

IGNACY JAN PADEREWSKI ACADEMY OF MUSIC IN POZNAŃ

Course name	Electronic Sound Processing for Acoustic Instruments and Vocalists	ECTS CREDITS	2
Course coordinator	mgr Patryk Rynkiewicz	Credit hours total	60
Faculty of	Instrumental Studies, Historically Informed Performance, Jazz and Pop Music	Course type	applied course
Institute of	Jazz and Pop Music	Mode of Study	full-time programme
Major	all programmes	Profile of Study	general academic
Specialisation	Instrumental Studies, Vocal Studies	Language of Instruction	Polish/English
Cycle	First- and Second-Cycle Studies	Course group	Elective

Course placement in the study plan			
Semester 1	30 hours, pass/fail, 1 ECTS	Semester 2	30 hours, pass/fail, 1 ECTS
Semester 3		Semester 4	
Semester 5		Semester 6	
Semester 7		Semester 8	

Teacher	mgr Patryk Rynkiewicz
Learning aims and objectives	<p>The course aims to:</p> <ul style="list-style-type: none"> Introduce students to the fundamental techniques of live sound processing in the context of acoustic instruments and the human voice Develop practical skills in the creative use of digital effects and tools for shaping sound Cultivate artistic awareness regarding the integration of electronic technologies into musical performance Prepare students for independent work with sound modifiers in both concert and studio settings
Prerequisites	<ul style="list-style-type: none"> No health-related contraindications that would prevent continued instrumental or vocal study General knowledge of music Successful result in the entrance audition exam, Basic performance skills on an instrument or in voice

COURSE CONTENT
Semester 1

The course covers:

- Introduction to the fundamentals of sound processing, beginning with an overview of essential tools and key concepts
- Structure of the audio signal chain, including signal flow, impedance, interfaces, and routing
- Use of basic audio effects such as reverb, delay, chorus, and flanger, as well as more creative and experimental effects including pitch shifting, granular synthesis, and looping
- Creative and experimental effects including pitch shifting, granular synthesis, and looping
- Integrating electronic processing with acoustic instruments and the human voice

Semester 2

- Practical skills in working with microphones and audio interfaces
- Software tools designed for real-time audio processing
- Process of designing and configuring custom effects setups
- Showcasing student project presentations

	Learning outcome reference code	LEARNING OUTCOMES	Descriptor	
			PQF STAGE 2	PQF STAGE 1
		The Student:		
Knowledge	JiME1_W05	Is familiar with and understands fundamental performance traditions, styles and idioms in jazz music and related genres.	P6S_WG	P6S_WK
	JiME1_W07	Demonstrates knowledge of contemporary techniques of musical creation and the basic technological tools used in artistic practice.		
Skills	JiME1_U08	Is able to apply music technology in the execution of simple artistic tasks.	P6S_UW	P6S_UK
	JiME1_U09	Interprets and performs musical material using basic expressive means and technological tools.		
	JiME1_U13	Is capable of collaborating effectively within performance and improvisation ensembles.		
Competence	JiME1_K01	Is prepared to work collaboratively and take responsibility for shared artistic outcomes.	P6S_KK	P6S_KO
	JiME1_K02	Is able to refine their artistic craft and develop individual means of artistic expression.		
	JiME1_K03	Demonstrates awareness of the artist's role in culture and the responsibility for the artistic value of their work.		P6S_KR

TEACHING METHODS

lectures, case study analysis, addressing artistic challenges, individual work, group work and collaborative exercises, presentation and analysis of audio and video recordings (CD/DVD), active learning techniques (e.g. brainstorming, snowball method, mind mapping), problem-based learning (PBL), problem-solving sessions, project presentations in the form of live performance or concert, remote and online learning format

LEARNING OUTCOME VERIFICATION METHODS

Final Requirements – Successfully Completed Year, Grading Criteria	Learning Outcome Reference Code
Practical exam (an observed performance)	JiME1_U08, JiME1_U09, JiME1_U13
Oral test	
Written test	
Knowledge evaluation test	
Performance audition	
Project work, presentation	JiME1_U08, JiME1_U09, JiME1_W07
Project progress checks	JiME1_U08, JiME1_U09
Completion of assigned tasks	JiME1_U08, JiME1_U09, JiME1_K01
Portfolio submission	JiME1_U08, JiME1_K02, JiME1_K03
Essays, written reports	
Open-book examinations	
Short structured questions (SSQ)	
Test questions, including: Multiple Choice Questions (MCQ), Multiple Response Questions (MRQ), True/False questions	
Any other assessment methods applied by the course instructor	
Student engagement and collaboration during classes	JiME1_K01, JiME1_K02, JiME1_K03

ASSESSMENT METHODS AND CRITERIA

Course Completion Requirements	<ul style="list-style-type: none"> • Attend and actively participate in at least 80% of scheduled classes • Prepare and present a short musical project that incorporates electronic sound processing, either individually or in collaboration • Demonstrate the ability to configure an audio signal chain and apply digital effects and tools in a practical context • Submit documentation of individual project, which may include audio recordings, configuration files, and a written description of the artistic concept
Exam Requirements	Not applicable: the course credit is awarded based on pass/fail basis, with no final examination.

STUDENT WORKLOAD	Credit hours total	ECTS CREDITS
Contact hours with the instructor <i>(in-class contact, consultation hours)</i>	30	2
Hours of independent student work <i>(preparing for classes, tests, exams, presentations or project concerts)</i>	30	

Recommended Reading

- Kotoński W., *Muzyka elektroniczna*, PWM S.A., Kraków 2002.
- Francis R., Tim McCormick, *Sound and Recording: An Introduction*. Oxford: Focal Press, 2014.
- Fortuna M., *Kreacja dzieła inspirowana współczesnymi możliwościami elektronicznego przetwarzania dźwięku w muzyce jazzowej*.
- Pruchnicki T., *Elektroniczne przetwarzanie dźwięku narzędziem poszerzającym środki wyrazu saksofonisty i kompozytora realizującego samodzielnie lub z zespołem utwory muzyczne w stylistyce jazzowej*, Akademia Muzyczna im. K. Lipińskiego we Wrocławiu, Wrocław 2009.

Supplementary Reading

- Thom Holmes, *Electronic and Experimental Music: Technology, Music, and Culture*. New York: Routledge, 2020.
- Simon Emmerson (red.), *The Language of Electroacoustic Music*. London: Palgrave Macmillan, 1986.

On-Line Resources (Optional)

- <https://soundonsound.com> – a journal and database on sound technology
- youtube.com – channels: All Things Brass And Technology, Horn FX