design of sound systems based on specific requests or spaces. (The design does not include the design or the apparatus, but targets the design of a complete system based on existing equipment.)
- **Acoustic engineering** programs focus on the behaviour of sound within a physical environment.

Moreover most programs focus on one or more specific genres.

### 2.2 Different levels (and interpretation of levels)

The EQF (European Qualification Frameworks) system is meant to compare different National (/regional) Qualification Systems (NQF) and so indirectly the level of different programs. We do use EQF directly as a comparing factor, even if it is not meant for this.

The EQF levels are described in complexity of expected learning outcomes (knowledge, skills and, responsibility and autonomy) (see also <https://europa.eu/europass/en/description-eight-eqf-levels>)

One of the issues of EQF is that the descriptors are in the first place intended to be used in a “hard science” context and less in an artistic environment. The Tuning project developed in 2009 a “Sectoral Qualifications Framework for Humanities & Arts” that made an interpretation of the descriptors in an artistic context. Unfortunately the framework does not describe the level 5, but it has been inspirational for our work. (see also [https://cdn.ymaws.com/elia-artschools.org/resource/resmgr/elia\\_library/Annex\\_23\\_EQF-SQF\\_Level\\_Descr.pdf](https://cdn.ymaws.com/elia-artschools.org/resource/resmgr/elia_library/Annex_23_EQF-SQF_Level_Descr.pdf))

Another issue in the use of EQF is that there seems to be a variation in interpretation of the descriptors between different countries / regions. One of the reasons could be adaptation to existing structures and levels, but we also see a tendency to lower the level in some countries to keep essential programs in “free education”.

Sound related programs exist from EQF level 3 to level 7 (and 8 if we include PhD in sound design for example).

### 2.3 ESCO and international occupation descriptions

The ESCO classification identifies and categorises skills, competences, and occupations relevant for the EU labour market and education and training. (see also <https://esco.ec.europa.eu>). The occupations are described generically, using a set of competences. These are generic too, and need in some cases a more specific interpretation to be useful in a sectoral or educational context.

The main advantage of these descriptions is that they are accepted by all EU member countries and available in all EU languages. They can be used as reference for comparison.

Some of the occupations that are included are listed below:

- 2652.5 - sound artist
- 3521.1.7 - sound designer
- 3521.1.10 - sound operator

- 3435.3 - audio production technician
- 3521.1.8 - sound editor
- 3521.1.9 - sound mastering engineer
- 3521.1.6 - recording studio technician
- 3521.1.1 - boom operator
- 2149.1 - acoustical engineer
- 2166.7 - digital media designer
- 2513.1 - digital games developer
- 2654.3.1 - music producer
- 3435.25 - theatre technician
- 2652.1 - composer
- 3435.25.5 - stage technician
- 2654.1.7 - technical director

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## 2.4 Multi-skilled vs specialised

Not all programs we researched are sound specific programs. Some countries, sectors or schools prefer multi-skilled profiles, where sound, lighting, stage mechanics, image and projection are joined to one profile. This choice is mainly based on the local practice in the field. But practices change and educational programs tend to respond slow to change.

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We see a tendency to more specialised profiles, mainly because of the increased complexity of the field. This has the advantage that learners can develop themselves profoundly in the sound field.

This does not mean that specialists should not have any multi-skilled training, the fact that one works in an environment where all fields are active at the same time and influence each others work makes it essential to have some basic understanding of the other fields.

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Moreover, in order to improve efficiency and teamwork, it is preferable that every worker on a stage is able to perform the basic tasks in different fields. This results in a new type of profile: the multi-skilled specialist.

## 2.5 Profiles, occupations and roles

To make the comparison with the sectoral approach, we need to define the scope of different descriptions of a profession.

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**Educational programs** are often described as a generic profile that can lead to multiple occupations, sometimes including different strands specialising in different occupations. Moreover it needs to be written more abstract in order to improve sustainability, but exact enough to be able to verify the level and content. In general the programs describe a starting professional, this is someone with all the basic skills, but with limited experience.

**Professional (or sectoral) profiles** describe the competences needed to work/start in the sector in a specific occupation, but exclude often general education and more supporting knowledge.

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**Job role** is the description of the competences that are expected of a specific person in a specific context. These can be different depending on needs, organisation of the employer, type of sector, and individual choices of the employing organisation. Job roles are used for vacancies and do not need sustainable descriptions.

**Learners profile** is the description in competences of the unique learner. This can include extra skills acquired in other contexts, expertise and background. In short this describes what makes the individual unique. Often the choice for a specific person for a specific job is made based on these "extras".

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To be able to **compare** the educational **supply** with the sectoral **demand**, we need to make abstraction of the job roles and learners profiles, but need to compare the educational programs with the professional profiles.

Credits / time spending, different calculation methods

To be able to **compare** the **weight** of different programs, we need to compare the **learning effort** of a learner. In higher education, **credits** are used often to reflect this learning effort, but these can be translated into learning hours. This calculation of learning effort is mostly based on the amount of time an average learner spends to master the skillset that is described in the profile or program. Ideally this measuring method is independent of the type of learning and should include all activities needed to master the skills and show proof of them.

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For example, where an **apprentice** will spend a lot of time "learning by doing", a student in a **regular school program** will probably spend more time on "theory" or "lab exercises". The apprentice will probably show a workpiece as a result to be assessed, where the regular student will probably have

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some “theoretical exams”. But the time that they spend on these learning efforts should be the same for an average learner in both systems if we want to compare in a fair way the different systems.

The situation becomes even more complex if a program description includes **prerequisites of prior learning**. These are proof of prior learning, based on certificates, diploma's or degrees, or based on recognition of prior learning. As the prerequisite is part of the program, it needs to be calculated as well.

5 Additional issue here is that we can't just transfer the learning effort between different levels. One expects a level 4 learner to need more time to master a skill than a level 5 learner. And on top of that not all skills of a level 4 program will be needed on a level 5.

To counter these problems, the **prerequisite skills** should be listed with the level 5 program and weighted on that level. In this way, we can create a fair comparison. By doing so, we make the final description independent from a specific country or system.

Some examples:

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- In Germany, the level 5 program expects the candidates to have a fachkraft certificate
  - In the Netherlands, the entry requirement of the level 5 program is a level 4 in Media.
  - In most countries, the law foresees that a learner can prove the prerequisites based on recognition of prior learning, in other words, the candidate proves based on evidence of work that he/she masters the prerequisite skills. These are assessed by an independent assessor or internally in the level 5 institute.

15 Some more attention points to ensure the quality of the comparison:

- Not all countries include self study or work at home.
- Some countries work with hours of 50 minutes.
- In some countries, programs include “general education”.

## 2.6 Different ways of describing programs

20 Each country/region and education system describes their programs in different ways. Some use a knowledge based approach, some a process based approach and some a skill / competence based approach.

An extra complexity is the description of artistic competence, which is core to our type of profile but hard to describe. And it is even harder to describe the required level of these competences. Often the descriptions are indirect and leave a lot of interpretation.

25 A program, and it's accompanying qualification is the “contract” with the society, in other words it guarantees that a learner is assessed and passed the set of competences. But also here there are variations in interpretation. In some cases the minimum requirements to pass are described, in other the “ideal outcome”, the maximum reachable result.

Additional issue is that often a set of competences is graded as a whole, which makes it possible that a learner fails for some crucial competences, but passes in the totality.

30 We also note that more and more programs leave room for a personal focus, which gives the opportunity to a learner to excel in a specific subject of choice.

## 2.7 Sound vs other performing arts fields

35 Sound is often an odd element in multi-skilled training and education. Where the other fields (set/scenography, video, lighting, stage mechanics) all deal with the physical, visual world, sound deals with an auditory world which is less dependant on the physical-visual environment. This often also asks for a different approach. Where most people are rather well in viewing / seeing, most people will need training to develop a “trained” and “selective” hearing, needed to perform the tasks.

## 2.8 Different systems vs reality of teaching and training

Even if we can distinguish different types of learning, the reality is often more complex. Traditionally we divide the learning types in:

- 40
- Full time classroom
  - Apprenticeship
  - Dual
  - Online learning
  - Self development
  - Recognition of prior learning / portfolio
  - ...



But in reality, even in a full time classroom environment, we see a lot of practical exercises, productions with artists, practical work experience, ... The type of skills that are to be trained need contact with the reality. It is impossible to train operators without musicians, it is impossible to teach teamwork without colleagues. This is a factor that we take in account in the comparison by splitting out the total time into different comparable parameters.

## 2.9 Training for the future

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The speed of evolution in the sector makes that all knowledge taught in an education program is by definition outdated when a learner leaves the program. The need for long life learning skills becomes more and more an essential part of a program. We can't train learners no longer for what we know now, but we need to train them to train themselves.

## 2.10 Conclusion

All the elements above support a better understanding of the complexity of the comparing process and the complexity for learners to adapt to a different and more complex world. In the next chapter, we list the existing programs in order to support the match with the sectoral demands.

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## 3 Belgium (Flanders) – Overview programs including sound

### 3.1 General info

Theatre technical education in Flanders is embedded in the secondary education system for the levels 3 and 4. These can be as well full time as dual programs. Moreover, the programs are also offered for unemployed by the regional unemployment sector (VDAB), as adult education (CVO) and as education for independent workers (Syntra). There is a difference between educational diploma's delivered by the education institutes and professional certificates. (The educational qualifications include "general education".)

The levels 5, 6 and 7 are organised within the higher education system (universities of applied sciences and arts) Flanders makes a difference between professional bachelors (that end at Bachelor level) and academic bachelors (that continue in a master program).

