

<b>1. Course title: BIG DATA, Cloud platforms</b>		<b>2. Course code BG_CP</b>		
<b>3. Validity of course description:</b> 2018/2019				
<b>4. Level of studies:</b> MSc programme				
<b>5. Mode of studies:</b> intramural studies				
<b>6. Field of study:</b> CONTROL, ELECTRONIC AND INFORMATION ENGINEERING (MACRO)		(FACULTY SYMBOL) RAU-2		
<b>7. Profile of studies:</b> ACADEMIC				
<b>8. Programme:</b> DATA SCIENCE				
<b>9. Semester:</b> 1				
<b>10. Faculty teaching the course:</b> Faculty of Automatic Control, Electronics and Computer Science				
<b>11. Course instructor:</b> dr hab. inż. Dariusz Mrozek				
<b>12. Course classification:</b> common courses				
<b>13. Course status:</b> compulsory/ <del>elective</del>				
<b>14. Language of instruction:</b> English				
<b>15. Pre-requisite qualifications:</b> Theory of computer science, Computer architecture, Introduction to programming in Java, Computer programming, Programming for the Java Platform, Enterprise Edition				
<b>16. Course objectives:</b> The aim of the course is to provide students the knowledge necessary to understand Cloud computing, its architecture, models, platforms, interaction, programming solutions working on the Cloud for various applications.				
<b>17. Description of learning outcomes:</b>				
Nr	Learning outcomes description	Method of assessment	Teaching methods	Learning outcomes reference code
1.	Student understands basic notions in the area of cloud computing.	Exam	Lecture	K2A_W05, <b>K2A_W06</b> , K2A_W26
2.	Student knows available platforms of computational cloud and can verify their usefulness.	Exam	Laboratory	<b>K2A_W05</b> , K2A_W06
3.	Student is able to elaborate computer program or application working in the chosen cloud platform	Laboratory tasks	Laboratory	<b>K2A_U18</b> , K2A_U20, K2A_K03, K2A_K04
4.	Student is able to use advanced tools for developing applications for cloud computing.	Laboratory tasks	Laboratory	K2A_U19, <b>K2A_U20</b> , K2A_K03, K2A_K04
5.	Student is able to administer cloud resources.	Laboratory tasks	Laboratory	K2A_U21, <b>K2A_U22</b> , K2A_K05, K2A_K06
6.				
7.				
8.				
<b>18. Teaching modes and hours</b>				
Lecture 15 / <del>BA/MA Seminar / Class / Project</del> / Laboratory 15				

**19. Syllabus description:****Lecture:**

1. Introduction to cloud platforms and cloud computing.
2. Cloud architecture.
3. Abstraction and virtualization.
4. Cloud models and services.
5. Cloud platforms.
6. Working with Cloud-based storage.
7. Exploring platform as a service.
8. Working with virtual machines.
9. Scaling resources on the Cloud.
10. Developing solutions for selected cloud platform.

**Laboratory:**

1. Managing resources in a cloud platform.
2. Storing data in the Cloud.
3. Developing applications for the Cloud.

**20. Examination:** semester 1**21. Primary sources:**

T. Erl, R. Puttini (2013) Cloud Computing: Concepts, Technology &amp; Architecture. Prentice Hall; 1 edition (May 20, 2013)

**22. Secondary sources:**

D. Hutten (2017) Azure: Microsoft Azure Tutorial The Ultimate Beginners Guide. CreateSpace Independent Publishing Platform (September 18, 2017)

**23. Total workload required to achieve learning outcomes**

Lp.	Teaching mode :	Contact hours / Student workload hours
1	Lecture	15/15
2	Classes	0/0
3	Laboratory	15/15
4	Project	/
5	BA/ MA Seminar	/
6	Other	/
	Total number of hours	30/30

**24. Total hours:** 60**25. Number of ECTS credits:** 3**26. Number of ECTS credits allocated for contact hours:** 1**27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects):** 1**26. Comments:**

Approved:

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(date, Instructor's signature).....  
(date, the Director of the Faculty Unit signature)