COURSE INFORMATION SHEET

University: Catholic University in Ružomberok	
Faculty: Faculty of Education	
Course code: KIN/In-MD209A/22	**Course title:** Didactics of Informatics 2
Type and range of planned learning activities and teaching methods: **Form of instruction:** Lecture / Seminar **Recommended study range:** **hours weekly:** 2 / 2 **hours per semester:** 26 / 26 **Teaching method:** on-site	
Credits: 4	**Working load:** 100 hours
Recommended semester/trimester: 2.	
Level of study: II.	
Prerequisities:	
Requirements for passing the course: On-going assessment: partial subject activities according to the semester assignment, micro-presentation, report (50%), Final assessment: submission, presentation and defense of one's own portfolio for the subject (50%). Subject evaluation: A – 100%-93% B – 92%-85% C – 84%-77% D – 76%-69% E – 68%-60% Fx – 59%- 0%	
Learning outcomes of the course: Objective of the subject: To deepen the knowledge of the didactics of informatics, methods and procedures of teaching the thematic area Algorithmic problem solving according to the Innovative State Education Program (ISCED 2, ISCED 3). Present motivational tasks for teaching algorithmization and programming in the form of micro-outputs. Refer to current information on the selected subject topic. Learning outcomes: After completing the subject, the student will acquire the following knowledge, skills and competences: ~ is oriented in the educational standard to the thematic area Algorithmic problem solving according to the Innovative State Education Program (ISCED 2 and ISCED 3) and controls the basic conceptual apparatus, ~ is oriented in working with at least one children's programming language suitable for the 2nd grade of elementary school, ~ is oriented in working with at least one higher level programming language suitable for gymnasiums, ~ knows the textbooks for teaching algorithmization and programming for the 2nd grade of elementary school and gymnasium and can use them when preparing lessons, ~ can use various activating methods in teaching algorithmization and programming, ~ is able to prepare written lesson plans and teach them in exercises,	

˜ knows different programming paradigms and can assess the appropriateness of their use.

Course contents:

Algorithmization and programming. Programming paradigms. Programming languages in the teaching of computer science at primary and secondary schools (children's programming languages, advanced programming languages). Forms and methods of teaching programming. Methodology of the thematic areas of iŠVP for the 2nd grade of primary schools and for gymnasiums and preparation for the lesson: Algorithmic problem solving (problem analysis, language for writing the solution, using a sequence of commands, using cycles, using branching, using variables, using tools for interaction, interpretation of notation solutions, finding and fixing errors). Intersubject relations. Forms of interest and IT competitions, projects and conferences. Report. Didactic project / excursion.

Recommended or required literature:

Tomcsányiová, M. a kol.: Riešenie problémov a základy programovania 1. Bratislava, 2009. https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/riesenie_problemov_a_zaklady_programovania_1.pdf
Tomcsányiová, M. a kol.: Riešenie problémov a základy programovania 2. Bratislava, 2010. https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/riesenie_problemov_a_zaklady_programovania_2.pdf
Salanci, Ľ., Tomcsányiová, M., Blaho, A.: Didaktika programovania. Bratislava, 2010. https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/didaktika_programovania.pdf
Lovászová, G., Galbavá, Ľ., Palmárová, V., Tomcsányiová, M., 2010. Malé programovacie jazyky. Bratislava, 2010. https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/male_programovacie_jazyky.pdf
Hornik, T., Musílek, M., Milková, E., 2019: Didaktika programování. https://imysleni.cz/images/vyukove_materialy/UHK_Didaktika_programovani.pdf
Drábková, J., 2019: Didaktika programování. https://imysleni.cz/images/vyukove_materialy/TUL_Didaktika_programovani.pdf
Salanci, Ľ., 2018: Didaktika programovania. https://imysleni.cz/images/vyukove_materialy/JU_Didaktika_PRG.pdf
Inovovaný Štátny vzdelávací program https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/
Štátny pedagogický ústav. Metodická príručka Zavádzanie inovovaných štátnych vzdelávacích programov pre vzdelávaciu oblasť Matematika a práca s informáciami v základnej škole [online]. Bratislava : Štátny pedagogický ústav, september 2015. http://www.statpedu.sk/files/sk/metodicky-portal/metodicke-podnety/matematika_a_praca_s_informaciami.pdf
Učebnice informatiky k tematickej oblasti Algoritmické riešenie problémov a programovanie pre 2. stupeň základnej školy a gymnáziá
SCRATCH. https://scratch.mit.edu/,
Scratch CUP. http://www.edu.fmph.uniba.sk/ScratchCup/
Blaho, A. 2018: Učebnica Pythonu pre stredné školy. https://input.sk/ucebnica/, https://abcpython.input.sk/
Jacková, J., Majherová, J.: Didaktika informatiky 2 (DidINF2), študijná elektronická podpora https://moodle.pf.ku.sk/course/view.php?id=92
Tkáčová, Z., Hanesz, A., Tomcsányiová, M., Tomcsányi, P., Trajteľ, Ľ., Jacková, J. Lovászová, G., Cápay, M., Michaličková, V. Zbierka inovatívnych metodík z Informatiky pre 2. stupeň základných škôl a stredné školy Bratislava: Centrum vedecko-technických informácií SR, 2020. ISBN 978-80-89965-60-1. https://vzdelavanie.itakademia.sk/vystupy/zim-inf-zs-ss.pdf
Zborníky konferencie DidInfo http://didinfo.net/predchozi-rocniky
Turek, I.: Didaktika. 3.vyd. Wolters Kluwer, 2014.

Language of instruction:

Slovak

Notes:

Course evaluation:

Assessed students in total: 2

A	B	C	D	E	FX
0.0	0.0	100.0	0.0	0.0	0.0

Name of lecturer(s): Ing. Jana Jacková, PhD.
Last modification: 06.12.2022
Supervisor(s): **People responsible for the delivery, development and quality of the study programme:** prof. PhDr. Ingrid Emmerová, PhD., PhDr. ThLic. Martin Taraj, PhD., doc. Ing. Igor Černák, PhD.