

## Załącznik nr 5 do ZW

### MATRIX OF CORRELATION BETWEEN AREA EDUCATIONAL EFFECTS AND MAIN-FIELD-OF-STUDY EDUCATIONAL EFFECTS

2nd level studies in main field-of-study *mining and geology*, specialization *exploratory and mining geology*, general academic profile

Symbol of educational effect for area of education in technical sciences	Description of educational effects for area of education in technical sciences	Correlation with educational effects for 2nd level studies in main field of study <i>mining and geology</i> specialization <i>exploratory and mining geology</i>
<b>KNOWLEDGE</b>		
OT2A_W01	- has expanded and broadened knowledge of mathematics, physics and chemistry and other areas related to the studied discipline necessary to formulate and solve complex tasks in the field of the studied discipline	<b>K_W01</b>
OT2A_W01	- has expanded and broadened knowledge of mathematics, physics and chemistry and other areas related to the studied discipline necessary to formulate and solve complex tasks in the field of the studied discipline	<b>K_W02</b>
OT2A_W03, W04, W05	- has organized, general knowledge and theoretical grounding including key issues related to the studied discipline - has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline - has knowledge of trends in development and the most crucial and newest achievements in scientific disciplines and fields of study related to the studied discipline and other related scientific disciplines	<b>K_W03</b>
OT2A_W04	- has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline	<b>K_W04</b>
OT2A_W03, W04, W05	- has organized, general knowledge and theoretical grounding including key issues related to the studied discipline - has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline - has knowledge of trends in development and the most crucial and newest achievements in scientific disciplines and fields of study related to the studied discipline and other related scientific disciplines	<b>K_W05</b>
OT2A_W03	- has organized, general knowledge and theoretical grounding including key issues related to the studied discipline	<b>K_W06</b>

OT2A_ W03, W04	- has organized, general knowledge and theoretical grounding including key issues related to the studied discipline - has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline	<b>K_W07</b>
OT2A_ W02, W04	has detailed knowledge in the field of study related to the studied discipline - has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline	<b>K_W08</b>
OT2A_ W04	- has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline	<b>K_W09</b>
OT2A_ W04, W08	- has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline - has fundamental knowledge necessary to understand social, economical ,legal and other non-technical factors of engineering activities as well as taking them into consideration in engineering practice	<b>K_W10</b>
OT2A_ W03, W04, W07	- has organized, general knowledge and theoretical grounding including key issues related to the studied discipline - has detailed knowledge and theoretical grounding connected with the chosen issues in the field of the studied discipline - knows fundamental methods, techniques, tools and materials used for solving simple engineering tasks in the field of the studied discipline	<b>K_W11</b>
OT2A_ W09	- has fundamental knowledge of management, including quality management and running a business	<b>K_W12</b>
OT2A_ W01, W08, W09	- has expanded and broadened knowledge of mathematics, physics and chemistry and other areas related to the studied discipline necessary to formulate and solve complex tasks in the field of the studied discipline - has fundamental knowledge necessary to understand social, economical ,legal and other non-technical factors of engineering activities as well as taking them into consideration in engineering practice - has fundamental knowledge of management, including quality management and running a business	<b>K_W13</b>
OT2A_ W08	- has fundamental knowledge necessary to understand social, economical ,legal and other non-technical factors of engineering activities as well as taking them into consideration in engineering practice	<b>K_W14</b>
<b>SKILLS</b>		
OT2A_ U08, U09	- is able to plan and run experiments including measurements and computer simulations, interpret results and draw conclusions - is able to use analytical, simulation and experimental methods to formulate and	<b>K_U01</b>

