University of Gdańsk

Subject card

Subject name and code	Script Languages, PG_00178484		
Field of study	Informatics and Econometrics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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	part-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	8.0	0.0	32.0	0.0	0.0	40

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	40	2.0	133.0	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
[IiEL3_U02] 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 such as JavaScript, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel and webpack and use them to describe and solve economic problems.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[IiEL3_U12] 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 the activities of enterprises and use modern technologies such as JavaScript, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel and webpack	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[IiEL3_W06] Knows and understands, to an advanced degree, 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, Ajax, Fetch API, JSON, jQuery, Leaflet, Babel and webpack.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report

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
final test	51.0%	30.0%
work in class	51.0%	30.0%
project	51.0%	40.0%

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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