There is (in theory) the possibility for recognition of prior learning, but this option is not active at the moment.

Below, you find the different programs and standards that have a sound component included.

### 3.2 Level VKS3 (EQF3)

#### 3.2.1 "Multiskilled assistant technician, including a sound part"

**Level:** VKS3 (EQF3)

**Focus:** live performance

**Description:** This program consists of partial workplace learning and learning at school, typically 1 or 2 days at school. Students have the profile of a "assistant-stage technician" (Assistant – Podiumtechnicus ) which means that they are trained in setting up equipment.

This program includes basic electricity and basic skills in light, sound, video, and scenery.

**Target group:** students without a certificate 1st grade of the secondary

**Link:** <https://www.vlaanderen.be/opleidingsdatabank/assistent-podiumtechnicus>

**Recognising body:** ministry of education

**Entrance requirements:** students can start when they are 16 or at the age of 15 if they have completed the first two years of secondary education full-time (passed or not)

**Relation theory/practical work/work in the sector:** focus on practical work and workplace learning (dual learning)

**Relation technical/artistic skills:** focus on basic technical skills

**Normal duration of the program:** at own tempo

**Qualification/certification:** certificate "assistent - podiumtechnicus"

**Permeability:** diploma secondary education after a extra year and direct access to EQF5

**Job opportunities:** load in and load out, setting up equipment rental companies

**Classroom teaching sound:** 100 hours

**Classroom teaching (other not sound related):** 380

**Expected learning activities (self-study/exams/tests/...):** to be determined

**Practice in school:** approx. 50 hours

**Practice in workplace:** approx. 4000 hours

### 3.3 Level VKS4 (EQF4)

#### 3.3.1 "BKD (Beroeps Kwalificatie Dossier) Podiumtechnicus"

*This is a description of a professional profile , NOT a program on which the level 4 education is based.*

**Level:** VKS4 (EQF4)

**Focus:** live performance

**Description:** A BKD (BeroepskwalificatieDossier) is a description of competences and knowledge expected of a “starting professional” on a VKS level. This is what is different from an education program, which includes also the “general knowledge”. The profile is developed by the sector and the ministry of education. It forms the basis to develop educational programs.

**Note:** only the competences relevant for sound are taken in account in the matrix

**Target group:** N/A

**Classroom teaching sound:** N/A

**Classroom teaching (other not sound related):** N/A

**Expected learning activities (self-study/exams/tests/...):** N/A

**Practice in school:** N/A

**Practice in workplace:** N/A

**Link:** [https://igwueducation.sharepoint.com/:w:/r/sites/Essence/Freigegebene%20Dokumente/WG%201%20-%20Existing%20qualifications/Existing%20Qualifications/Belgium%20-%20Existing%20Qualifications/BKD%20-%20Podiumtechnicus%20\\_.docx?d=w1e377789e1ea4caf82d7a381eb17e746&csf=1&web=1&e=WjMnuu](https://igwueducation.sharepoint.com/:w:/r/sites/Essence/Freigegebene%20Dokumente/WG%201%20-%20Existing%20qualifications/Existing%20Qualifications/Belgium%20-%20Existing%20Qualifications/BKD%20-%20Podiumtechnicus%20_.docx?d=w1e377789e1ea4caf82d7a381eb17e746&csf=1&web=1&e=WjMnuu)

### 3.3.2 “TSO Podiumtechnicus (Stage technics EQF4)”

**Level:** VKS4 (EQF4)

**Focus:** live performance

**Description:** A curriculum (leerplan ) is a description of competences and knowledge that has to be taught in a school to receive a degree on a VKS level. This has to be combined with a general education part that is identical for all technical programs.

This program includes basic electricity, rigging, light, sound and a general artistic education.

TSO is the technical secondary education in Flanders. Next to this, one can also follow ASO (which is general education), KSO (which is art education) and BSO (which is professional education on level 4).

The curriculum is developed by a group of schools (koepels), in this case (VVKSO). But it is representative for other groups.

**Target group:** 16-18 year, last part secondary education

**Link:** [https://igwueducation.sharepoint.com/:w:/r/sites/Essence/\\_layouts/15/Doc.aspx?sourcedoc=%7BABA26B0C-1BB5-4F98-BF03-40402F3D9B5E%7D&file=Stage%20Technics%20EQF4.doc&action=default&mobileredirect=true](https://igwueducation.sharepoint.com/:w:/r/sites/Essence/_layouts/15/Doc.aspx?sourcedoc=%7BABA26B0C-1BB5-4F98-BF03-40402F3D9B5E%7D&file=Stage%20Technics%20EQF4.doc&action=default&mobileredirect=true)

**Recognising body:** ministry of education

**Entrance requirements:** after passing the second degree of the secondary education, normally at the age of 16

**Relation theory/practical work/work in the sector:** about 50% theory and 50% practice school (exercises at school, projects) + approximately 4 to 5 weeks internship at rental companies, theatres, ...

**Relation technical/artistic skills:** focus on technical education, but also a very basic artistic education (recognising instruments, music & theatre styles, ... )

**Normal duration of the program:** 2 schoolyears (2 x 10 months), a schoolyear in Belgian secondary education starts in September and ends at the end of June, summer vacation in July and August. Specific subjects 20 (of the 34) hours a week

**Qualification/certification:** diploma technical secondary education “Podiumtechnieken”

**Permeability:** EQF5 or EQF6

**Job opportunities:** Rental companies, theatres, ...

**Classroom teaching sound:** approximately 256 hours (8u / week 32 school weeks, theory)

**Classroom teaching (other not sound related):** approximately 1664 hours (2 years , 32 weeks, all subjects except sound)

**Expected learning activities (self-study/exams/tests/...):** approximately 64 hours self-study, no exams, 64 hours test, 64 hours assignments

**Practice in school:** approximately 256 hours

**Practice in workplace:** approximately 160 hours (internship)

## 3.4 Level VKS5 (EQF5)

### 3.4.1 “Sound operator (EQF 5) (Podium- en eventtechnieken)”

**Level:** VKS5 (EQF5)

**ECTS credits:** 120 credits (3600 hours)

**Focus:** live performance

**Description:** The student has to choose between 4 fields of study (sound, light, video, theatre mechanics/rigging). These 4 fields share a common basic education in safety, electricity, etc... . This program consists of partial workplace/dual learning and learning at school. Students have the profile of an operator in the chosen field of study, hence the title "sound operator".

5 **Target group:** 18+ (after high school)

**Link:** *Graduaat EQF5- Opleidingsmatrix.xlsx*

**Recognising body:** university

**Entrance requirements:** after obtaining a diploma of secondary education (EQF level 3 or level 4) OR after passing an entrance test (for students that don't have a diploma secondary education)

10 **Relation theory/practical work/work in the sector:** at school guided self-study, workshops in which theory is mostly integrated and approximately 50% workplace learning. "Hands on education" is the key concept in this program.

**Relation technical/artistic skills:** focus on technical education and a basic artistic education. The goal is that artistic matters are taken in account in the design and/or while doing a mix.

15 **Normal duration of the program:** two academic years (an academic year in Belgium typically starts in the last week of September and ends at the end of June)

**Qualification/certification:** diploma sound operator (level EQF5)

**Permeability:** Students can start at RITCS "Podiumtechnieken" (professional Bachelor). By passing an entrance test, the trajectory is shortened by one year, thus 2 academic years instead of 3.

Students can also start other education at level 6

20 **Job opportunities:** Rental companies, theatres, ... .

**Classroom teaching sound:**

**Classroom teaching (other not sound related):**

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:**

25 **Practice in workplace:**

## 3.5 Level VKS6 (EQF6)

### 3.5.1 "Multiskilled technician technical theatre (Podiumtechnieken) RITCS (EQF6)"

**Level:** VKS6 (EQF6)

**ECTS credits:** 180 credits (5400 hours)

30 **Focus:** live performance

**Description:** Professional Bachelor. Mainly theatre-based (not R&R) program with theatre mechanics, scenography, video, light, sound and production as main subjects. An artistic approach is stimulated to integrate the technical skills. The students are trained to become co-creators in a theatre company, stage managers and to be multiskilled technicians in companies, theatres, ... .

Professional bachelors are trained in universities of applied sciences and arts, while academic bachelors are trained in general universities.

35 **Target group:** 18+ (after high school)

**Link:** *Podiumtechnieken Bachelor in de audiovisuele kunsten.docx* <https://www.ritcs.be/en/node/122>

**Recognising body:** university

**Entrance requirements:** after obtaining a diploma of secondary education + passing an artistic entrance test OR after passing a general entrance test (for students that don't have a diploma secondary education EQF4) + passing an artistic entrance test

40 **Relation theory/practical work/work in the sector:** at about 40% theory and 60% hands-on workshops + 22 weeks internship (4 weeks in the 1st year, 6 in the 2nd year and 10 in the 3rd year)

**Relation technical/artistic skills:** focus on a artistic approach and creativity instead of technical knowledge

**Normal duration of the program:** three academic years (an academic year in Belgium typically starts in the last week of September and ends at the end of June)

45 **Qualification/certification:** diploma Bachelor in audiovisual arts , Podiumtechnieken

**Permeability:**

**Job opportunities:** designing and co-creating with artists in theatre companies (light, sound, ...), working in theatres, touring with shows

**Classroom teaching sound:** approximately 50 hours

**Classroom teaching (other not sound related):** +/- 1550 hours

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** approximately 100 hours

**Practice in workplace:** 25% of the internship (25% of 20 weeks = 5 weeks)

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### 3.5.2 “Multiskilled technician audiovisual, RITCS (EQF6)”

**Level:** VKS6 (EQF6)

**ECTS credits:** 180 credits (5400 hours)

**Focus:** audiovisual media and live events

**Description:** This program is focussed on all technical aspects associated with recording and streaming of events and television. (multicam, sound, light, production, streaming). The students are “co-creators”.

