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.	Course teacher	dr hab. inż. Mariusz Kostrzewski, prof. Uczelni; mgr Hanna Meijer; mgr Anna Piskorek-Atys		
Implementing unit	Doctoral School	Scientific discipline / disciplines*			
Level of education	Doctoral Program	Semester	winter and summer semesters		
Language of the course	English				
Type of assessment	passed/not passed	Number of hours in a semester	45	ECTS credits	3
Minimum number of participants	10	Maximum number of participants	not limited	Available for students (BSc, MSc)	No

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

* does not apply to the Researcher's Workshop

1. Prerequisites

No pre-requisites for credit for other courses.

Pursuant to the Warsaw University of Technology Doctoral School programme, "Methodology of teaching" (in Polish or English version) is a compulsory course to be completed during the first year of PhD education.

As part of the course, the PhD student is obliged to (see also Fig. 1):

- pass a lecture entitled *Basics of university didactics*
- pass 2 of the following modules**:
  - *Modern forms of education*,
  - *Voice Emission,*
  - *Modern educational theories,*
  - *Learning styles and teaching methods.*
- co-teach classes of 15 hours (note: the internship related to co-teaching may be completed during full academic year in which the doctoral student undertook the course, so the internship may be carried out exactly in the first or second semester of the academic year).

No credit for a lecture, any of the 2 selected modules (workshops/projects) and/or failure to co-teaching a class (internship) will result in failing to receive credit for the whole course (marked as 'nzal' in the University's internal documentation and in USOS). If co-teaching a class is not completed in the semester in which this course is realized by a given PhD student, credit shall remain withheld until the end of the following semester.

In case of failure to pass the "Methodology of teaching", PhD student must sign up for the course in the following semester and then complete those parts of the course that were not passed in the previous edition.

Each of the PhD students, who signs up for the course accepts its regulations.

Dates for the delivery of each part in the course are given in USOS and/or on the WUT Doctoral School website and in

section 7 of this document (it is subjected to possible changes for reasons beyond the control of the course coordinator and those who teach parts of the course).

