

**Subject card**

<b>Subject name and code</b>	Script Languages, PG_00178057						
<b>Field of study</b>	Informatics and Econometrics						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2027/2028		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	3	<b>ECTS credits</b>			7.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>							
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Sławomir Radomski				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	0.0	60.0	0.0	0.0	75
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	75		4.0		96.0	175
<b>Subject objectives</b>	<p>angielski polski niemiecki Tekst źródłowy 1. Zapoznanie studentów ze składnią języka JavaScript. 2. Zapoznanie studentów ze zmianami technologiami Ajax, Fetch API, JSON. 3. Zapoznanie studentów z bibliotekami jQuery, Leaflet. 4. Zapoznanie studentów ze standardem ECMAScript. 5. Zapoznanie studentów z technologiami Babel oraz webpack. 6. Zapoznanie studentów z językiem programowania TypeScript i PHP. 7. Praktyczne umiejętności wykorzystania technologii JavaScript, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel oraz webpack oraz TypeScript i PHP.</p> <p>clear 513 / 5 000</p> <p>1. Familiarizing students with the syntax of the JavaScript language. 2. Familiarizing students with changes in Ajax, Fetch API, JSON technologies. 3. Familiarizing students with jQuery, Leaflet libraries. 4. Familiarizing students with the ECMAScript standard. 5. Familiarizing students with Babel and webpack technologies. 6. Familiarizing students with the TypeScript and PHP programming language. 7. Practical skills in using JavaScript, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel and webpack technologies as well as TypeScript and PHP.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEL3_U12] The student can design and implement IT systems to enhance business operations and effectively utilize modern ICT technologies for management and business communication.	The student is able to design and implement IT systems supporting enterprise operations and use modern technologies using JavaScript, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel and webpack.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[liEL3_W06] To an advanced degree, the student knows and understands the processes and methods of creating, developing, and providing appropriate conditions for using informatics or statistics tools, particularly those that improve human and organizational functioning.	The student has an advanced knowledge and understanding of the processes and methods of creating, developing and ensuring appropriate conditions for the use of IT tools such as JavaScript, Fetch API, JSON, jQuery, Leaflet, Babel and webpack.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[liEL3_U02] Students can select or construct econometrics, informatics or statistics tools and apply them to describe and solve economic and social problems.	The student is able to select or construct IT tools and apply them to describe and solve economic and social problems using JavaScript, Fetch API, JSON, jQuery, Leaflet, Babel and webpack.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task
Subject contents	<p>Lecture:</p> <ol style="list-style-type: none"> <li>1. Introduction to JavaScript: variables and types, functions, loops, native methods, conditional statements, selections, arrays.</li> <li>2. Ajax- asynchronous, Fetch, JSON, jQuery library, Map applications- Leaflet.</li> <li>3. ECMAScript standards: variables and functions, classes, template strings, symbols, modules, maps. Babel transpiler and webpack.</li> <li>4. TypeScript programming language: strong typing, interfaces, classes, generics.</li> <li>5. PHP language in forms and databases.</li> </ol> <p>Lab:</p> <ol style="list-style-type: none"> <li>1. Performing a practical project using variables, loops.</li> <li>2. Using conditional and selection statements in Java Script.</li> <li>3. Using arrays in JavaScript.</li> <li>4. Using asynchronous queries - Ajax, Fetch.</li> <li>5. Using JSON and jQuery in JavaScript.</li> <li>6. Creating an application using the Leaflet library.</li> <li>7. Creating a program containing arrow functions, ES6 classes, and symbols.</li> <li>8. Using iterators, generators, and the field keyword.</li> <li>9. Asynchronicity in ECMAScript.</li> <li>10. Using webpack-Babel modules in the ES6 standard.</li> <li>11. Creating an application using interfaces in TypeScript.</li> <li>12. Creating an application using classes in TypeScript.</li> <li>13. Using generics in TypeScript.</li> <li>14. Creating an application supporting forms in PHP.</li> <li>15. Creating an application supporting a database in PHP.</li> </ol>		
Prerequisites and co-requisites	Basic knowledge of how the Internet works and how web browsers interpret tags. Knowledge of HTML, CSS, Bootstrap technologies.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final test	50.0%	30.0%
	work in class	50.0%	30.0%
	project	50.0%	40.0%
Recommended reading	Basic literature	<p>Duckett J., JavaScript i jQuery. Interaktywne strony WWW dla każdego. Podręcznik Front-End Developera, Helion 2018</p> <p>Simpson K., Tajniki języka JavaScript. ECMAScript 6 i dalej, Helion 2016</p> <p>Freeman A., TypeScript 4. Od początkującego do profesjonalisty. Wydanie II, helion 2021</p>	
	Supplementary literature	Wrycza S., J. Maślankowski (red.), Informatyka Ekonomiczna, PWN, 2019,	
	eResources addresses		
	Example issues/ example questions/ tasks being completed		
Work placement	Not applicable		

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