**Target group:** 18+ (after high school)

**Link:** <https://www.ritcs.be/en/node/189> – <https://www.luca-arts.be/nl/film-tv-en-video-campus-brussel-narafi>

**Recognising body:** university

**Entrance requirements:** after obtaining a diploma of secondary education + passing an artistic entrance test OR after passing a general entrance test (for students that don't have a diploma secondary education VKS4) + passing an artistic entrance test

**Relation theory/practical work/work in the sector:**

**Relation technical/artistic skills:** combination of both and the possibility for students to focus on technical or artistic skills in the Bachelor's thesis.

**Normal duration of the program:** three academic years (an academic year in Belgium typically starts in the last week of September and ends at the end of June)

**Qualification/certification:** diploma Bachelor in audiovisual arts , Podiumtechnieken

**Permeability:** a “transition year” (from Professional Bachelor to academic bachelor = 90 ECTS credits) and then master sound design, master production, master radio, ...

**Job opportunities:** companies involved in broadcasting, video at events, recording, ...

**Classroom teaching sound:** approximately 200 hours

**Classroom teaching (other not sound related):** approximately 1400 hours

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** approximately 300 hours

**Practice in workplace:** +/- 60 hours

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### 3.5.3 “B.A. Pop and Rock , music technics PXL (EQF6)”

**Level:** VKS6 (EQF6)

**ECTS credits:** 180 credits (5400 hours)

**Focus:** live performance

**Description:** education in music & instruments , recording and editing. Intensive training and highly skilled in FOH- & monitor mixing, wireless audio, system design and optimisation.

**Note:** Students have to choose between PA or studio in the first year, some subjects in the first year are common for both options. Another (less technical) option is to study music management (Bachelor) or to become a musician at the same school.

**Target group:** 18+ (after secondary education)

**Link:** Ba Pop and Rock, music technics <https://www.pxl.be/muziektechniek>

**Recognising body:** university

**Entrance requirements:** after obtaining a diploma of secondary education + passing an artistic entrance test OR after passing a general entrance test (for students that don't have a diploma secondary education VKS4) + passing an artistic entrance test

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**Relation theory/practical work/work in the sector:** although theory is an important and extensive part of the program, knowledge and skills are often trained in projects. And in the last (the 3rd) year the students have at about 12 weeks internship.

**Relation technical/artistic skills:** Intensive training in music, musical instruments eartraining, music history, but also

**Normal duration of the program:** three academic years (an academic year in Belgium typically starts in the last week of September and ends at the end of June)

Diploma Professionele Bachelor in de pop- en rockmuziek / muziektechniek (Ba Pop and Rock , music technics)

**Permeability:**

**Job opportunities:** system engineering, FOH & monitor mixing, wireless technician for complex setups, working for the “bigger” PA companies

**Classroom teaching sound:** approximately 840 hours

**Classroom teaching (other not sound related):** minimum 364 hours

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** +/- 448 hours

**Practice in workplace:** 456 hours internship

## 3.6 Level VKS6+7 (EQF6+7)

### 3.6.1 “Audiovisual arts, Radio (RITCS)”

**Level:** VKS7 (EQF7)

**ECTS credits:** 180 + 60 credits (5400 +1800 hours)

**Focus:** Radio / soundscape

**Description:** The program prepares for radio makers, with an additional focus on radio play and radio sound scape.

**Target group:** 18+ (after high school) for the Ba, 21+ (after academic Bachelor degree) for the master.

**Link:** <https://www.ritcs.be/nl/radio>

**Recognising body:** university

**Entrance requirements:** artistic entrance exam

**Relation theory/practical work/work in the sector:** Next to a profound theoretical base, the program also contains practical training like voice training and a major part of project work

**Relation technical/artistic skills:** strong artistic focus

**Normal duration of the program:** 3+1 years

**Qualification/certification:** Master of arts

**Permeability:**

**Job opportunities:** radio maker, sound artist

**Classroom teaching sound:** approximately hours

**Classroom teaching (other not sound related):** approximately hours

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** approximately hours

**Practice in workplace:**

### 3.6.2 “Audiovisual arts, Sound design (RITCS)”

**Level:** VKS7 (EQF7)

**ECTS credits:** 180 + 60 credits (5400 +1800 hours)

**Focus:** Sound recording and soundscape for film and cinema

**Description:** The program prepares for sonorisation of film.

**Target group:** 18+ (after high school) for the Ba, 21+ (after academic Bachelor degree) for the master.

**Link:** <https://www.ritcs.be/nl/sound-design>

**Recognising body:** university

**Entrance requirements:** artistic entrance exam

**Relation theory/practical work/work in the sector:** Next to a theoretical base, the program also contains practical training and project work with students from other departments.

**Relation technical/artistic skills:** strong artistic focus

**Normal duration of the program:** 3+1 years

**Qualification/certification:** Master of arts

**Permeability:** students with a professional bachelor or an other academic bachelor can enter the master after an extra year.

**Job opportunities:** film sound maker

**Classroom teaching sound:** approximately hours

**Classroom teaching (other not sound related):** approximately hours

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** approximately hours

**Practice in workplace:**

## 3.7 Other related profiles

### 3.7.1 KASK & Conservatorium Gent, “bachelor + master muziek, afstudeerrichting scheppende muziek, traject muziekproductie”

- This program is focussed on music producing
- <https://schoolofartsgent.be/nl/opleiding/bachelor-en-master-in-de-muziek/scheppende-muziek/muziekproductie/>

## 3.8 French speaking community

The French speaking community has a more limited offer, but in the same type of programs as in Flanders.

- Dual learning program
  - Multiskilled technical theatre program
  - <https://www.ifapme.be/formations/chef-dentreprise/regisseur-technicien-de-spectacles>
- Training for independent workers
  - Multiskilled technical theatre program
  - <https://www.efp.be/formations/chef-d-entreprise/efp-2/regisseur-technicien-de-spectacles.html>
- Program for unemployed people
  - Multiskilled technical theatre program
  - <http://performat.be/public/regie-de-spectacle/>
- Recognition of prior learning
  - Multiskilled technical theatre
  - <https://www.validationdescompetences.be/php/pdf.php?fuse=metiers&idmetier=86>
- INSAS Son
  - Bachelor/master programs
  - <https://insas.be/cursus/bacheliers/baccalaureat-son/>
  - <https://insas.be/cursus/masters/master-radio-television-multimedia/>

## 3.9 Other training programs

Betterlive <https://www.betterlive.be>

Masterclasses and workshops in wireless audio, AV networks, monitor- and FOH-mixing, live streaming. For semi professionals and professionals.

Qualification/ certification: none

SAE (<https://www.sae.edu/bel/>)

SAE is a part of the University of Hertfordshire (UK)

5 Education in electronic music production

Qualification/ certification: certificate

Education in Audio production

Qualification/ certification: Ba/Bsc diploma

10 De Klankacademie <https://klankacademie.be>

Workshops and masterclasses pro tools, PA, Studio, Mastering, home recording

Qualification/ certification: none

MasterClaes <https://masterclaes.be/index.html>

15 Seminars about mixing , compressors and effects

Qualification/ certification: none

Interactive Sound Production <https://www.howest.be/nl/opleidingen/bachelor/digital-arts-en-entertainment/interactive-sound-production>

Elective course of the study program “game development” focussed on recording, mixing and SFX.

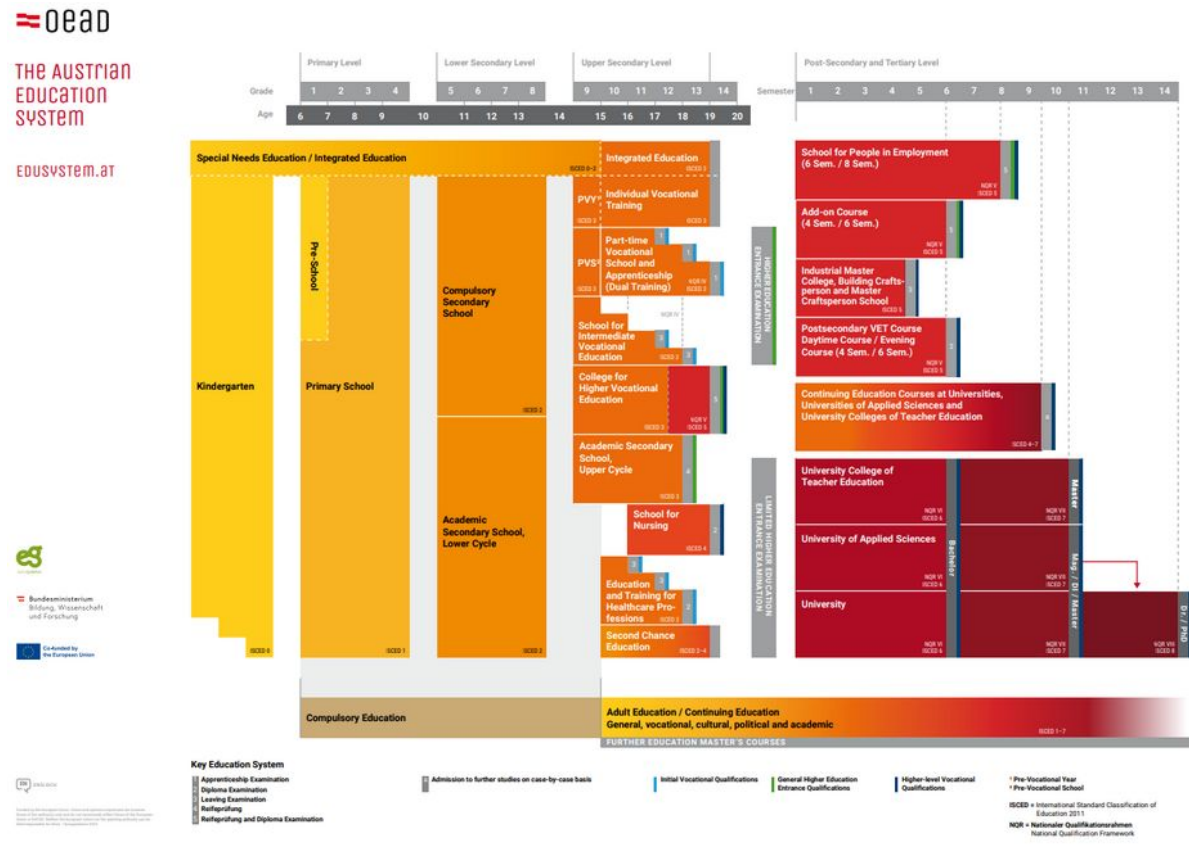
20 Qualification/ certification: Bachelor Digital arts and entertainment



