

Information technologies and sound engineering in the education of students of the musical school at the Széchenyi István University

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Introduction

● Where we are, who we are?

● Széchenyi István University

- Established 2002



Széchenyi István Egyetem



The University

- Basically technical and engineering oriented: Faculty of Engineering Sciences
 - Informatics and electrical engineering (BSc, later MSc)
 - Transportation and Mechanical Engineering (Bsc, MSc)
 - Built Environment (Civil engineering and architects, MSc)
 - Doctoral School (PhD)
- There are multidisciplinary faculties:
 - Law and political sciences
 - Economics and social sciences
 - Institute of Musical Arts

About musical education

- The Institute trains highly qualified teachers and chamber artists.
- Our graduates are able to join either small chamber choirs or big choirs and orchestras.
- They are familiar with instrumental-vocal literature, instrumental and solo methodology.
- Owing to their knowledge of languages they are able to take part in international music life.
- 4 departments: Wind Instruments, Piano, Stringed Instruments and Music Theory
- Number of students: 104
Number of lecturers: 40
- 4 academic years of study

About sound engineering education

- Széchenyi István University

- **Faculty of Engineering Sciences**

- Institute of Informatics and Electrical Engineering

- Department of Telecommunications

- Study:

- 3 years „electrical engineering” (BSc)

- Last year: specialization

- Radio communication

- Telecommunication informatics

Radio communication

● Studies of:

- Microwave and mobile technologies
- Radio systems and broadcast
- Television systems and broadcast
- Antenna and propagation
- CATV, digital broadcast systems, modulation and coding, digital signal processing
- Image coding, technical acoustics, (sound) recoding technologies, studiotecnologies

Main subjects

● Technical acoustics

- Engineering science
- With mathematics and engineering education needs
- Only for engineering students

● Studiotechnologies

- Less mathematics and engineering knowledge
- Also acceptable for musicians
- Laboratory & recording room background available

The laboratory



Equipment (for sound recording):

- up to 8 channel simultaneous recording
- up to 96 kHz/24 bit format, 24 channels
- Microphones, amplifiers, CD-R/W and DVD-R/W recorders
- Digital mixer
- Sound proofed and damped room
- It will be extended



Cooperation

- Students of the Musical Faculty can take this subject, participate at the lessons and practice joined or separated from students of electrical engineering.
- They can cooperate as musicians are playing their instruments until they are making recording sessions and then produce a demo CD/DVD.
- Musicians are becoming familiar with the engineering parts of a recording session and they can also manufacture their own recordings by themselves.

Future plans

- Our future plans include to re-new the room next door for a separated recording room with instruments. It could be hard sometimes for some musicians to bring their instrument with them (piano, drums) that could be included and installed in the room.



Digital drumset from Roland



Conclusion

- This unique cooperation between engineering sciences and humanity-artistic point of view is inspiring for both sides and we hope has a great future for both sides.
- And this leads to.....

◆ ...happy and satisfied students in the classrooms:



The background is a solid blue color with a subtle, repeating pattern of small, raised, square-like shapes that create a textured, three-dimensional effect. The shapes are arranged in a grid that slightly recedes into the distance, giving a sense of depth.

Thank you for your attention!