

Study Course Title	Digital Transformation I - Applied Digital Skills and Technologies (UX/UI, AR, VR, Gamification)
Study Course Code	DatZB143
Branch of Science	Computer and information sciences
Sub-branch of Science	Computer and systems software
Credits(ECTS)	6
Total Number of Contact Hours	60
Number of Lecture Hours	12
Number of Seminar and Practical Assignment Hours	48
Number of Hours for Laboratory Assignments	0
Independent Study Hours	90
Language of Instruction	Latvian and English
Course Approval Date	21.01.2026
Responsible Unit	BA School of Business and Finance of the University of Latvia

Study form	Lectures	Seminars and Practical Assignments	Laboratory Assignments	Independent Studies
Full-time Regular Studies	12	48	0	90
Distance learning	4	8	0	138

Course Developer

Mg. sc. soc, Roberts Ceruss

Prerequisite Knowledge

Not required, but basic knowledge of information technology is preferred

Study Course Abstract

The course covers modern technological solutions and platforms that facilitate the implementation of digital change: office applications (MS Word, Excel), data visualization, UX/UI design basics, virtual and augmented reality (VR/AR) technologies, and Metaverse as the digital environment of the future. The course also integrates a gamification approach to motivate students, develop critical thinking, and improve learning outcomes using challenges, a point system, badges, leaderboards, and other interactive elements. Students will gain hands-on experience with tools and platforms that are used to improve user experience, collaborate in the digital environment, and develop innovative solutions. The course encourages critical thinking about the ethical, social, and economic aspects of technology use, as well as fosters digital literacy and adaptability.

The goal of the course is to introduce students to the basics of digital transformation, its impact on business, society, and the professional environment, as well as to develop practical skills in using digital tools.

Course Plan Full-time Regular Studies

- 1.Digital transformation: essence, drivers and trends 2L
 - 2.Digital literacy, security and ethical considerations 2L 3S
 - 3.Digital collaboration tools and cloud platforms 1L 3Pd
 - 4.Effective work with MS Word and Excel (automation, analysis, visualization) 2L 14Pd
 - 5.UX/UI design and user-centered thinking 2L 16Pd
 - 6.Use of VR and AR technologies and gamification in education, business and design 2L 8Pd
 - 7.Metaverse and its potential – from entertainment to professional collaboration 1L 4Pd
- Total 12L 3S 45Pd

Course Plan Distance learning

1. Digital transformation: essence, drivers and trends 1L
 2. Digital literacy, security and ethical considerations 1S
 3. Digital collaboration tools and cloud platforms 1Pd
 4. Effective work with MS Word and Excel (automation, analysis, visualization) 1L 2Pd
 5. UX/UI design and user-centered thinking 1L 3Pd
 6. Use of VR and AR technologies and gamification in education, business and design; Metaverse and its potential – from entertainment to professional collaboration 1L 1Pd
- Total 4L 1S 7Pd

Characterization of students' independent work organization and tasks

Full-time: Group work and presentations on results, case studies.

Distance: Independent study via Moodle (video lectures, study materials, self-assessment tests, etc.)

Learning Outcomes

Knowledge:

1. About the basic principles of digital transformation and its implementation
2. About the application and potential of UX/UI design, VR/AR and metaverse

Skills:

3. Analyze and apply digital solutions in various industries
4. Analyze and improve user experience, create interactive interfaces

Competence:

5. Ability to use digital tools for effective information management and communication
6. Critical understanding of the social and ethical consequences of digital transformation

Requirements for Awarding Credits

Full-time

Intermediate tests:

1. Group work and presentation - The test is graded on a 10-point scale. Weight in the total grade – 50%
2. Practical individual work and presentation - The test is graded on a 10-point scale. Weight in the total grade – 30%

Final test:

3. Exam - The test is graded on a 10-point scale. Weight in the total grade – 20%

Distance

Intermediate tests:

1. Group work and presentation - The exam is graded on a 10-point scale. Weight in the total grade – 50%
2. Practical individual work and presentation- The exam is graded on a 10-point scale. Weight in the total grade – 30%

Final exam:

3. Exam - The exam is graded on a 10-point scale. Weight in the total grade – 20%

Criteria for Evaluating Learning Outcomes

In accordance with Regulations of the Cabinet of Ministers of the Republic of Latvia, at the end of the course, students' knowledge is evaluated according to the following criteria: the amount and the quality of the obtained knowledge, acquired skills and competence in compliance with the planned learning outcomes.

Type of Assessment	Learning Outcomes					
	1	2	3	4	5	6
1. Group work and presentation	+	+	-	+	-	+
2. Practical individual work and presentation	+	+	+	+	-	+
3. Exam	+	+	+	+	+	+

Compulsory Reading List

1. Jelen B., Alexander M. "Microsoft Excel 2019, Pivot Table Data Crunching", Pearson Education, 2019.
2. Alexander M., Kusleika D., Walkenbach J., "Excel 2019 Bible", 2018.
3. Lambert J., "Microsoft Word 2019 Step by Step", Pearson Education, 2019.
4. Jesse James Garret. "The Elements of User Experience. User Centered Design for the Web and Beyond (2nd Edition)

Further Reading List

1. XR for business (podcast)
2. Extended Reality summary, report, Accenture
3. XR for EVERY budget, Alan Smithson (Medium.com)
4. "Seeing is believing. How VR and AR will transform business and the economy", PwC interactive XR industry tool (<https://www.pwc.com/seeingisbelieving>)
5. Gamification by Design, Gabe Zichermann

Periodicals and Other Sources

1. Gaming Can Make a Better World, Jane McGonigal, TED talk
2. The Octalysis Framework, Yu-kai Chou, (<https://yukaichou.com/gamification-examples/octalysis-complete-gamification-framework/>)
3. How games make kids smarter, Gabe Zichermann, TED talk
4. 6 Steps to Effective Gamification, Kevin Werbach, podcast (<https://engagingleader.com/6-steps-to-effective-gamification-transcript/>)
5. Materials prepared by lectors (Moodle)