## 4 Austria

### 4.1 General info

Currently in Austria no specialized Live Sound Specialist training is being offered. The most important path to live sound and the event industry today is the Austrian event technology specialist. This programme is also officially recognized by the German authorities.



(taken from [www.edusystem.at](http://www.edusystem.at) – Das österreichische Bildungssystem)

#### Part-time vocational school and apprenticeship (dual system)

In the apprenticeship training system, the apprentice is in a training relationship with his or her training company and a student at a part-time vocational school at the same time. The training in an apprenticeship occupation is open to all young people who have completed their nine years of compulsory schooling. No specific school qualification is needed for access to an apprenticeship.

At the end of the training, the young person takes the Apprenticeship Examination in front of professional experts.

#### General

An apprenticeship offers young people (mostly aged between 15 and 19 years) a solid vocational training. The apprenticeship is the right choice for all those who prefer to follow a practically-based programme of training in a workplace (involving working in a company setting). Trainees spend around 20 - 25% of their apprenticeship in the technical or vocational school, where they acquire the theoretical knowledge needed in their profession.

Admission to an apprenticeship takes place once a young person has completed 9 years of compulsory education. Successful completion of the Compulsory Secondary School, Polytechnic School of the ninth year at a different type of school is not compulsory, but will significantly increase the chances of obtaining an apprenticeship.

An apprenticeship is also an attractive choice for young people who leave or complete their education at medium level or upper-level schools and who wish to enter employment. In those cases, the duration of the apprenticeship may be shortened (generally by one year; in the case of training professions in one's own vocational area, possibly by longer than one year).

### Part-time Vocational School (Berufsschule BS-EVITA for Event Technology Specialist)

During their training in a training profession, the Part-time Vocational School (Berufsschule) provides young people with teaching that complements and is relevant to their training and that provides them with the underpinning theoretical knowledge they require. This will assist and expand upon the training that the young people receive in the workplace and received during their general education. Young people will attend the Technical or Vocational College for the number of course years that corresponds to the duration of their apprenticeship contract. Depending on the training profession, the duration of the apprenticeship will be from two to four years. In general, an apprenticeship will last for three years.

Young people do not have a free choice as to which Part-time Vocational School (Berufsschule) they must attend. The institution attended will be decided according to the training profession concerned and by the location of the company in which the training is being provided. In Austria only one school in Vienna the BS-Evita Trains Event Technology Specialists. The company supplying the training handles registering its apprentices at the Part-time Vocational School (Berufsschule).

### Modes of delivery

The teaching provided by the Part-time Vocational School (Berufsschule) can be delivered in the following ways: for an entire year, involving attendance on a minimum of one full day or two half days per week; on a course-specific basis, in other words for a continuous period of at least eight weeks, or on a seasonal basis, in other words, in a block that is held at a specific time of the year. The variety of modes in which teaching is delivered is decided based on agreements between the business sector and the management of the school and considers the needs of individual sectors or regions. One of the essential factors underpinning the success of the Dual System is the cooperative collaboration between all parties and locations involved in the training. Nowadays, a programme of vocational training requires a closely interrelated combination of theory (provided by the Part-time Vocational School) and practical experience

### Industrial Master College

The Industrial Master College are attended by individuals who have completed their vocational training in a technical or trade area. It serves the purpose of expanding their theoretical knowledge.

The programme for eventtechnology lasts 4 semesters and is completed by taking a final examination, which will qualify the individual to train apprentices.

On the next level event technology specialists may follow further training at the “Werkmeisterschule für Veranstaltungen and Event Technik, TGA des BFI Vienna, or WIFI Linz). The industrial master college for event and event technology teaches all the skills to be successful in almost any senior position in the event business. The curriculum ranges from pyrotechnics, plant, drive and control technology through multimedia, lighting, video and sound technology to stage technology and statics. Live sound is only one part of the extensive training. So far to our knowledge no participant has chosen to specialise in live sound. This training is currently only offered in Vienna and no courses have been arranged for due to lack of participants.

### Further Training possibilities:

Other Training courses are offered for Media Technology and do not target specifically live sound or sound applications for theatres. Some of the graduates may find their way through to theatre or live sound.

On a higher level (NQF 6 and NQF7) there are two studies in Austria currently available. One at the Technical University in Graz together with the University of Music and Performing Arts Graz. And a graduate program at the University of Music and Performing Arts in Vienna. These two programmes are described below.

### University of Applied Sciences:

Universities of Applied Sciences (Fachhochschulen) provide scientifically-based vocational education and training with strong occupational orientation (the study programme includes one practical training semester). (ISCED-Level 6 / 7; NQR Level VI / VII)

The following types of study programmes are currently offered:

#### Bachelor's degree programmes

last six semesters (three years) and conclude with the academic degree "Bachelor".

#### Master's degree programmes

build on Bachelor's programmes and primarily serve to scientifically complement these, generally last four semesters (two years) and lead to the award of a Master's degree.

### Colleges for higher vocational education (BHS)

We also find multimedia training with sound, with focus on recording film sound and media. This institution This school form is a college for higher vocational Education (BHS) in the form of a Secondary School for Artistic Design (Höhere Lehranstalt für künstlerische Gestaltung)

In addition to an in-depth general education, the five-year course in an Upper Level Secondary Technical and Vocational School also provides a higher level of vocational training and concludes with a Reifeprüfung and Diploma examination. If successfully achieved, the Reifeprüfung and Diploma examination entitles a young person to undertake a course of study at a University, a University of Applied Sciences or a University College of Teacher Education, whilst the Diploma examination provides access to legally regulated professions in accordance with the Trade and Industry Code.

The recognition of relevant knowledge held by young people who have completed the Upper Level Secondary Technical and Vocational School is legally prescribed; entitlements under the Engineers Act will apply to the graduates of most of the Upper-Level Technical Schools. 5

### Admission:

The Upper level Secondary Technical and Vocational Schools can be attended by pupils who have successfully completed the fourth year/eighth year of education at the Compulsory Secondary School, the fourth or higher year in the Academic Secondary School or have completed their ninth year of education at the Pre-vocational School (Polytechnische Schule) (with the exception of Latin, Geometrical Drawing and compulsory subjects for one's area of focus). 10

Pupils completing the fourth year of a Compulsory Secondary School will be required to take an entry examination in German, English or Mathematics, if they were in the lowest stream for one of those subjects or were in the middle stream, but obtained a classification of "Adequate". Pupils who were awarded a "Satisfactory" grade may be admitted following a decision by the conference of class teachers.

Example of a BHS with sound in it's programme: 15

Höhere Graphische Bundes-Lehr- und Versuchsanstalt Wien, [www.graphische.net](http://www.graphische.net)

Audio Visual Multimedia Program: The training is supplemented by the soundtrack of your own films and animations in the recording studio and by field recordings.

## NQR – EQF Level Qualification in Austria

In principle, the eight NQF qualification levels relate to the eight EQF levels, i.e. the mapping of a qualification to a qualification level of the NQF corresponds to the equivalent level of the EQF. Per Section 5 of the NQF Act, the OeAD | the official Austrian NQF Coordination Office (NKS) has mapped and published the following qualifications to NQR Level 5 to the "Reife- and Diplomprüfung at Higher Technical Schools (HTL) among others. A comprehensive List of all schools and institutions with Level 5 Training can be found here: Mapping of qualifications - Qualifikationsregister 20

In the case of formal qualifications (i.e., qualifications that are regulated by law or regulation), the responsible ministry or the responsible office of the state government gives the request for the mapping directly to the OeAD. In this case ESSENCE would have to deal with official state government offices to implement a live sound engineer curriculum as a special study within an existing programme to achieve NQR/EQF Level 5. 25

## 4.2 Level NQR4 (EQF4)

### 4.2.1 Veranstaltungstechnik (event technology specialist)

**Level:** NQR 4 (EQF4)

**Focus:** live performance 30

**Description:** The training takes place in the training company and at the same time in the vocational school (dual VET). The vocational school supplies the theoretical background that the students need to successfully practice their profession as event technology specialist. Sound engineering is only a part of the education. (Other elements of the program are lighting, rigging, general management etc.)

