

KIERUNEK STUDIÓW: **Mechatronika**OBOWIĄZUJE OD CYKLU KSZTAŁCENIA: **2023/24-L**SPECJALNOŚĆ: **Mechatronika w Maszynach i Pojazdach**FORMA STUDIÓW: **stacjonarna**POZIOM KSZTAŁCENIA: **studia drugiego stopnia**JĘZYK PROWADZENIA STUDIÓW: **polski**PROGRAM STUDIÓW: **W10-MTRP-000P-OSMW3**

<b>Komputerowa diagnostyka pojazdów</b> <b>W10MTR-SM1019</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td>15</td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1	1				ZZU	15	15				<table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS						ZZU						<table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS						ZZU					
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<b>Mechatronika w pojazdach samochodowych</b> <b>W10MTR-SM1020</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>BLOK WYBIERALNY KIERUNKOWY</b> <b>MTR-SM2W-MMP1</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td>2</td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td>30</td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2	2				ZZU	30	30				<table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS						ZZU					
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<b>Mikroprocesorowe układy pomiarowe</b> <b>W10MTR-SM1021</b> <b>S</b> <b>E</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Modelowanie i symulacja komputerowa zespołów mechatronicznych</b> <b>W10MTR-SM1024</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td>2</td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td>30</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS			2			ZZU			30			<table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS						ZZU					
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<b>Systemy hydrotroniczne i pneumatyczne</b> <b>W10MTR-SM1022</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Zaawansowane układy sterowania maszyn roboczych</b> <b>W10MTR-SM1025</b> <b>S</b> <b>E</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15			<b>Energooszczędne układy napędowe maszyn i pojazdów</b> <b>W10MTR-SM1026</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15		
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<b>Układy mechatroniczne maszyn roboczych</b> <b>W10MTR-SM1023</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Sztuczna inteligencja i uczenie maszynowe</b> <b>W10MTR-SM0019</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Technologie optyczne i laserowe</b> <b>W10MTR-SM1027</b> <b>S</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15		
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<b>BLOK WYBIERALNY CAx</b> <b>MTR-SM1W-0001</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>2</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>30</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		2			ZZU	15		30			<b>Dynamika układów elektromechanicznych</b> <b>W10MTR-SM0020</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Diagnostyka powierzchni</b> <b>W12MTR-SM0010</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1					ZZU	15				
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<b>Statystyka i rachunek prawdopodobieństwa</b> <b>W10MTR-SM0015</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>2</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		2			ZZU	15		15			<b>Interdyscyplinarny projekt zespołowy - symulacje</b> <b>W10MTR-SM0021</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td>2</td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td>45</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS			2			ZZU			45			<b>Inżynieria kwantowa</b> <b>W12MTR-SM0011</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1					ZZU	15				
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<b>Mechanika analityczna</b> <b>W10MTR-SM0016</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td>2</td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td>15</td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1	2				ZZU	15	15				<b>Synteza mechanizmów</b> <b>W10MTR-SM0022</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	15		15			<b>BLOK WYBIERALNY ZARZĄDZANIE</b> <b>MTR-SM3W-0001</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>3</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	3					ZZU	30				
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<b>Interdyscyplinarny projekt zespołowy - prototyp</b> <b>W10MTR-SM0017</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td>2</td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td>45</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS			2			ZZU			45			<b>Podstawy konstrukcji aparatury elektronicznej</b> <b>W12MTR-SM0008</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15			<b>Diagnostyka i niezawodność w mechatronice</b> <b>W10MTR-SM0024</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td>15</td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1	1				ZZU	15	15			
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<b>Mikroelektronika</b> <b>W12MTR-SM0007</b> <b>K</b> <b>E</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15			<b>Optymalizacja</b> <b>W04MTR-SM0003</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1		1			ZZU	15		15			<b>Mikromechanizmy i mikronapędy</b> <b>W12MTR-SM0012</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15		
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<b>Systemy RT i embedded</b> <b>W12MTR-SM0009</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>2</td><td></td><td>1</td><td></td><td></td></tr> <tr><td>ZZU</td><td>30</td><td></td><td>15</td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	2		1			ZZU	30		15			<b>Autoprezentacja</b> <b>W08MTR-SM0003</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1					ZZU	15					<b>Podstawy negocjacji</b> <b>W08MTR-SM0004</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td>15</td><td></td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS	1					ZZU	15				
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<b>Język obcy I</b> <b>SJO-SM0001</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td>1</td><td></td><td></td><td></td></tr> <tr><td>ZZU</td><td></td><td>15</td><td></td><td></td><td></td></tr> </table>	W	C	L	P	S	D	ECTS		1				ZZU		15				<b>PRACA DYPLOMOWA I</b> <b>W10MTR-SM0023</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td>4</td><td></td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td>3</td><td></td></tr> </table>	W	C	L	P	S	D	ECTS				4		ZZU				3		<b>PRACA DYPLOMOWA II</b> <b>W10MTR-SM0026</b> <b>K</b> <table border="1"> <tr><td>W</td><td>C</td><td>L</td><td>P</td><td>S</td><td>D</td></tr> <tr><td>ECTS</td><td></td><td></td><td></td><td></td><td>12</td></tr> <tr><td>ZZU</td><td></td><td></td><td></td><td></td><td>7</td></tr> </table>	W	C	L	P	S	D	ECTS					12	ZZU					7
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**BLOKI WYBIERALNE KIERUNKOWE**

