Warsaw University of Technology

COURSE OFFERED IN THE DOCTORAL SCHOOL

Code of the course	4606-EW-0000000-0084	Name of the course	Polish	Metodologia prowadzenia zajęć dydaktycznych
			English	Methodology of teaching
Type of the course	Researcher's Workshop			
Course coordinator	Dr. Mariusz Kostrzewski, Assoc. Prof.			
Implementing unit	CZIiTT	Scientific discipline / disciplines*		

Level of education	Doctoral Program	Semester	Winter and summer semesters		
Language of the course	english				
Type of assessment:		Number of hours in a semester	45	ECTS credits	3
Minimum number of participants	?	Maximum number of participants	?	Available for students (BSc, MSc)	No

Type of classes		Lecture	Auditory classes	Project classes	Laboratory	Seminar
Number of hours	in a week	5		6		
	in a semester	10		35		

* does not apply to the Researcher's Workshop

1. Prerequisites

No requirements.

As part of the course, the PhD student is obliged to:

- pass a lecture on the subject „ Basics of university didactics"
- co-teach classes – 15 hours
- pass 2 out of 3 proposed modules**:
  - Modern forms of education
  - Voice Emission
  - Modern tools used in didactics

** Each PhD student has to choose only 2 modules

2. Course objectives

The aim of the course is to acquire knowledge in the field of university didactics in a degree enabling the understanding of the complexity of didactic processes and teaching.

3. Course content (separate for each type of classes)

Basics of university didactics

1. Basic concepts in didactics.
2. Methods and techniques of teaching adults.
3. Learning goals. David Kolb's cycle.
4. Learning in the digital age – contemporary dilemmas.
5. Methods – specificity of adult learning (knowledge structure, dominant mental functions, motivation to learn, attitude towards education, susceptibility to change, the role of control the assessment).
6. Exercise – behavioral self-portrait.

PART I

- Understanding student learning. The challenges of education in rapidly changing world. "What does it mean to be a member of university today?" Challenges-Limitations-Opportunities-Dilemmas of contemporary culture and university education. Concepts and Actual everyday life of the university.
- Introduction to the conceptual structure of didactics as a theoretical and practical science. Hierarchy of main concepts and their mutual relations. Functions and specificity of academic education. Contemporary models of

higher education, including the interactive model of education in college. Relationship between the teacher's activities and the student's activities.

PART II

- Planning teaching and learning: curriculum design and development. The specificity of adult learning. Academic education tools vs the contemporary student (generational transformation)
- Designing educational activities in a university (stages, areas, instruments, decisions; methods and forms of academic work supporting thinking and reasoning).
- Teaching quality, standards and enhancement. Student and teacher interactions in the course of classes. Creating a climate conducive to stimulate education process. The dynamics of the student group: cooperation and collaboration of students.
- Stimulating students 'cognitive activity, creating teaching situations, managing students' work.

PART III

- Evaluation of the education process. Evaluation procedure and techniques. A critical review of the course and effect of activities in the teaching-learning process.

PART IV

- The specificity of didactic work of an academic teacher. Professional work ethic of a teacher. Assessment and self-assessment of the didactic work of an academic teacher.

Modern forms of education

Workshops related to the innovative forms of education (8 hours) – stimulation of creativity among students, motivating students (creativity workshops with use of prototyping materials, Lego bricks, etc.), elements of Design Thinking (methodology and phases, the role of empathy, prototyping and testing solutions) and their use in didactics.

Voice Emission

1. Basics of the anatomy and physiology of the phonation system.
   The breathing system. Types of breathing. Abdominal press – how it functions. Diaphragm – breathing support. Vocal tract. The larynx, its build and functions. Resonate; resonating space.
   Exercises.
2. Intensifying the sound. Dynamic changes during the acoustic breathing phase. The skull and its role in speech sound production. Tongue – rest position and functions during articulation.
   Vowels as the musical frame of a phrase. Exercises.
3. Utterance prosody (intonation, rhythm, word stress). Word stress and its realization.
4. The breath as the element of shaping the logical and emotional aspect of an utterance.
5. Relaxing and dynamic exercises.
6. Natural voice.
7. Individual assessment of phonation habits.
8. The voice as a nonverbal aspect of communication. Body language. Self-presentation.
9. Exercise for the protection and maintenance of voice, and developing vocal identity.

Modern tools used in didactics

Workshop icludes discussion, skills development, demonstration, exercises, instruction, staging.

During these workshops, doctoral students learn about the concepts of innovation and creativity and discuss innovative solutions in didactics. During the workshops, modern digital tools used in education are presented (including interactive internet boards, test tools, such as online quizzes with the use of smartphones, generating qr codes for educational purposes, modern tools for creating educational games and escape rooms, online databases of free materials. presentations, internet chats, for use in class to communicate with students and much more).