** Each PhD student must choose only 2 modules (each module is described further in the course card).

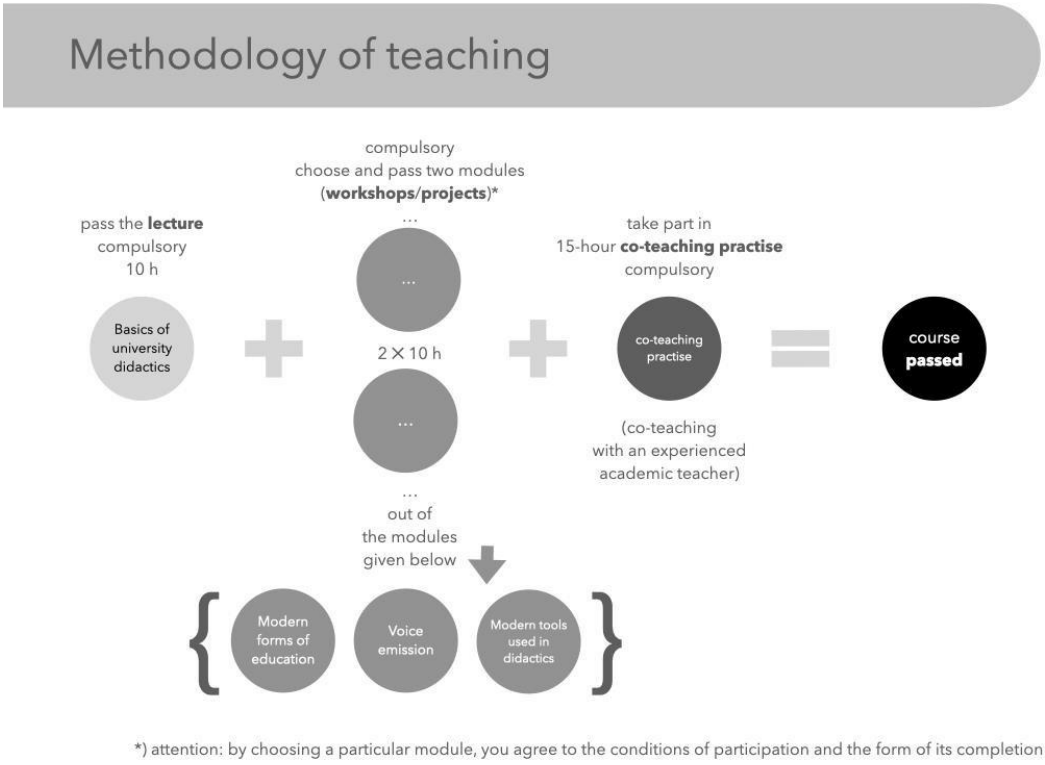

Fig. 1. The structure for the entire course entitled "*Methodology of teaching*"

2. Course objectives
The aim of the course is to prepare a PhD student to plan and implement the educational process that is an essential part of the professional competence of an academic teacher independently, consciously and effectively.

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

1. Terminology and definitions in didactics.
2. Educational methods and techniques in adult education.
3. Objectives of education and the concept of David Kolb's cycle.
4. Educational dilemmas in the digital era.
5. Specificity of adult learning.
6. Analysis of teaching abilities, preferences and ethics.

Ad 1.

Introduction to the scope of didactics, getting familiar with terminology and definitions. Considering theory and practice in didactics. Specifics of degree education, its contemporary models, including the interactive model of education. Mutual influence between teachers' and students' activities.

Ad 2.

Planning educational activities for students (stages, areas, instruments, decisions; stimulative methods and forms of teaching for thinking and reasoning at the degree level).

Evaluation of the teaching process, standards and improvement. Stimulating the educational process, dynamics

of the student group: cooperation and collaboration of students, student-teacher interactions during classes. Managing students' work, motivating students to cognitive activity, creating didactic situations.

Ad.3.

Planning teaching and learning: designing and developing curricula. Specifics of adult learning. Tools of university education in the context of the contemporary student (generational change). David Kolb's cycle concept in practice.

Ad.4.

Challenges of education in a rapidly changing world. "What does it mean to be a member of a university today?" Challenges-Constraints-Opportunities-Dilemmas of contemporary university culture and education. Concepts and real everyday life of the university.

Ad.5.

Structure of knowledge, dominant psychological functions, motivation to learn, attitudes to education, susceptibility to change, the role of self-control and self- assessment.

Ad.6.

Specific aspects of working at the university level. Assessment and self-assessment of own skills and preferences in the context of teaching at degree level. Teaching ethics.

Lecture duration per semester: 10 hours.

Modern forms of education

The workshop deals with modern forms of education. Stimulating creativity among PhD students and students, elements of *design thinking* or *double diamond* (methodology and phases, the role of empathy, prototyping and testing solutions), elements of *problem-based learning* and their use in didactics, motivating students (creativity workshops using prototyping materials, Lego blocks, etc.) will be considered and practiced.

Literature items: [7]-[9].

The module is delivered remotely via MS Teams (the instructor does not annotate the MS Teams calendar with the module's starting time).

Module duration per semester: 10 hours.

Voice emission

1. Basics of the anatomy and physiology of the phonation system.
2. 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.
3. Exercises.
4. 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.
5. Vowels as the musical frame of a phrase. Exercises.
6. Utterance prosody (intonation, rhythm, word stress). Word stress and its realization.
7. The breath as the element of shaping the logical and emotional aspect of an utterance.
8. Relaxing and dynamic exercises.
9. Natural voice.
10. Individual assessment of phonation habits.
11. The voice as a nonverbal aspect of communication. Body language. Self-presentation.
12. Exercise for the protection and maintenance of voice, and developing vocal identity.

Module duration per semester: 10 hours.

