1. Information about the study programme

1.1	Institution	Universitatea Tehnica din Cluj-Napoca
1.2	Faculty	Facultatea de Automatica si Calculatoare
1.3	Department	Automatica
1.4	Field of study	Ingineria Sistemelor
1.5	Cycle of study	licenta
1.6	Program of study/Specialization	Automatica si Informatica Aplicata
1.7	Form of education	IF - invatamant cu frecventa
1.8	Subject code	204

2. Information about the subject

2.1	Subject name		Computer Assisted Training			
2.2	Course responsible/lecturer		assoc. prof. Ionut-Dorin Stanciu ionut.stanciu@dppd.utcluj.ro			
2.3	Teachers in charge of seminars		conf. dr. psih. Ionut-Dorin Stanciu ionut.stanciu@dppd.utcluj.ro			
2.4 Year of study	3	2.5 Semester	1	2.6 Assessment		C
2.7 Subject category	Formative category					DC
	Optionality					DFac

3. Estimated total time

3.1 Number of hours per week	2	of which	3.2 Course	1	3.3 Seminar	1	3.3 Laboratory	-	3.3 Project	-
3.4 Total hours in the curriculum	28	of which	3.5 Course	-	3.6 Seminar	-	3.6 Laboratory	-	3.6 Project	-

3.7 Individual study:	
(a) Textbooks, lecture material and notes, bibliography	7
(b) Supplementary study in the library, online and in the field	7
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays	1
(d) Tutoring	5
(e) Exams and tests	2
(f) Other activities	-

3.8 Total hours of individual study (sum (3.7(a)…3.7(f)))	22
3.9 Total hours per semester (3.4+3.8)	50
3.10 Number of credit points	2

4. Pre-requisites (where appropriate)

4.1	Curriculum	-
4.2	Competence	Baccalaureate level of instruction and basic computer literacy. Specific teacher training program knowledge corresponding to previous instruction years.

5. Requirements (where appropriate)

5.1	For the course	Auditorium or large lecture room. Audio-video installation for on-screen presentations (with room speakers). WiFi or cable Internet connectivity.
5.2	For the applications Seminar /Laboratory/Project	Auditorium or large lecture room. Audio-video installation for on-screen presentations (with room speakers). WiFi or cable Internet connectivity.

6. Specific competences

Professional competences	Theoretical knowledge (declarative knowledge) about: -Digital literacy and digital skills for learning and instruction - Major paradigms, theories, and principles, of specific relevance to CSL - Technology acceptance and use of information processing technologies - Fundamentals of computational thinking and theoretical underpinnings of the technological design applied to technology-augmented instructional means Practical skills (procedural knowledge): - Ability to identify, select, and use software tools which are adequate for instructional settings - Ability to identify, select, and use psychological and pedagogical principles and strategies which are relevant for instructional design in CSL - Ability to identify, select, and use means and opportunities for online instruction and learning, applicable at individual- or group-level, and in domain-specific and domain-general learning communities - Ability to operate and use, or operate in, for instructional purposes: - Instructional/educational software - Learning management systems - Online specific and nonspecific learning communities
Cross competences	- Ability to operate in technology-enhanced or technology-mediated collaborative learning communities and groups - Ability to cooperate and collaborate with experts from other disciplines in designing instruction and optimizing instructional designs that require and/or make use of technology.

7. Discipline objectives (as results from the *key competences gained*)

7.1	General objective	To provide the course graduate with a set of competencies, skills and level of knowledge about him/herself which allows the formation of a competitive advantage and to provide to course graduate with a better understanding of his/her current academic status and curriculum.
7.2	Specific objectives	To facilitate domain-specific learning and knowledge acquisition by providing a larger perspective on CSL. To be able to identify and use psychological insights and instructional strategies in the utilisation and instructional design of CSL

8. Contents

8.1. Lecture (syllabus)	Number of hours	Teaching methods	Notes
Frameworks and strategies: The European Framework for Digital Literacy; European Computer Driving License;	2	Interactive / participatory	-

European Framework for the Digital Competence of Educators.		lectures. Problem-solving; debating; case studies; role play Inquiry learning;
Pedagogical underpinnings and introduction to CSL: scaffolding, constructivism, connectivism	2	
Pedagogical underpinnings and introduction to CSL: digital competencies, the TPACK model	2	
Fundamentals of designing technology-augmented instructional technologies. - technology acceptance. Models of TA.: - The utilitarian approach; - The hedonic approach	2	
Fundamentals of designing technology-augmented instructional technologies. - UX and usability (learnability and ease of use)	2	
Opportunities, means, and methods of online learning: Learning Management Systems. Examples and descriptions. Characteristics and functionalities of LMSs. The MOOCs phenomenon.	2	
Overview and exam preparation.	-	
-	-	
-	-	
-	-	
-	-	
-	-	
-	-	
-	-	

Bibliography

-

Adesope, O. O., & Rud, A. G. (Eds.). (2019). *Contemporary Technologies in Education: Maximizing Student Engagement, Motivation, and Learning*. Springer International Publishing. https://doi.org/10.1007/978-3-319-89680-9

Ala-Mutka, K., Punie, Y., & Redecker, C. (2008). *Digital Competence for Lifelong Learning. Policy Brief*. https://doi.org/10.13140/RG.2.2.17285.78567

Anderson, J. R., & Lebiere, C. (1998). *The atomic components of thought*. Lawrence Erlbaum Associates.

