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Teacher Training (TT) Course Syllabus

Institution Name	Brest State Technical University (BrSTU)
TT Course Title	**"Active Learning in the Flipped Classroom"**
Instructor(s) Name(s) Faculty and Department Position Email address Phone number	**Alena Charnavokaya** Economic faculty, Department of Accounting, Analyses and Audit Head of Department evchernookaya@tut.by (+375 33) 609 23 37
Meeting Dates & Times Place/Room(s)	28February – 19 March, 2019 / 13:30-15:00 Building 5/Room 202
Workload	10 hours presented in 2 hours per day X 5 days of classroom work and 26 hours of individual work (1 ECTS Credit)
Course Purpose	The aim of this teacher training course (TT) is to prepare teachers in higher education for designing and developing courses that support active learning with the use of digital tools according to the flipped classroom design approach.
Learning Outcomes (LOs):	Upon successful completion of this course, the trainees will be able to: • Use digital tools to support active learning during a teaching and learning activity and to prepare course material • Design teaching and learning activities that takes advantage of digital tools • Design the outline of a course where digital course material and digital tools for interaction support active learning • improve the program of the course on the subject using the methods of "Flipped Classroom" and ABC Learning Design
Course methodology/Instructional Strategies	The training is based on the principle "From traditional education to digital education". In the process of learning, work in small groups, discussions organized online and in the classroom are used. Trainers will have to create a mini-project, including a fragment of a recorded video lecture, redesign the curriculum of their course for ABC learning.
Recommended Texts & Materials	Online resources 1. Flipping your class is a comprehensive introduction to flipped classroom created by the Center for Research on Learning and Teaching (CRLT) at University of Michigan // http://www.crlt.umich.edu/flipping-your-class 2. CRLT Introduction to active learning including examples from teachers at U-M // http://www.crlt.umich.edu/active_learning_introduction 3. How do I flip my class? is a quick-start guide for teachers, created by the Faculty Innovation Center at The University of Texas at Austin // https://facultyinnovate.utexas.edu/flipped-classroom 4. FLIP Learning is a community resource created by the Flipped Learning Network. // https://flippedlearning.org/

	Articles Bishop, J. L., & Verleger, M. A. (2013, June). The flipped classroom: A survey of the research. In *ASEE national conference proceedings, Atlanta, GA (Vol. 30, No. 9, pp. 1-18)*. http://www.asee.org/file_server/papers/attachment/file/0003/3259/6219.pdf *A review of current research on flipped classroom.* • Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences, 111(23), 8410-8415.* https://doi.org/10.1073/pnas.1319030111 *This is a large meta study suggesting that student performance on examination is increased by active learning, as opposed to traditional lecturing, in undergraduate science, technology, engineering, and mathematics (STEM) courses.* • Garrison, D. R., & Vaughan, N. D. (2013). Institutional change and leadership associated with blended learning innovation: Two case studies. *The internet and higher education, 18, 24-28*. https://doi.org/10.1016/j.iheduc.2012.09.001 *Using two case studies, the authors discuss the importance of institutional change and strong leadership in order to achieve sustainable transformation of pedagogical approach.* • Jensen, J. L., Kummer, T. A., & Godoy, P. D. D. M. (2015). Improvements from a flipped classroom may simply be the fruits of active learning. *CBE—Life Sciences Education, 14(1), ar5*. https://doi.org/10.1187/cbe.14-08-0129 *This study argues that flipped classroom might not be cost-effective, and that the success of a flipped classroom transformation can be attributed to the active learning aspects of the approach.* • King, A., Boysen-Osborn, M., Cooney, R., Mitzman, J., Misra, A., Williams, J., ... & Gottlieb, M. (2017). Curated collection for educators: five key papers about the flipped classroom methodology. *Cureus, 9(10)*. https://doi.org/10.7759/cureus.1801 *Summary of five important papers on flipped classroom.* • O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *The internet and higher education, 25, 85-95*. https://doi.org/10.1016/j.iheduc.2015.02.002 *The authors try to create a comprehensive overview of relevant research regarding flipped classroom.* • Prince, M. (2004). Does active learning work? A review of the research. *Journal of engineering education, 93(3), 223-231*. https://doi.org/10.1002/j.2168-9830.2004.tb00809.x *A review of research that concludes that there is broad but uneven support for the core elements of active learning.* • Prunuske, A. J., Batzli, J., Howell, E., & Miller, S. (2012). Using online lectures to make time for active learning. *Genetics, genetics-112*. https://doi.org/10.1534/genetics.112.141754 *Example of a partial flipped classroom transformation of an introductory biology course.* • Singh, A., & Min, A. K. K. (2017). Digital lectures for learning gross anatomy: a study of their efficacy. *Korean journal of medical education, 29(1), 27*. https://doi.org/10.3946/kjme.2017.50 *Example of a partial flipped classroom transformation of an anatomy course for medical students.*
Basic Technical/Media Requirements	Equipment Laptop Smartphone Multimedia projector Internet connection WIFI

	Special software required 1. MENTEP. SELF ASSESSMENT TOOL: TET-SAT 2. Mentimeter 3. PADLET
Quality Assurance (QA)	Online feedback survey of trainees and a brief QA report

Course Overview/Outline

Training Days	Key Topics	Learning Activities	Assignments
Day-1 28 Feb 2019 13:30-15:00 B 5 202	The pedagogical development in digital world - Setting goals of course - Features of development of pedagogical competences in the digital world - Balance of Conventional and Digital methods in learning	1. Lecture "Introduction to course" 2. Seminar "The pedagogical development in digital world" (Questions and answers with the Mentimeter)	Individual assignment #1: take the test using Technology-Enhanced Teaching Self-Assessment Tool (TET-SAT)
Day-2 05 March 2019 13:30-15:00 B 5 202	Active learning methods - Essence of active methods - Characteristics of Active Learning - Critique of Active Learning - Types of active methods - Examples of practical application	1. Lecture "Active learning methods" 2. Discussion groups (Questions and answers to using the PADLET system) 3. View video lectures with the use of active methods	Individual assignment #2: - reading online resources and articles on the topic "Active learning methods" - Analyzing the ideas and information in a range of digital resources - learn how to use the PADLET system to conduct classes for students
Day-3 12 March 2019 13:30-15:00 B 5 202	Technological support of active learning methods - Power Point features - Making educational videos with Lightboard - Active Learning Classroom - Open Networked Learning course	1. Lecture "Technological support of active learning methods" 2. View videos demonstrating the technical support of active learning methods	Individual assignment #3: -make a slide show with sound using Power Point to the material of the lecture (3-5 minutes)
Day-4 14 March 2019 13:30-15:00 B 5 202	Welcome to a Flipped Classroom - Introduction to flipped classroom - Pedagogical digital transformation - Short introduction to the final project	1. Lecture "Welcome to a Flipped Classroom" 2. Small group exercises (record videos). 3. Questions and answers 4. Online discussion	Individual assignment #4: make a 10-minute presentation with sound to one of the special subject topics. Recording in MPEG-4 (*.mp4)

Day-5 19 March 2019 13:30-15:00 B 5 202	**Creating an effective syllabus using the " Flipped Classroom"** - ABC Learning Design toolkit - Introduction to the DEF course development lab - Instructions for the DEF course development lab - Future work	1. Lecture "Creating an effective syllabus using the " Flipped Classroom" 2. The presentation of the assignment prepared during week, including reflections and comments. 3. Questions and answers	**Individual assignment #5:** improve the program of the course on the subject using the methods of "Flipped Classroom" and ABC Learning Design