Classes are conducted in the form of workshops, activating students, encouraging them to overcome internalized thinking patterns and standard organizational techniques in education.

1. Creativity and innovation. Creativity training. Thinking outside the box.
2. Innovative creation of (auto) presentations.
3. Innovation and ways of shaping it
   - Need for innovation
   - Innovation and the European Union

- Conceptual barriers to European creativity
- Three dimensions of innovation
- Innovations in making training independent of space (place) - examples from Google, Multicom, Procter & Gamble.

4. An innovative way of using traditional forms of distance education. Innovative methods (immersive and zapping learning).
5. The phenomenon of hate on the Internet
6. Blog, vlog, webinar, fanpage - educational contexts of the informal Internet space
7. Edutainment - gamification, combining entertainment activities with educational activities (including geocaching, questing)
8. Virtual reality in education (augmented reality in the context of educational activities in selected areas).
9. Step-by-step planning of classes with the use of innovative digital tools. Adjusting tool to the method and type of classes.

4. Learning outcomes

	Learning outcomes description	Reference to the learning outcomes of the WUT DS	Learning outcomes verification methods*
	Knowledge		
K01	• Student understands the methods of conducting classes using modern digital technologies	SD_W3	presentation
K02	• Student knows a variety of modern tools used in education	SD_W5	presentation
	Skills		
S01	A student is able to plan – in a methodologically correct way – teaching activities or groups of activities and implement them using modern methods and tools.	SD_U9	active participation during classes /presentation
S02	• Student is able to plan classes or groups of classes and carry them out with the use of modern methods and tools	SD_U7	presentation
	Social competences		
SC01	• Student is able to communicate on specialist topics at a level enabling active participation in the international scientific environment.	SD_K2	Assessment of the student's work during the classes
SC02	A student is prepared to fulfill the social obligations of researchers and creators and initiate action for the public interest.	SD_K3	active participation during classes
SC03	• The student is prepared to think and act in a creative and entrepreneurial manner.	SD_K4	Assessment of the student's work during the classes

*Allowed learning outcomes verification methods: exam; oral exam; written test; oral test; project evaluation; report evaluation; presentation evaluation; active participation during classes; homework; tests

5. Assessment criteria

Basics of university didactics:

The lecture last 10 hours. Absence is possible for 1,5 hours of classes.

To pass:

- Writing test (minimum 55% correct answers).

Modern forms of education

Active participation during the course's meetings.

Voice Emission:

Passing the course is based on attendance, being active during class exercises and acquiring basic skills related to breathing and forming a natural voice. These acquired skills will be assessed based on student performance during classes and on 2 recorded tasks.

6. Literature

[1] Fry H., Ketteridge S., Marshall S. (2009) *A Handbook for Teaching and Learning in Higher Education*, Routledge.
[2] Arnold R. (2005) *Approaches to Adult Education*, International Labour Office, Cinterfor
[3[Bierema L., Merriam S. (2013) *Adult Learning: linking theory and practice*, Jossey-Bass.
[4] Brookfield S. (2013) *Understanding and Facilitating Adult Learning: A Comprehensive Analysis of Principles and Effective Practices*, Jossey-Bass.
[5] Smith P. (2018) *Free Range Learning in the Digital Age: The Emerging Revolution in College, Career, and Education*, SelectBooks
[6] Knowles, Holton, Swanson (2020) *The Adult Learner*, Taylor and Francis.
[7] Vianna M., Vianna Y., Adler I.K., Lucena B., Russo B., Design thinking: business innovation, 1st eletronic edition, MJV Tecnologia ltda, Rio de Janeiro 2012, accessed at:
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[8] Stickdorn M., Schneider J. (Eds.), This is service design thinking. Basics — Tools — Cases, BIS Publishers Amsterdam 2011, accessed at:
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[9] Kostrzewski M., 2018, One Design Issue – Many Solutions. Different Perspectives of Design Thinking – Case Study. In: Uden L., Hadzima B., Ting IH. (eds) Knowledge Management in Organizations. KMO 2018. Communications in Computer and Information Science, vol 877, pp. 179-190. Springer, Cham, https://doi.org/10.1007/978-3-319-95204-8_16

7. PhD student's workload necessary to achieve the learning outcomes**

No.	Description	Number of hours
1	Hours of scheduled instruction given by the academic teacher in the classroom	30
2	Hours of consultations with the academic teacher, exams, tests, etc.	10
3	Amount of time devoted to the preparation for classes, preparation of presentations, reports, projects, homework	25
4	Amount of time devoted to the preparation for exams, test, assessments	15
	Total number of hours	**80**
	ECTS credits	**3**

** 1 ECTS = 25-30 hours of the PhD students work (2 ECTS = 60 hours; 4 ECTS = 110 hours, etc.)