**Target group:** 16-18 year, last part secondary education

**Links:** 35

- BS-Evita School: <https://www.bsevita.at>
- Legislation for event technology training regulations: <https://ris.bka.gv.at>
- [https://www.bic.at/berufsinformation.php?beruf=veranstaltungstechnik\\_lehrberuf&brfid=1499](https://www.bic.at/berufsinformation.php?beruf=veranstaltungstechnik_lehrberuf&brfid=1499)
- <https://www.bildungderwirtschaft.at/wko-bildungspfade/produktion-technik/eventtechnik>

**Recognising body:** Federal Ministry Republic of Austria Education, Science and Research (Lehrlingsprüfungsstelle der WKO) 40

**Entrance requirements:** The prerequisite for this is the completion of 9 years of compulsory schooling and an apprenticeship in a training company. Attending the vocational school normally requires a company apprenticeship.

**Relation theory/practical work:** at least 50% practical

**Relation technical/artistic skills:** fully technical

**Normal duration of the program:** 3 ½ years, 1560 school units (1170 hours) in total 45

**Qualification/certification:** Fachkraft Veranstaltungstechnik – Specialist event technology

**Permeability:** Berufsreifeprüfung, EQF5

**Job opportunities:** technician for event service suppliers, theatres, multipurpose venues etc.

**Classroom teaching sound:**

5 **Classroom teaching (other not sound related):** 30% of 260 units

**Expected learning activities (self-study/exams/tests/...):** none

**Practice in school:** minimum 2x 10 hours per semester (min 60%)

**Practice in workplace:** dual 5 weeks school + workplace, 1560 h + religion

## 4.3 Level NQR6 (EQF6)

### 10 4.3.1 Universitätsstudium Elektrotechnik – ToningenieurIn (TU Graz / KUG Graz)

**Level:** NQF 6 (EQF6)

**ECTS credits:** 180 ECTS

**Focus:** Electrical Engineering (Audio Eng.) Bachelor of Science (BSc)

15 **Description:** The engineering bachelor's degree in electrical engineering and sound engineering is set up as an inter-university course at the Technical University of Graz and the University of Music and Performing Arts Graz. The students learn to understand the scientific principles and methods of electrical engineering and acoustics, have basic scientific knowledge, can analyse and model technical tasks and problems in the field of information technology and acoustics, and understand and design musical relationships. The basic musical training combined with the technical-scientific one puts the graduates in a position to work as interdisciplinary mediators at the interface of science and art, technology and music. Sound engineer is a technical profession that is practiced in the fields of sound engineering, studio and recording technology, signal processing, acoustics and computer music. In addition to technical knowledge, the Electrical Engineering - Sound Engineer course also imparts extensive musical knowledge and skills. They are regarded as competent partners for artists in questions of acoustics, recording and reproduction technology and in computer music tasks.

20 The following compulsory modules are part of the course: Mathematics and scientific basics, electrical engineering basics, electrical engineering and information technology, computer science, audio technology and acoustics, studio and recording technology, computer music, musical basics, soft skills and bachelor thesis. By completing an elective seminar, in which the bachelor's thesis is to be written, the students get personal special training in a selected subject area of audio signal processing, audio electronics, acoustics, recording technology or computer music.

25 **Target Group:** 18+ after highschool

**Links:** <https://www.tugraz.at/studium/studienangebot/bachelorstudien/elektrotechnik-toningenieur> – [https://mibla-archiv.tugraz.at/17\\_18/Stk\\_18a/18a.html](https://mibla-archiv.tugraz.at/17_18/Stk_18a/18a.html)

**Recognising Body:** Federal Ministry Republic of Austria Education, Science and Research

30 **Entrance Requirements:** Matura, Berufsreifeprüfung; Studienberechtigungsprüfung +

An examination of artistic aptitude at the KUG must be completed. This consists of the following three parts: Written hearing test parts one and two and written music theory test.

**Relation theory/practical work:** Theory ++

**Relation technical/artistic skills:** Technical / Artistical

35 **Normal duration of the program:** 6 (2+4) Semester / 3 years

**Qualification/certification:** Bachelor of Science (BSc)

**Permeability:** After completing the master's degree, students can define and interpret the specific features, limitations, terminologies and doctrines of the subject. You can make science-based decisions based on incomplete or limited information.

40 **Job opportunities:** Electrical engineering and audio engineers who have received their degrees in Graz are strongly in demand internationally due to their expertise. This degree program is unique in Europe, and the career prospects in the following fields are correspondingly good: Vehicle acoustics and automotive industry; Room and building acoustics planning; Electroacoustic development; Digital signal processing; Speech communication; Software development; Sound synthesis and sound design; Sound engineering and studio technology; Installation art and multimedia; Sound installations and live electronics;

**Classroom teaching sound:** 25% or 43 ECTS – (Audiotechnik, Acoustic, Studio- and Recordingtechnique)

45 **Classroom teaching (other not sound related):** 137 ECTS – (Math, Science, Elektrotechnik, Electronic, Computer Science, Music Studies)

**Expected learning activities (self-study/exams/tests/...):** 15%

**Practice in school:** Students have access to and the opportunity to use excellent infrastructure. This includes the teaching studios and acoustic measuring stations at TU Graz and the KUG and especially the "CUBE", a replay room for 3D spatial audio simulation at the KUG. Students can deepen their theoretical knowledge in numerous laboratories and discuss questions that arise as a result of the practical application of this knowledge.

**Practice in workplace:** possibility, to follow a job-oriented practice, or to complete short study visits abroad as part of the freely selectable courses (

## Level NQF7 (EQF7)

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### 4.3.2 Universitätsstudium Elektrotechnik – ToningenieurIn (TU Graz / KUG Graz)

**Level:** NQF7 (EQF7)

**ECTS credits:** 120 ECTS

**Focus specialization:**

- **Embedded Audio** - includes subject areas such as circuitry and electronics, computer engineering and communications engineering. 10
- **Acoustics and Recording Technology** - includes acoustics subject areas such as psychoacoustics and vehicle acoustics, as well as recording and playback technology.
- **Signal Processing and Speech Communication** – places a focus on subject areas such as digital signals, digital speech processing and audio signal processing.
- **Computer Music and Multimedia** – covers subject areas that range from classical music theory to algorithmic composition and multimedia art. 15

**Description of the program:** The engineering master's degree in electrical engineering and sound engineering is set up as an inter-university course at the Technical University of Graz and the University of Music and Performing Arts Graz. The knowledge in the areas of audio technology, acoustics and recording technology, signal processing and voice communication as well as computer music and multimedia is significantly expanded and deepened. This enables the students to apply and further develop complex scientific methods to find innovative solutions in the field of information technology applications and services. After completing the master's degree, students can define and interpret the specific features, limitations, terminologies and doctrines of the subject. This enables the students to apply and further develop complex scientific methods to find innovative solutions in the field of information technology applications and services. The students can make science-based decisions based on incomplete or limited information. In the artistic environment, the students can act as mediators in the field of tension between technology and art, to judge and act competently in both spheres. 20

**Target Group:** NQF 6 – Electrical Engineering (Audio) 25

**Recognising Body:** Federal Ministry Republic of Austria Education, Science and Research

**Entrance Requirements:** The acceptance of graduates of the bachelor's degree Electrical Engineering - Sound Engineer at the TU Graz or the University of Music and Performing Arts Graz (KUG) is unconditional. Graduates of other bachelor's degrees are invited to the admissions colloquium.

**Relation theory/practical work:**

**Relation technical/artistic skills:** Highly technical 30

**Normal duration of the program:** 4 Semester / 2 years

**Qualification/certification:** Diplomingenieur/in, Dipl.-Ing., Master of Science, MA

**Permeability:** PhD Higher Studies

**Job opportunities:** Graduate of the master's degree, have a broad range of career opportunities open Wherever new media technology meets art, they will find electrical engineering sound engineers in business, 35

- as a developer: of studio, live recording and hi-fi equipment.
- as an acoustician: in the automotive industry, for noise abatement, in room acoustics, in the conception of measurement applications and psychoacoustic test series, in industrial sound design or in the development of hearing aids.
- as signal processing specialists for communication technologies, speech and audio processing algorithms.
- in the field of multimedia sound design and music production, as a radio and sound engineer or in the development of audio applications. 40

**Classroom teaching sound:**

**Classroom teaching (other not sound related):**

**Expected learning activities (self-study/exams/tests/...):** 20% - Master Theses is 30 ECTS

**Practice in school:** Practical Infrastructure: Sound Lab and the recording studio of the Signal Processing and Speech Communication Laboratory (SPSC) at TU Graz as well as the production studio - CUBE, a playback room for 3D sound at the Institute of Electronic Music and Acoustics (IEM) at the University of Music and Performing Arts Graz 45

**Practice in workplace:** it is possible to receive workplace practice for up to 6 ECTS. Each week of workplace related practice counts for 1,5 ECTS points.

### 4.3.3 Diplomstudium Tonmeister/Tonmeisterin (MDW Vienna)

**Level:** NQF7 (EQF7)

**ECTS credits / Hours:** 300 ECTS

**Target Group:** Unlike the professions of audio engineer and audio technician, the profession of Tonmeister is characterised by a primarily creative and artistic focus. The Tonmeister represents the interests of music and sound art in the world of technology. And ultimately, Tonmeisters have a hand in the production of over 90% of all music that gets listened to.

The goal of this course of study is therefore to train Tonmeisters who are capable of working creatively in all areas where audio production plays a role —individuals go beyond merely handling the technology to serve as the overall artistic head of a production.