	solve engineering tasks as well as simple research problems	
OT2A_U09, U19	- is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks as well as simple research problems - is able – according to a given specification which considers non –technical aspects- to design a complex device, object, system or process specific for the studied discipline and complete this project – at least partially- using appropriate methods, techniques and tools, adapting already existing tools or by creating new tools	<b>K_U02</b>
OT2A_U08	- is able to plan and run experiments including measurements and computer simulations, interpret results and draw conclusions	<b>K_U03</b>
OT2A_U07, U09	- is able to use information and communication technologies necessary to perform tasks typical of engineering activities - is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks as well as simple research problems	<b>K_U04</b>
OT2A_U08	- is able to plan and run experiments including measurements and computer simulations, interpret results and draw conclusions	<b>K_U03</b>
OT2A_U07, U17	- is able to use information and communication technologies necessary to perform tasks typical of engineering activities - is able to identify and formulate specifications of complex engineering tasks specific for the studied discipline including untypical tasks considering their non-technical aspects	<b>K_U06</b>
OT2A_U08, U09	- is able to plan and run experiments including measurements and computer simulations, interpret results and draw conclusions - is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks as well as simple research problems	<b>K_U07</b>
OT2A_U08	- is able to plan and run experiments including measurements and computer simulations, interpret results and draw conclusions	<b>K_U08</b>
OT2A_U11, U13	is able to formulate and test hypotheses connected with engineering problems and simple research problems is prepared to work in an industry environment and knows safety rules in the workplace	<b>K_U09</b>
OT2A_U01, U04	- is able to obtain information from literature, databases and other properly selected sources, either in English or another foreign language regarded as a language for international communication in the studied discipline ; is able to integrate obtained information, interpret and critically evaluate it, draw conclusions, formulate and justify opinions in full - is able to prepare and give an oral presentation concerning detailed issues in the field of the studied discipline both in Polish and a foreign language	<b>K_U10</b>
OT2A_U01, U04	- is able to obtain information from literature, databases and other properly selected	<b>K_U11</b>

	sources, either in English or another foreign language regarded as a language for international communication in the studied discipline ; is able to integrate obtained information, interpret and critically evaluate it, draw conclusions, formulate and justify opinions in full - is able to prepare and give an oral presentation concerning detailed issues in the field of the studied discipline both in Polish and a foreign language	
OT2A_U07	- is able to use information and communication technologies necessary to perform tasks typical of engineering activities	<b>K_U12</b>
OT2A_U01, U03	- is able to obtain information from literature, databases and other properly selected sources, either in English or another foreign language regarded as a language for international communication in the studied discipline ; is able to integrate obtained information, interpret and critically evaluate it, draw conclusions, formulate and justify opinions in full - is able to prepare a scientific study in Polish language and also a short scientific report, with the results of own research, in a foreign language regarded as a basic one in the scientific disciplines and fields of study related to the studied discipline	<b>K_U13</b>
OT2A_U01, U03	- is able to obtain information from literature, databases and other properly selected sources, either in English or another foreign language regarded as a language for international communication in the studied discipline ; is able to integrate obtained information, interpret and critically evaluate it, draw conclusions, formulate and justify opinions in full - is able to prepare a scientific study in Polish language and also a short scientific report, with the results of own research, in a foreign language regarded as a basic one in the scientific disciplines and fields of study related to the studied discipline	<b>K_U14</b>
OT2A_U01, U03	- is able to obtain information from literature, databases and other properly selected sources, either in English or another foreign language regarded as a language for international communication in the studied discipline ; is able to integrate obtained information, interpret and critically evaluate it, draw conclusions, formulate and justify opinions in full - is able to prepare a scientific study in Polish language and also a short scientific report, with the results of own research, in a foreign language regarded as a basic one in the scientific disciplines and fields of study related to the studied discipline	<b>K_U15</b>
<b>SOCIAL COMPETENCES</b>		
OT2A_K04, K05	- is able to set clear priorities leading to the realization tasks set by himself or others - identifies correctly and solves dilemmas connected with the profession	<b>K_K01</b>
OT2A_K06, K07	- is able to think and act in an entrepreneurial way - realizes the social role of technical university graduates and especially understands	<b>K_K02</b>

	the need to formulate information and share it with society, e.g. through mass media, in relation to achievements in environmental engineering and other aspects of engineering activity; makes attempts at sharing such information and opinions in an understandable way	
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