KIERUNEK STUDIÓW: **Mechatronika**

SPECJALNOŚĆ:

POZIOM KSZTAŁCENIA: **studia drugiego stopnia**

PROGRAM STUDIÓW: **W10-MTRP-000P-OSMW3**

OBOWIĄZUJE OD CYKLU KSZTAŁCENIA: **2023/24-L**

FORMA STUDIÓW: **stacjonarna**

JĘZYK PROWADZENIA STUDIÓW: **polski**

Blok wybier. 1 MTR-SM1W-0001	<b>Analiza MES układów mechatronicznych</b>							<b>MES w modelowaniu układów mechatronicznych</b>							<b>Modelowanie termiki i przepływów</b>													
	<b>W10MTR-SM0027</b>							<b>W10MTR-SM0028</b>							<b>W10MTR-SM0029</b>													
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	ZZU		15			30		ZZU		15			30		ZZU		15			30		ZZU						
Blok wybier. 2 MTR-SM3W-0001	<b>Zarządzanie małą firmą</b>							<b>Zarządzanie przedsiębiorstwem</b>																				
	<b>W10MTR-SM2030</b>							<b>W10MTR-SM2031</b>																				
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	ZZU		30					ZZU		30					ZZU							ZZU						

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**BLOKI WYBIERALNE SPECJALNOŚCIOWE**

KIERUNEK STUDIÓW: **Mechatronika**

OBOWIĄZUJE OD CYKLU KSZTAŁCENIA: **2023/24-L**

SPECJALNOŚĆ: **Mechatronika w Maszynach i Pojazdach**

FORMA STUDIÓW: **stacjonarna**

POZIOM KSZTAŁCENIA: **studia drugiego stopnia**

JĘZYK PROWADZENIA STUDIÓW: **polski**

PROGRAM STUDIÓW: **W10-MTRP-000P-OSMW3**

Blok wybier. 1 MTR-SM2W-MMP1	<b>Analiza modalna</b> <b>W10MTR-SM1028</b>		<b>Analiza obrazów</b> <b>W10MTR-SM1029</b>		<b>Badania układów mechatronicznych</b> <b>W10MTR-SM1030</b>		<b>Drgania układów mechanicznych</b> <b>W10MTR-SM1031</b>		<b>Modelowanie oraz badania mechatronicznych układów maszyn roboczych i pojazdów</b> <b>W10MTR-SM1032</b>		<b>Sterowanie elektrohydrauliczne</b> <b>W10MTR-SM1033</b>		<b>Układy hydrotroniczne w pojazdach</b> <b>W10MTR-SM1034</b>	
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