**Focus:** Senior Soundrecording Engineer (Tonmeister) for Studio Recording / Sound directing (Klangregie) / Film and Video Sound / Radio Production

**Description:** The diploma programme Sound Engineer imparts knowledge about the handling of the technical means and enables the students to independently create designs. The sound engineer has an indispensable advisory function in the electro-acoustic realization of a musical work. The course promotes the diversity, creativity and artistic competence of the students. The training enables future sound engineers to work creatively in sound productions or audio-visual media productions and to help shape them both technically and musically. The fields of activity include music sound engineer, production manager, sound director, live sound engineer, theatre sound engineer, film sound engineer, sound designer, radio sound engineer or radio producer. Further career opportunities are available in the areas of acoustic research, device and system development, and education.

**Target Group:** Graduation with a: Magistra artium (Mag.a art.) or Magister artium (Mag.art.)

**Links:**

- MDW University: <https://www.mdw.ac.at/1292/>
- Information on Entrance Exams : <https://www.mdw.ac.at/studienplaene/?stNR=8257&stArt=infozpe>
- Study Plan : <https://www.mdw.ac.at/studienplaene/?stNR=8257&stArt=infoite>
- Curriculum: <https://www.mdw.ac.at/studienplaene/?stNR=8257&stArt=cur>

**Recognising Body:** Federal Ministry Republic of Austria Education, Science and Research

**Entrance Requirements:** Matura, Berufsreifeprüfung; Studienberechtigungsprüfung +

Successful completion of an admission test in the areas of hearing, acoustics/technology, general music theory, mathematics and physics as well as earlier knowledge of an instrument or singing is a prerequisite for admission to the course.

**Relation theory/practical work:** Theory ++

**Relation technical/artistic skills:** High artistic skills

**Normal duration of the program:** 10 Semester / 5 years ( hours)

**Qualification/certification:** Magistra artium (Mag.a art.) or Magister artium (Mag. art.)

**Permeability:** PhD / Doctor of Philosophy

**Job opportunities:** Tasks and fields of activity include for example music sound engineer, recording manager, sound director, live sound engineer, theatre sound engineer, film sound engineer, sound designer, radio sound engineer or radio producer. Further career opportunities are offered in the areas of acoustic research, or device and plant development.

**Classroom teaching sound:**

**Classroom teaching (other not sound related):**

**Expected learning activities (self-study/exams/tests/...):** min. 20%

**Practice in school:** 10 %

**Practice in workplace:** During the second stage of studies students are to complete a three-month work experience with companies active in these fields (broadcasting, audiovisual industry, etc.). Completion of the work experience is to be documented by written certification/ a letter of confirmation.

**Remark:** Students are required to learn an instrument and follow classes for piano.

## 5 The Netherlands

### 5.1 General information

In the Netherlands there are different education levels where sound is educated. It starts after the secondary school. After that there is a choice between level 2, 3, 4. That is a secondary vocational education (MBO: Middelbaar Beroeps Onderwijs). There is also a choice for a level 5 or 6, there is one associate degree and three bachelor programs (HBO: Hoger Beroeps Onderwijs). At that level a specialistic program with only sound education is being offered. At the moment, there is still a specific sound education at level 4, but that will change four years from now. There are also some private programs. So in this overview, the level 4 sound education has not been taken into account. 5

3	4	5	6	6	6	ZN	ZN
MBO	MBO (Nieuw KD + keuzedelen)	AD	HBO AHK Geluidsontwerp	HKU Sound design media and game	Conservatorium Den Haag Art of sounds (verschillende richtingen)	AES	IAB

### 5.2 Level 2 (EQF2)

#### 5.2.1 “Medewerker podium- en evenemententechniek [employee stage and event crafts]” 10

**Level:** EQF2

**Focus:** live performance

**ECTS credits:** 1600 hours a year

Total study effort in hours.

- Classroom teaching sound (Hours): appr 3 – 6 hours a week depending on the school 15
- Classroom teaching (other not sound related) (Hours)
- Expected learning activities (self-study / exams / tests / ...)(Hours)
- Practice in school(Hours): 700
- Practice in workplace (Hours): 250
- Total hours for a student to spend: 1000 (Hours) 20

**Focus:** live performance

**Description:** At level 2 (EQF2) there is a general education to work in the stage and event industry. In this education, sound is part of the education. Next to sound light and AV is taught.

Only basic skills of are taught: installing, connecting and testing equipment. Basic troubleshooting is part of this level: taking care the equipment works when for the stage and event technician Operating the equipment during the production is not part of this level. It is a one-year education. 25

**Target group:** secondary school or no certificate from the secondary school

**Link :** <https://kwalificatie-mijn.s-bb.nl/kwalificatie/medewerker-podium-en-evenemententechniek/cmVzdWx0YWFOVHlwZT01O2Rvc3NpZXJjZD0xMjQ5O2t3YWxpZmljYXRpZUlkPTcwMDIOMQ==>

**Recognising body:** ministry of education

**Entrance requirements:** secondary school or no certificate from the secondary school 30

**Relation theory/practical work/work in the sector:** practice based

**Relation technical/artistic skills:** focus on basic technical skills

**Normal duration of the program:** 1 year

**Qualification/certification:** certificate Medewerker podium- en evenemententechniek

**Permeability:** Level 3/EQF3 35

**Job opportunities:** with a certificate at this level you can work for organisations that are responsible for the technical part of events (theatre, music, festival). Examples of places to work are: all kind of theatres, producers of theatre plays, events, festivals and pop venues, rental companies for stage equipment and specialised employment agencies.

## 5.3 Level 3 (EQF3)

### 5.3.1 “podium- en evenemententechnicus [stage and event crafts technician]”

Level: EQF3

ECTS credits: credits (1600 hours a year)

- 5 • Total study effort in hours. Classroom teaching sound (Hours): appr 4 –6 hours a week depending on the school
- Classroom teaching (other not sound related) (Hours)
- Expected learning activities (self-study / exams / tests / ...)(Hours)
- Practice in school(Hours): 1250
- Practice in workplace (Hours): 450 hours in 2 years
- 10 • Total hours for a student to spend: 2000 Hours in 2 years

Focus: live performance

Description: At level 3 (EQF3) there is a general education to work in the stage and event industry. In this education, sound is part of the education. Next to sound light and AV is taught.

15 Not only basic skills of are taught: installing, connecting, testing and operating the equipment. Trouble shooting is also part of this level. Operating the equipment during the production and rehearsals is part of this level. It is a two-year education.

Target group: secondary school

Link:

Recognising body: ministry of education

Entrance requirements: secondary school

20 Relation theory/practical work/work in the sector: practice based

Relation technical/artistic skills: focus on technical skills

Normal duration of the program: 2 year

Qualification/certification: certificate Podium- en evenementen Technicus

Permeability: Level 4/EQF4

25 Job opportunities: with a certificate at this level you can work for organisations that are responsible for the technical part of events (theatre, music, festival). Examples of places to work are: all kind of theatres, producers of theatre plays, events, festivals and pop venues, rental companies for stage equipment and specialised employment agencies.

## 5.4 Level 4 (EQF4)

### 5.4.1 “podium- en evenementen technicus [allround stage and event crafts technician]”

30 Level: EQF4

ECTS credits: 240 credits (1600 hours a year)

Total study effort in hours.

- Classroom teaching sound (Hours): appr 4 – 10 hours a week depending on the school
- Classroom teaching (other not sound related) (Hours)
- 35 • Expected learning activities (self-study / exams / tests / ...)(Hours)
- Practice in school(Hours): 1800 in 3 years
- Practice in workplace (Hours): 900 hours in 3 years
- Total hours for a student to spend: 3000 Hours in 3 years

Focus: live performance

40 Description: At level 4 (EQF4) there is a specific and broad education to work in the stage and event industry. In this education, sound is part of the education. Next to sound light and AV is taught.



Specific skills of are taught in a wide variety: from pre-production and preparing a show to installing, connecting, testing and operating the equipment. Trouble shooting is also part of this level. Operating the equipment during the production and rehearsals is part of this level. It is a three-year education.

**Target group:** secondary school

**Link:**

**Recognising body:** ministry of education

**Entrance requirements:** secondary school

**Relation theory/practical work/work in the sector:** practice based

**Relation technical/artistic skills:** focus on technical skills

**Normal duration of the program:** 3 year

**Qualification/certification:** certificate Podium- en evenementen Technicus

**Permeability:** Level 5/EQF5

**Job opportunities:** with a certificate at this level you can work for organisations that are responsible for the technical part of events (theatre, music, festival). Examples of places to work are: all kind of theatres, producers of theatre plays, events, festivals and pop venues, rental companies for stage equipment and specialized employment agencies. Can also work in other relevant industries as for instance musea.

## 5.5 Level 5 (EQF5)

### 5.5.1 Associate Degree Technical Production, University of Arts Amsterdam (AHK)

**Level:** EQF 5

**ECTS credits:** 120 credits (... hours)

**Classroom teaching sound:** In general 3 hours a week

**Classroom teaching (other not sound related):** varies between 24 and 32 hours a week

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:**

**Practice in workplace:**

**total:** 1000 (Hours)

**Focus:** live performance

**Description:** The Associate Degree Technical Production is an education for the level 4 stage- and event technician (Podium- en evenementen technicus), who want to specialise in technical production. It is an education of the University of Art Amsterdam, department Design & Technology. Classes leadership are an important part of this education. The first year is at school, where knowledge of sound, light, rigging et cetera is taught to take care that all the students the same knowledge. In the second year there is an internship of 4 months.

**Target group:** level 4 stage- and event technicians (Podium- en evenementen technicus), that come from one of the 17 of these kind of educations in the Netherlands. Maximum 13 students a year.

