

Course code																																	
Type and description	EC																																
ECTS credit	1																																
Course name	Data Science and Big Data Analysis																																
Course name in Polish	Data Science oraz analiza danych masowych																																
Language of instruction	English																																
Course level	8 PRK																																
Course coordinator	dr hab. inż. Agnieszka Wosiak																																
Course instructors	dr hab. inż. Agnieszka Wosiak																																
Delivery methods and course duration	<table border="1"> <thead> <tr> <th></th> <th>Lecture</th> <th>Tutorials</th> <th>Laboratory</th> <th>Project</th> <th>Seminar</th> <th>Other</th> <th>Total of teaching hours during semester</th> </tr> </thead> <tbody> <tr> <td>Contact hours</td> <td>0</td> <td>0</td> <td>0</td> <td>15</td> <td>0</td> <td>0</td> <td>15</td> </tr> <tr> <td>E-learning</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Assessment criteria (weightage)</td> <td></td> <td></td> <td></td> <td>100%</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester	Contact hours	0	0	0	15	0	0	15	E-learning								Assessment criteria (weightage)				100%			
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Contact hours	0	0	0	15	0	0	15																										
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Assessment criteria (weightage)				100%																													
Course objective	Understanding and ability to use methods of intelligent processing and analysis of big data																																
Learning outcomes	<p>After completing the course, the student should be able to:</p> <ol style="list-style-type: none"> 1) analyse a complex problem related to big data analysis and to apply method of data science to identify solutions 2) design and evaluate a solution based on methods related to big data processing and analysis <p>W4, U4, K1</p>																																
Assessment methods	Evaluation of the final project or/and final project report (effect 1. and 2) - 100% final grade																																
Prerequisites	Fundamentals of statistics, data analysis and databases																																
Course content with delivery methods	Project which involves designing, implementation and evaluation of the solution concerning big data processing and analysis.																																
Basic reference materials	<ol style="list-style-type: none"> 1. Szeliga M.: Data Science i uczenie maszynowe, Wydawnictwo Naukowe PWN 2017 2. Rutkowski L.: Metody i techniki sztucznej inteligencji, Wydawnictwo Naukowe PWN, Warszawa, 2019 3. Loshin D.: Big Data Analytics. From Strategic Planning to Enterprise Integration with Tools, Techniques, NoSQL, and Graph, Morgan Kaufmann, 2013 4. Stanton J.M.: Introduction to Data Science, E-book, 2013 5. EMC: Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data, Wiley, 2015 6. Sharda R.: Business Intelligence, Analytics, and Data Science: A Managerial Perspective (4th Edition), Pearson, 2017 																																

Other reference materials	<ol style="list-style-type: none">1. Raschka S.: Python. Uczenie maszynowe, Helion, 20172. VanderPlas J.: Python Data Science Handbook: Essential Tools for Working with Data 1st Edition, O'Reilly Media; 1 edition, 20163. Wickham H.: R for Data Science: Import, Tidy, Transform, Visualize, and Model Data, O'Reilly Media, 2017
Average student workload outside classroom	20 h
Comments	
Last update	25.04.2023