

Subject card

Subject name and code	Script Languages, PG_00178057						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		7.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Sławomir Radomski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	60.0	0.0	0.0	75
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	75		4.0		96.0	175
Subject objectives	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.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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
	[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
Subject contents	Lecture: 1. Introduction to JavaScript: variables and types, functions, loops, native methods, conditional statements, selections, arrays. 2. Ajax- asynchronous, Fetch, JSON, jQuery library, Map applications- Leaflet. 3. ECMAScript standards: variables and functions, classes, template strings, symbols, modules, maps. Babel transpiler and webpack. 4. TypeScript programming language: strong typing, interfaces, classes, generics. 5. PHP language in forms and databases. Lab: 1. Performing a practical project using variables, loops. 2. Using conditional and selection statements in Java Script. 3. Using arrays in JavaScript. 4. Using asynchronous queries - Ajax, Fetch. 5. Using JSON and jQuery in JavaScript. 6. Creating an application using the Leaflet library. 7. Creating a program containing arrow functions, ES6 classes, and symbols. 8. Using iterators, generators, and the field keyword. 9. Asynchronicity in ECMAScript. 10. Using webpack-Babel modules in the ES6 standard. 11. Creating an application using interfaces in TypeScript. 12. Creating an application using classes in TypeScript. 13. Using generics in TypeScript. 14. Creating an application supporting forms in PHP. 15. Creating an application supporting a database in PHP.		
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
	project	51.0%	40.0%
	work in class	51.0%	30.0%
	final test	51.0%	30.0%
Recommended reading	Basic literature	Duckett J., JavaScript i jQuery. Interaktywne strony WWW dla każdego. Podręcznik Front-End Developera, Helion 2018	
		Simpson K., Tajniki języka JavaScript. ECMAScript 6 i dalej, Helion 2016	
		Freeman A., TypeScript 4. Od początkującego do profesjonalisty. Wydanie II, helion 2021	
	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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