**Link :** <https://www.atd.ahk.nl/en/theatre-programmes/design-technology-technical-production-ad/technical-production-associate-degree/>

**Recognising body:** ministry of education

**Entrance requirements:** a certificate of the level 4 stage- and event technician.

**Relation theory/practical work/work in the sector:** practice and theory based

**Relation technical/artistic skills:** the focus is on technical skills and the communication with the artistic disciplines

**Normal duration of the program:** 2

**Qualification/certification:** Associate Degree Technical Production

**Permeability:** Bachelor Design & Technology

**Job opportunities:** (assistant/junior) technical producer for events, festivals, theatre, or producing companies for festivals

## 5.6 Level 6 (EQF6)

### 5.6.1 Bachelor program Design & Technology, specialisation Sound Design (BA), University of Arts Amsterdam (AHK)

Level: NKS ?? EQF 6

5 ECTS credits: 240 credits (... hours)

Classroom teaching sound: In general between 24 and 32 hours a week

Classroom teaching (other not sound related): varies between 6 and 10 hours a week Expected learning activities (self-study / exams / tests / ...)(Hours)

Practice in school: 50% in year 1 and 2, 70% practice in year 3 and 4

Practice in workplace: in the 3rd and 4th year 4 months each year

10 Total study effort in hours: 1600 Hours

Focus: live performance

15 **Description:** The bachelor specialisation in Sound Design is one of the three specialisations of the department Design & Technology at the University of Art Amsterdam. It is a level 6 education that specializes in sound design for theatre and events. After a first year in which students get to know the basics of the different disciplines as sound, lighting, technical production and AV, they choose either sound design, lighting design and/or video or Technical Production. Students are trained to work together with other artistic departments, they have a deep knowledge of the technical aspects of sound, as well as the artistic part.

**Target group:** 18+, all students from secondary schools.

**Link:** <https://www.atd.ahk.nl/en/theatre-programmes/design-technology-technical-production-ad/design-technology-bachelor/study-programme/sound-design/>

20 **Recognising body:** ministry of education

**Entrance requirements:** an entry test will be done

**Relation theory/practical work/work in the sector:**

**Relation technical/artistic skills:** focus on an artistic approach and creativity next to specialistic technical knowledge according to their preferences.

**Normal duration of the program:** 4

25 **Qualification/certification:** Bachelor of Art

**Permeability:** any master in this field

**Job opportunities:** sound engineer or sound designer for theatre companies, events, festivals or specialised sound companies

### 5.6.2 Bachelor Art of Sound (BA), conservatory The Hague

Level: EQF 6

30 ECTS credits: 240 credits (... hours)

Classroom teaching sound: 20 hours a week

Classroom teaching (other not sound related): - (musical skills is appr 30%)

Expected learning activities (self-study/exams/tests/...): 20 hours/week

Practice in school:

35 **Practice in workplace:):** 280 hours

**Focus:** 3 specialities: recording (from jazz and classical music), producing (multitrack editing), sound reinforcement (live performance)

**Description:** The education Bachelor of Art and Sound at the conservatory in The Hague educates sound technicians with a focus on understanding music. The study program combines a comprehensive musical course (both theoretical and practical) with an extensive technical course (both theoretical and practical). The state-of-the-art facilities offer plenty of opportunity for both instruction and practicing.

40 **Target group:** 18+, all students from secondary schools.

**Link:** <https://www.koncon.nl/en/programmes/bachelor/art-of-sound/bachelor-art-of-sound>

**Recognising body:** ministry of education

**Entrance requirements:** you have to be able to play an instrument; you must have basic knowledge of mathematics; you must have basic understanding of music theory.

**Relation theory/practical work/work in the sector:**

**Relation technical/artistic skills:** focus on an artistic approach and creativity next to specialistic technical knowledge according to their preferences.

**Normal duration of the program:** 4

**Qualification/certification:** Bachelor of Music

**Permeability:** any master in this field

**Job opportunities:** 'sound director' for musical recordings and performances

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### 5.6.3 Bachelor Sound Design(BA), University of Art Utrecht (HKU)

**Level:** NKS ?? EQF 6

**ECTS credits:** 240 credits (... hours)

**Classroom teaching sound:** 28 hours a week

**Classroom teaching (other not sound related):** - (musical skills is appr 30%)

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** all

**Practice in workplace:** in the 4rth year 3 months internship

**Focus:** In the 2nd year you choose a speciality: sound design, studio and live audio technology, creative system design, sound design of sonic interaction design

**Description:** Sound Design is one of the pathways of the HKU Music and Technology's Creative Media and Game Technologies Bachelor degree course. In Sound Design you learn to design sound in a way that gives it meaning.

**Target group:** 18+, all students from secondary schools.

**Link :** <https://www.hku.nl/en/study-at-hku/music-and-technology/sound-design>

**Recognising body:** ministry of education

**Entrance requirements:** ?

**Relation theory/practical work/work in the sector:**

**Relation technical/artistic skills:** A combination of creativity and technology

**Normal duration of the program:** 4

**Qualification/certification:** Bachelor of Art

**Permeability:** any master in this field

**Job opportunities:** 'sound director' for musical recordings and performances

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## 5.7 Other training programs

### 5.7.1 IAB Education Sound technician

**Level:** N/A

**ECTS credits:** N/A

**Ecvet credits:** N/A

**Classroom teaching sound:** 22 evenings

**Classroom teaching (other not sound related):** none

**Expected learning activities (self-study/exams/tests/...):**

**Practice in school:** 22 evenings

**Practice in workplace:**

**Focus:** Live audio, this private education aims at people interested in sound who want to start in the industry.

**Description:** At this education you can specialize yourself in: system engineer, Front of house technician, Monitor technician or System Designer. This education is an education in the evenings.

**Target group:** 18+, interested people starting in the industry

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Link : <https://iabopleidingen.nl/geluidstechniek/opleiding-geluidstechnicus/>

Recognising body: none

Entrance requirements:

Relation theory/practical work/work in the sector: practical based

5 Relation technical/artistic skills: Mostly technical

Normal duration of the program: 22 evenings

Qualification/certification: none

Permeability: -

Job opportunities: sound technician

## 10 5.7.2 IAB Playing with sound

Level: N/A

ECTS credits: N/A

Ecvet credits: N/A

Classroom teaching sound: 3 days

15 Classroom teaching (other not sound related): none

Expected learning activities (self-study/exams/tests/...):

Practice in school: 3 days

Practice in workplace:

Focus: Live audio, this private education aims at people interested in sound who want to start in the industry.

20 Description: At this education you can learn the basics of sound in three days in a group of maximum 6. It is about the basics of sound at a professional level.

Target group: 18+, amateur theatre makers and teachers in secondary education

Link : <https://iabopleidingen.nl/geluidstechniek/spelen-met-geluid/>

Recognising body: none

25 Entrance requirements:

Relation theory/practical work/work in the sector: practical based

Relation technical/artistic skills: only technical

Normal duration of the program: 3 days

Qualification/certification: none

30 Permeability: N/A

Job opportunities: none

## 6 Germany

### 6.1 General information

### 6.2 Level EQF4

#### 6.2.1 “Fachkraft für Veranstaltungstechnik”

Level: EQF4

Focus: Live Performance / Stage / Theater

Description: The “classic” german learning program for live sound, but a general education also including light, staging and more.

Target group: students after secondary school I

Link: <https://www.ausbildung.de/berufe/fachkraft-veranstaltungstechnik/>

Recognising body: Federal Government / Ministry of Education

Entrance requirements: students can start when they are 14 but 17 is recommended due to work at night, after secondary school I, Hauptschulabschluß, Realschulabschluss or Abitur

Relation theory/practical work/work in the sector: Mixture between practical work and school learning (dual learning)

Relation technical/artistic skills: focus on all basic technical skills in the live business, including Sound, Light, Staging, Pyro etc.

Normal duration of the program: 3 Years / 840 Hours School

Classroom teaching sound: approx. 100

Classroom teaching (other not sound related): 740

Expected learning activities (self-study/exams/tests/...): approx 60

Practice in school: approx. 200

Practice in workplace: approx. 600

Qualification/certification: Fachkraft für Veranstaltungstechnik

Job opportunities: Sound/Light/Video Operator, Planning/Setting Up/Managing Shows

### 6.3 Level EQF5

#### 6.3.1 SQQ7 Berufsspezialistin für Tontechnik / Berufsspezialist für Tontechnik

Level: EQF5

Focus: Live Performance / Stage / Theater

Description: Program to specialize in Sound, higher Level education building on the “Fachkraft” but also for career changer for People working in the business

Target group: “Fachkraft für Veranstaltungstechnik” and Career Changer

Link: <https://www.igvw.org/fachgruppen/fg-sqq7/>

Recognising body: Interessengemeinschaft Veranstaltungswirtschaft (IGVW) e. V.