Modern educational theories

1. Guy Claxton's "Learning Power" concept.
2. Contemporary educational theories.
3. Modern teaching tools.
4. Teaching methods.
5. The academic learning community.

During workshops PhD students will analyse the concept of 'Learning Power' by Guy Claxton to apply it to academic education. They will be challenged to compare it to different educational theories presented during the classes to estimate its value. They will also be encouraged to discuss modern teaching tools and preferable teaching methods to consider how to create a learning community at the degree level and a field of learning for everyone involved. Workshops duration per semester: 10 hours.
Learning styles and teaching methods
1. Learning styles described in the literature on education and psychology. 2. David Kolb's cycle. 3. Different teaching methods in relation to a curriculum and the recipients age, personal preferences and skills. 4. The structure of teaching. 5. Planning the teaching and evaluating the effects. During workshops PhD students will analyse different concepts of learning styles described in literature on education and psychology. Particular attention will be given to David Kolb's cycle. Students will get familiar with different teaching methods to be able to choose suitable ones according to the contest of the curriculum, age and personal preferences and abilities of their students. The teaching structure will be discussed and practised to prepare PhD students to be able to plan teaching and assessment. Workshops duration per semester: 10 hours.

1. Learning outcomes			
Type of learning outcomes	Learning outcomes description	Reference to the learning outcomes of the WUT DS	Learning outcomes verification methods*
Knowledge			
K01	A PhD student understands the methods of conducting classes using modern digital technologies.	SD_W3	presentation evaluation
K02	A PhD student knows a variety of modern tools used in education.	SD_W5	presentation evaluation
Skills			
S01	A PhD 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 evaluation
S02	A PhD 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 evaluation
Social competences			
SC01	A PhD student is able to communicate on specialistic topics at a level enabling active participation in the international scientific environment.	SD_K2	active participation during classes / assessment of the student's work during the classes
SC02	A PhD student is prepared to fulfill the social obligations of researchers and creators and initiate	SD_K3	active participation during classes

	action for the public interest.		
SC03	A PhD student is prepared to think and act in a creative and entrepreneurial manner.	SD_K4	active participation during classes / assessment of the student's work during the classes

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

2. Assessment criteria

***Basics of university didactics*:**

- presence at minimum 8 of 10 classes and 55% correct answers in the written test

***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 based on 2 recorded tasks.

Modern educational theories:

- 90% attendance, active participation in classes

Learning styles and teaching methods:

- 90% attendance, active participation in classes

3. 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] Claxton Guy, (2021) The Future of Teaching and the Myths that Hold It Back, Routledge

[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:

http://cdn2.hubspot.net/hubfs/1701231/Documents/Design_Thinking_

_The_Book/Design_Thinking_The_Book.pdf (accessed on-line: September 24th, 2022) or:

http://na-magazynie.pl/wp-content/uploads/2015/03/Design-Thinking-The-Book.pdf (accessed on-line: September 24th, 2022)

[8] Stickdorn M., Schneider J. (Eds.), This is service design thinking. Basics — Tools — Cases, BIS Publishers Amsterdam 2011, accessed at:

https://ec-lcc-nnu.wikispaces.com/file/view/Service+Design+Thinking+Book.pdf (accessed on-line: March 7th, 2018)

or:

https://issuu.com/bis_publishers/docs/this_is_service_design (accessed on-line: September 24th, 2022)

[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

[10] Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. Psychological science in the public interest

[11] Kolb D. Experimental Learning, (2014) Experience as the Source of Learning and Development, Pearson FT Press

[12] Tomaszewski T., (1963) Wstęp do psychologii, Wydawnictwo Naukowe PWN

4. Schedule

5. 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	45
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	20
4	Amount of time devoted to the preparation for exams, test, assessments	15
	Total number of hours	**90**
	ECTS credits	**3**

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

6. Additional information

Number of ECTS credits for classes requiring direct participation of academic teachers	
Number of ECTS credits earned by a student in a practical course	