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<tr><td>Course code</td><td></td></tr>
<tr><td>Type and description</td><td>EC elective subjects from the discipline of Information and communication technology</td></tr>
<tr><td>ECTS credit</td><td>1</td></tr>
<tr><td>Course name</td><td>Data Science and Big Data Analysis</td></tr>
<tr><td>Course name in Polish</td><td>Data Science oraz analiza danych masowych</td></tr>
<tr><td>Language of instruction</td><td>English</td></tr>
<tr><td>Course level</td><td>8 PRK</td></tr>
<tr><td>Course coordinator</td><td>dr hab. inż. Agnieszka Wosiak</td></tr>
<tr><td>Course instructors</td><td>dr hab. inż. Agnieszka Wosiak</td></tr>
<tr><td>Delivery methods and course duration</td><td>
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<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>
<tr><td>Contact hours</td><td>0</td><td>0</td><td>0</td><td>5</td><td>0</td><td>0</td><td>5</td></tr>
<tr><td>E-learning</td><td>no</td><td>no</td><td>no</td><td>no</td><td>no</td><td>no</td><td>no</td></tr>
<tr><td>Assessment criteria (weightage)</td><td>0</td><td>0</td><td>0</td><td>100%</td><td>0</td><td>0</td><td>100%</td></tr>
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<tr><td>Course objective</td><td>Understanding and ability to use methods of intelligent processing and analysis of big data</td></tr>
<tr><td>Learning outcomes</td><td>After completing the course, the student should be able to:<br>1) analyse a complex problem related to big data analysis and to apply method of data science to identify solutions<br>2) design and evaluate a solution based on methods related to big data processing and analysis</td></tr>
<tr><td>Assessment methods</td><td>Evaluation of the final project or/and final project report (effect 1. and 2) - 100% final grade</td></tr>
<tr><td>Prerequisites</td><td>Fundamentals of statistics, data analysis and databases</td></tr>
<tr><td>Course content with delivery methods</td><td>Project which involves designing, implementation and evaluation of the solution concerning big data processing and analysis.</td></tr>
<tr><td>Basic reference materials</td><td>1. Szeliga M.: Data Science i uczenie maszynowe, Wydawnictwo Naukowe PWN 2017<br><br>2. Rutkowski L.: Metody i techniki sztucznej inteligencji, Wydawnictwo Naukowe PWN, Warszawa, 2019<br><br>3. Loshin D.: Big Data Analytics. From Strategic Planning to Enterprise Integration with Tools, Techniques, NoSQL, and Graph, Morgan Kaufmann, 2013<br><br>4. Stanton J.M.: Introduction to Data Science, E-book, 2013<br><br>5. EMC: Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data, Wiley, 2015<br><br>6. Sharda R.: Business Intelligence, Analytics, and Data Science: A Managerial Perspective (4th Edition), Pearson, 2017</td></tr>
<tr><td>Other reference materials</td><td>1. Raschka S.: Python. Uczenie maszynowe, Helion, 2017<br><br>2. VanderPlas J.: Python Data Science Handbook: Essential Tools for Working with Data 1st Edition, O'Reilly Media; 1 edition, 2016</td></tr>
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|---|---|
| | 3. 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** | winter semester |
| **Last update** | July 2020 |