Entrance requirements: Fachkraft für Veranstaltungstechnik or Qualification Entrance Test / Proof of working in the business

Relation theory/practical work/work in the sector: Theory blocks in school with periods of self learning and practical work

Relation technical/artistic skills: technical skills, but also artistic and social skills

Normal duration of the program: 400 Hours

Classroom teaching sound: 250

Classroom teaching (other not sound related): 0

Expected learning activities (self-study/exams/tests/...): 150

Practice in school: 50

Practice in workplace: Not really integrated, but the participants will work as technicians between Theorie blocks

Qualification/certification: Berufsspezialist:in für Tontechnik

Job opportunities: Sound Planner & Operator, System Engineer

## 5 6.4 Level EQF6

### 6.4.1 “Geprüfte Meisterin/geprüfter Meister für Veranstaltungstechnik”

Official Name: Geprüfter Meister für Veranstaltungstechnik /Geprüfte Meisterin für Veranstaltungstechnik - Bachelor Professional für Veranstaltungstechnik

Level: EQF6

10 Focus: Theater Work / Live Venues

Description: Master/Foreman, with technical Duties but also a lot of Organising/Social Tasks,

Target group: Fachkraft für Veranstaltungstechnik/Tonspezialist:in, and Career Changer

Link: <https://www.ihk.de/koeln/hauptnavigation/weiterbildung/fortbildungspruefungen/veranstaltungsmeister-5243132>

VTMBAProVTFPrV - nichtamtliches Inhaltsverzeichnis (gesetze-im-internet.de)

15 Recognising body: Federal Government / Ministry of Justice

Entrance requirements: Fachkraft für Veranstaltungstechnik, Tonspezialist:in, Career Changer, with a Minimum of 4 Years of working in the business

Relation theory/practical work/work in the sector: Mostly theoretical learning but normally blocks of learning between normal work.

Normal duration of the program: 1 1/2 Years / 840 hours

Classroom teaching sound 30

20 Classroom teaching (other not sound related): 670

Expected learning activities (self-study/exams/tests/...): 140

Practice in school: 50

Practice in workplace: Not really integrated, but the participants will work as technicians between Theorie blocks

Qualification/certification: Bachelor Professional für Veranstaltungstechnik

25 Job opportunities: Working/Planning for Live Events / Theater, Education

### 6.4.2 Bachelor „Ton und Bild“

Level: EQF6

Focus: Studio Sound, Cinema Sound, Livesound

Description: former “Sound Engineer” Education more focused an Film & Classical Music, but also for Live Performances.

30 Target group: Music Students,

Link: <https://medien.hs-duesseldorf.de/studium/studiengaenge/btub/Seiten/uebersicht.aspx>

Recognising body: Federal Government / Ministry of Education

Entrance requirements: Bühnenmeister, Students after Secondary Grade II, with a additional entrance exam

Relation theory/practical work/work in the sector: Mixture between practical work and studies

35 Relation technical/artistic skills: 50:50

Normal duration of the program: 4 Years approx. 5000 hours

Classroom teaching sound: approx. 2000

Classroom teaching (other not sound related): approx. 2000

Expected learning activities (self-study/exams/tests/...): approx. 500

40 Practice in school: approx. 500

Practice in workplace: -

Qualification/certification: Bachelor of Music and Engineering or Bachelor of Engineering

**Job opportunities:** Recording / Live Sound / Cinema Sound / Acoustic Planning

## 6.5 Level EQF7

### 6.5.1 Dipl.-Tonmeister:in

**Level:** EQF7 (Master)

**Focus:** (Mostly) Classical Music Recording & Live

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**Description:** Technical and Music Skills combined, must be good Musician, really experienced in Note Reading, Link between Musicians and technical Staff.

**Target group:** students with General University Entrance Qualification (Abitur)

**Link:** <https://www.udk-berlin.de/studium/tonmeisterin/>

**Recognising body:** Federal Government / Ministry of Education

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**Entrance requirements:** General University Entrance Qualification (Abitur) and (pretty hard) Entrance Test

**Relation theory/practical work/work in the sector:** University Studies and Practica

**Relation technical/artistic skills:** Technical and Music Studies combined

**Normal duration of the program:** 4-6 Years / 7200 hours

**Classroom teaching sound:** approx. 3000

15

**Classroom teaching (other not sound related):** approx. 800

**Expected learning activities (self-study/exams/tests/...):** approx. 1000

**Practice in school:** approx. 1500

**Practice in workplace:** approx. 500

**Qualification/certification:** Tonmeister

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**Job opportunities:** Recording Labels, Live Classical Concerts

## 6.6 Other training programs

- Event Akademie Baden-Baden (<https://www.eventakademie.de>)
- DEAPlus (<https://deaplus.org>)
- Wave Academy Audio Engineer (<https://wave-akademie.de/ausbildung/audio-engineer>)
- HOFA College (<https://hofa-college.de/bachelor-studium/bachelor/>)

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## 7 Switzerland

### 7.1 EQF6 (assumed)

#### 7.1.1 “Tontechniker/in mit eidgenössischem Fachausweis”

**Official English title:** sound technician, federal diploma of higher education

5 **Level:** assumed EQF6

**Focus:** all aspects of sound engineering, including recording and broadcast

**Description:** “Sound engineers are audio specialists who work in radio, music, motion picture, cinema, theatre and tv productions as well as in web streaming and live event productions. They operate as professional liaison between performers (artists, hosts, sports athletes) and the public. [...] They act competently in their role between service provider and artist.”

10 **Target group:** people with previous vocational or academic training

**Link:** <https://tbz.ch/weiterbildung-tbz/tontechnikerin-mit-eidg-fa/>

**Recognising body:** Federal government.

**Entrance requirements:** vocational qualifications in related fields (electronics, media design, event technicians, acousticians, ..., and related university and applied sciences university degrees, or six years of professional experience in an audio-related occupation

15 **Relation theory/practical work/work in the sector:** part-time education (one day a week) while people supposedly accrue additional audio work experience

**Relation technical/artistic skills:** estimated 80:20 (does include music notation, musicology, and related topics)

**Normal duration of the program:** 4 semesters, one day per week

**Classroom teaching sound:** 750 units of 45 minutes

20 **Expected learning activities (self-study/exams/tests/...):** excursions, self-study, written assignments

**Practice in school:** 5 practice units

**Practice in workplace:** continuing professional activity is assumed

**Qualification/certification:** Tontechnikerin/Tontechniker mit eidgenössischem Fachausweis

**Job opportunities:** Recording / Live Sound / Cinema Sound / Broadcast / Fixed installation / Theatre

25 **Note:** The exam and certification process has been delegated to the Swiss chapter of the Audio Engineering Society, who was also responsible for the development of the assessment procedure. Course implementers offer entrance competence checks in the fields of music, electrical engineering and mathematics, and informatics.



## 8 International commercial education providers

A few commercial education providers offer audio courses that are usually identical across countries. A few relevant ones are listed here.

### 8.1 School of Audio Engineering (SAE)

Available in: DE, AT, NL, BE, worldwide

<https://www.sae.edu>

5

#### 8.1.1 Course BA/BSc (Hons) Audio Production – SAE Institute

Level: n/A

ECTS credits: n/A

Description:

The curriculum provides for two parts of the course, the renowned and industry-recognized Diploma, and a Bachelor's part, in which additional skills are learned and areas such as processes in the creative industries, project management.. The course is completed with an internationally recognized BA/BSc (Hons), confirmed by the University of Hertfordshire in London. The standard period of study for the BA/BSc (Hons) including Diploma is 36 months.

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- Ear training, acoustics and practical technical principles
- Studio signal flow and audio signal processing
- Information, Communication and Professional Media Practice
- recording, mixing and production techniques
- Sound for video games, film sound and advertising/multimedia production
- Marketing, Business Planning & Law
- Electronic music production
- Basics of live technology
- Advanced audio production
- Research Practice and Society

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Target Group:

Link: <https://www.sae.edu/aut/audio-engineering-ausbildung-studium>

**Recognising Body:** The courses and academic degrees offered by the SAE Institute Vienna at Middlesex University London are subject to British higher education law. These were included in the Austrian directory following Section 27 (6) HS-QSG. Inclusion in this directory does not justify the determination of equivalence with Austrian studies and corresponding Austrian academic degrees.

25

**Entrance Requirements:** Successful completion of the SAE Diploma

**Relation theory/practical work:**

**Relation technical/artistic skills:**

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**Normal duration of the program:** 12 - 24 months diploma course + 18 months bachelor program.

**Qualification/certification:** BA/BSc (Hons)

**Permeability:**

**Job opportunities:** Recording manager, sound editor, sound and recording engineer

### 8.2 Deutsche Pop

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Available in: DE, AT, NL, BE, worldwide partner network

<https://deutsche-pop.com>

#### 8.2.1 Diploma Tonmeister /Diploma Audio Engineer

Level: n/a

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**ECTS credits:** n/a

**Description:** Akademie DEUTSCHE POP located in Vienna, offers a variety of sound engineering related courses. Some of these courses consist of three to six individual courses.

Training content Diploma Tonmeister:

- 5
- Miking, recording and mixing in the studio
  - Live sound and post production
  - Sound and music direction in stereo and surround
  - composition and arrangement
  - Acoustics and analogue recording technology

10 Training content Diploma Audio Engineer:

Digital and analogue recording studio technology

- 15
- Recording and mix with EQ, dynamics and effects
  - pre-production and documentation
  - Acoustic and audio engineering knowledge
  - Confident use of studio software Target Group:

Other Programs at the DEUTSCHE POP are for example: Mastering Engineer Diploma, BA (Hons) Music Technology Specialist, Diploma Audio Producer, Diploma Music Producer, Diploma Audio Designer

Link: <https://deutsche-pop.com>

**Recognising Body:** n/A

20 **Entrance Requirements:** No specific school qualification needed. A minimum age of 18 is recommended; with parental consent also from 16 years.

**Relation theory/practical work:**

**Relation technical/artistic skills:**

**Normal duration of the program:** 3 to 6 semesters (1,5 – 3 years) - Full-time course enrolment: 3 semesters

**Qualification/certification:** Deutsche Pop Diploma

25 **Permeability:** n/A

**Job opportunities:** Sound engineer, sound mixer, sound technician or sound editor

## 8.3 Abbey Road Institute

Available in: NL, FR, UK, AU, SA, USA

<https://abbeyroadinstitute.de/kurse/advanced-diploma-music-production-sound-engineering/>

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