Anderson, T. (Ed.). (2008). *The theory and practice of online learning* (2nd ed). AU Press.

Bruner-Timmons, J., Nistor, N., & Stanciu, I. D. (2018). Rethinking TPACK in the Digital Age: Non-Linear Relationships Between Learning by Design, Teachers' Technology-Related Knowledge and Technology Integration in the Classroom. *ICLS 2018, International Society of the Learning Sciences*, *3*, 1553–1554.

Canziba, E. (2018). *Hands-On UX Design for Developers: Design, prototype, and implement compelling user experiences from scratch.* Packt Publishing. https://books.google.ro/books?id=DAlnDwAAQBAJ

Cress, U., Rosé, C., Wise, A. F., & Oshima, J. (Eds.). (2021). *International Handbook of Computer-Supported Collaborative Learning*. Springer International Publishing. https://doi.org/10.1007/978-3-030-65291-3

Elkins, D., & Pinder, D. (2015). *E-learning fundamentals: A practical guide*. ATD Press.

European Commission. Joint Research Centre. Institute for Prospective Technological Studies. (2013). *DIGCOMP: A framework for developing and understanding digital competence in Europe.* Publications Office. https://data.europa.eu/doi/10.2788/52966

Fu, X., Jar-Der, L., & Boos, M. (2017). *Social Network Analysis: Interdisciplinary Approaches and Case Studies* (X. Fu, J.-D. Luo, & M. Boos, Eds.; 1st ed.). CRC Press. https://doi.org/10.1201/9781315369594

Gómez Galán, J., Martín Padilla, A. H., Bernal Bravo, C., & López Meneses, E. (2019). *MOOC courses and the future of higher education: A new pedagogical framework*. River Publishers.

Hassandoust, F., Techatassanasoontorn, A., & Tan, F. B. (2016). Factors Influencing the Infusion of Information Systems: A Literature Review. *Pacific Asia Journal of the Association for Information Systems*, *8*(1). https://doi.org/10.17705/1pais.08101

Kidd, T. T., & Keengwe, J. (Eds.). (2010). *Adult learning in the digital age: Perspectives on online technologies and outcomes*. Information Science Reference.

Klement, M., & Dostál, J. (2016). *THEORY OF LEARNING AND E-LEARNING*. https://doi.org/10.21125/inted.2016.0175

Koç, S. (Ed.). (2015). *Assessment in online and blended learning environments*. Information Age Publishing.

MacDonald, D. (2019). *Practical UI patterns for design systems: Fast-track interaction design for a seamless user experience*. Apress. https://books.google.ro/books?id=E0efDwAAQBAJ

McKay, E. N. (2013). *UI is communication: How to design intuitive, user centered interfaces by focusing on effective communication*. Elsevier Science. https://books.google.ro/books?id=9DyClwEACAAJ

Nistor, N., & Stanciu, I.-D. (2017). "Being sexy" and the labor market: Self-objectification in job search related social networks. *Computers in Human Behavior*, *69*, 43–53.

Nistor, N., Stanciu, D., Lerche, T., & Kiel, E. (2019). "I am fine with any technology, as long as it doesn't make trouble, so that I can concentrate on my study": A case study of university students' attitude strength related to educational technology acceptance. *British Journal of Educational Technology*, *50*(5), 2557–2571. https://doi.org/10/gghhq8

Pomerol, J.-C. (2015). *MOOCs: Design, use and business models*. ISTE.

Pritchard, A., & Woollard, J. (2010). *Psychology for the classroom: Constructivism and social learning*. Routledge.

Rhoads, R. A. (2015). *MOOCs, high technology, & higher learning*. Johns Hopkins University Press.

Spector, J. M., Ifenthaler, D., Sampson, D. G., & Isaias, P. (Eds.). (2016). *Competencies in Teaching, Learning and Educational Leadership in the Digital Age*. Springer International Publishing. https://doi.org/10.1007/978-3-319-30295-9

STANCIU, D. (2017). Age differences and preferences in online behavior. How ageing and digital connectedness are reflected in current research regarding the use of social media. *The 13th ELearning and Software for Education Conference - ELSE 2017*, *2*, p624-631.

Stanciu, D. (2017). *Applying technology acceptance modeling to social networking. A psychosocial extension and partial validation of existing theories* [PhD Thesis]. Babes-Bolyai University, Cluj Napoca.

Stanciu, D., & Calugar, A. (2022). What is irrational in fearing to miss out on being online. An application of the I-PACE model regarding the role of maladaptive cognitions in problematic internet use. *Computers in Human Behavior*, *135*, 107365. https://doi.org/10.1016/j.chb.2022.107365

Stanciu, D., & Chis, A. (2021). A study of cyberstander reactions under community-related influence: When gender complicates matters. *Computers in Human Behavior*, *115*, 106589. https://doi.org/10.1016/j.chb.2020.106589

Stanciu, I. D. (2014). *Trenduri moderne în educație. MOOCs și comunități virtuale de învățare*. Presa Universitara Clujeana.

Stanciu, I.-D. (2015). Enhancing information processing by user categorization. Tagging content in support of learning. *The International Scientific Conference ELearning and Software for Education*, *3*, 237.

STANCIU, I.-D., BOCOS, M., & ANDRONACHE, D. C. (2012). Computer-mediated self-regulation of learning. *The 8th International Scientific Conference ELearning and Software for Education Bucharest, April 26-27, 2012*, Article 01.

Stanciu, I.-D., Bocos, M., & Andronache, D. C. (2012). The role of educational software in secondary school students' academic performance. *The International Scientific Conference ELearning and Software for Education*, *1*, 330.

Teo, T. (2011). *Technology acceptance in education: Research and issues*. SensePublishers.

University of Arkansas, Venkatesh, V., Thong, J., Hong Kong University of Science and Technology, Xu, X., & The Hong Kong Polytechnic University. (2016). Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead. *Journal of the Association for Information Systems*, *17*(5), 328–376. https://doi.org/10.17705/1jais.00428

Yablonski, J. (2020). *Laws of UX: Using psychology to design better products & services*. O'Reilly Media. https://books.google.ro/books?id=BuneDwAAQBAJ

8.2. Seminar /Laboratory/Project	Number of hours	Teaching methods	Notes
Introduction to CSL and theoretical underpinnings - Digital competencies and digital literacy. - CSL-specific methods of instruction, learning, and assessment	2	Interactive / participatory lectures. Problem-solving; debating; case studies; role play Inquiry learning;	-
Frameworks and strategies. European Framework for Digital Literacy. - European Computer Driving License. Simulations - European Framework for the Digital Competence of Educators. Simulations	2		
Fundamentals of designing technology-augmented instructional technologies. - technology acceptance. Models of TA. - The utilitarian approach; - The hedonic approach - UX and usability (learnability and ease of use) - Presentation of eLearning tools (MS Teams, Moodle, KB, Zoom, Cisco Webex, Google Classroom, etc.)	2		
Fundamentals of e-Learning. - Definitions and approaches to eLearning. Types and characteristics (hybrid and blended; synchronous vs asynchronous) Major paradigms in educational technology - "Adaptive Control of Thought – Rational" (ACT-R) Architecture	1		
Means and opportunities for online instruction and learning - Learning management systems. Examples and description. - Characteristics and features/functionalities. MOOCs. Overview and analysis.	3		
Analysis approaches in eLearning. Introduction to Social Network Analysis:	2		

- SNA. Main components and parameters - SNA. Applications and examples					
Overview and assessment - Overview; Portfolio presentation and review	2				
-	-				
-	-				
-	-				
-	-				
-	-				
-	-				
-	-				

Bibliography
- Same as for the course

9. Bridging the course contents with the expectations of the community, professional associations, and potential employers

The skills sought to be acquired in this course pertain to: -   Being capable of understanding, designing and delivering evidence-based and scientifically sound technology-mediated and technology-enhanced instruction -   Being capable of collaborating with professionals, experts, and specialists from other disciplines in instructional tasks and activities that require or make use of various technologies The course was designed to meet the requirements and contents of similar courses delivered in European Union universities, and the European Framework for Digital Literacy and the European Framework for the Digital Competence of Educators.

10. Evaluation

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	Assessment criteria consider critical thinking, logic, soundness of reasoning and argumentation, problem-solving, accuracy/precision, completeness, fluency, and relevance.	Written tests (quizzes)	50%
10.5 Seminar/ Laboratory/Project	Collaborative and individual semester projects.	Individual portfolio consisting of structured and/or unstructured assignments	50%
10.6 Minimum standard of performance			

The total weighed score exceeds the equivalent of 5/10 of the final grade. Each assessment exceeds 50% of the allotted grading. Assessment criteria include accuracy/precision, completeness, fluency, and relevance.

Date of filling in:		Title First Name Last Name	Signature
05.09.2023	Lecturer	assoc. prof. Ionut-Dorin Stanciu	-
	Teachers in charge of application	assoc. prof. Ionut-Dorin Stanciu	-

Date of approval in the department

-
_____

Head of department

Prof. dr. ing. Honoriu Mugurel Valean

Date of approval in the faculty

-
_____

Dean

Prof. dr. ing. Liviu Cristian Miclea