



**Faculty of Design  
in Warsaw**  
SWPS University



# Computer Science

Bachelor's Degree

[www.english.swps.pl](http://www.english.swps.pl)

**Faculty of Design in Warsaw**  
**FIELD OF STUDY: Computer Science**  
**PROFILE: practical**  
**LEVEL: bachelor degree**  
**MODE: full-time**  
**Programme starts in 2026/2027**

**SEMESTER 1**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Linear Algebra	lecture, tutorial	60	credit with grade	6
2	Elements of Logic and Set Theory	lecture, tutorial	60	credit with grade	6
3	Introduction to Programming	lecture, lab	60	credit with grade	6
4	Developer Tools	lab	24	credit with grade	3
5	Social and Group Processes, Communication in Organizations	lecture, tutorial	48	credit with grade	4
6	Academic Skills	lecture	24	credit with grade	2
7	Foreign Language 1	tutorial	30	credit with grade	3
<b>No. of hours and credits</b>			<b>306</b>		<b>30</b>

**SEMESTER 2**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Theoretical Foundations of Computer Science	lecture, tutorial	48	credit with grade	5
2	Discrete Mathematics	lecture, tutorial	60	credit with grade	6
3	Mathematical Analysis 1	lecture, tutorial	48	credit with grade	6
4	Programming in C	lecture, lab	48	credit with grade	5
5	Computer Architecture and Organization	lecture, lab	48	credit with grade	5
6	Foreign Language 2	tutorial	30	credit with grade	3
<b>No. of hours and credits</b>			<b>282</b>		<b>30</b>

**SEMESTER 3**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Object-Oriented Programming	lecture, lab	60	credit with grade	5
2	Operating Systems	lecture, lab	48	credit with grade	5
3	Mathematical Analysis 2	lecture, tutorial	48	credit with grade	5
4	Probability and Statistics	lecture, tutorial	48	credit with grade	5
5	Basics of Entrepreneurship and Intellectual Property Protection	lecture	24	credit with grade	3
6	Elective 1	lecture	24	credit with grade	4
7	Foreign Language 3	tutorial	30	credit with grade	3
8	Physical Education 1	tutorial	30	credit without grade	0
<b>No. of hours and credits</b>			<b>312</b>		<b>30</b>

**SEMESTER 4**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Algorithms and Data Structures	lecture, lab	60	credit with grade	6
2	Data Analysis Techniques	lecture, lab	48	credit with grade	5
3	Computer Networks	lecture, lab	48	credit with grade	6
4	Elements of Cryptography and Number Theory	lecture, tutorial	48	credit with grade	6
5	Representations, Cognitive Processes and Learning	lecture, tutorial	48	credit with grade	4
6	Foreign Language 4	tutorial	30	credit with grade	3
7	Physical Education 2	tutorial	30	credit without grade	0
<b>No. of hours and credits</b>			<b>312</b>		<b>30</b>

**SEMESTER 5**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Databases	lecture, lab	48	credit with grade	6
2	Programming Languages	lecture, lab	48	credit with grade	6
3	Numerical Methods	lecture, lab, tutorial	48	credit with grade	6
4	Software Engineering	lecture, lab, project	48	credit with grade	5
5	Soft Skills in the Work of an IT Specialist	lecture, tutorial	48	credit with grade	3
<b>SPECIALTY: CYBERSECURITY</b>					
6	Computer Forensics	lecture, lab	48	credit with grade	4
<b>SPECIALTY: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING</b>					
6	Advanced Data Analysis Methods	lecture, lab	48	credit with grade	4
<b>No. of hours and credits Speciality: Cybersecurity</b>			<b>288</b>		<b>30</b>
<b>No. of hours and credits Speciality: Artificial Intelligence and Machine Learning</b>			<b>288</b>		<b>30</b>

**SEMESTER 6**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Machine Learning in Data Analysis	lecture, lab	48	credit with grade	4
2	Diploma Project 1	diploma seminar	24	credit with grade	3
3	Humanities and Social Sciences	lecture	24	credit with grade	3
4	Elective 2	lecture	24	credit with grade	4
5	Internship 1	internship	240	credit with grade	8
<b>SPECIALTY: CYBERSECURITY</b>					
7	Security of Computer Systems	lecture, lab	48	credit with grade	4
8	Introduction to Penetration Testing	lecture, lab	48	credit with grade	4
<b>SPECIALTY: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING</b>					
7	Cloud Computing	lecture, lab	48	credit with grade	4
8	Explainability of AI Models	lecture, lab	48	credit with grade	4
<b>No. of hours and credits Speciality: Cybersecurity</b>			<b>456</b>		<b>30</b>
<b>No. of hours and credits Speciality: Artificial Intelligence and Machine Learning</b>			<b>456</b>		<b>30</b>

**SEMESTER 7**

No.	Course title	Course form	Hours	Credit type	ECTS credits
			Total		
1	Diploma Project 2	diploma seminar	24	credit with grade	3
2	Internship 2	internship	540	credit with grade	18
<b>SPECIALTY: CYBERSECURITY</b>					
3	Cryptographic Methods and Techniques	lecture, lab	48	credit with grade	3
4	Security of Web Applications	lecture, lab	48	credit with grade	3
5	Data Protection Systems	lecture, lab	48	credit with grade	3
<b>SPECIALTY: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING</b>					
3	Computer Vision	lecture, lab	48	credit with grade	3
4	Natural Language Processing	lecture, lab	48	credit with grade	3
5	Selected Advanced Machine Learning Methods in Data Analysis	lecture, lab	48	credit with grade	3
<b>No. of hours and credits Speciality: Cybersecurity</b>			<b>708</b>		<b>30</b>
<b>No. of hours and credits Speciality: Artificial Intelligence and Machine Learning</b>			<b>708</b>		<b>30</b>

	Hours	ECTS credits
	Total	
Total contact hours and credits Speciality: Cybersecurity	2664	210
Total contact hours and credits Speciality: Artificial Intelligence and Machine Learning	2664	210




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## USEFUL INFORMATION

Below, you can find some useful information for international candidates and students.

### Admission Webinars

Register for our free admission webinars to learn everything there is to know about applying to SWPS University in Poland.

>> [Register now!](#) 

### Living and studying in Poland

Moving to a new country can be challenging. To help you navigate the change, we have prepared short videos with expert advice. You will learn how to adapt to a new culture, how to manage stress, and how to find a student job in Poland.

>> [Working in multicultural teams](#) 

>> [Cross-cultural differences](#) 

>> [How to plan your future in uncertain times](#) 

>> [Job market in Poland](#) 

### Study for free

We offer scholarships that cover full or partial tuition fees for candidates who excel in academic achievements, community engagement, changemaking, and creativity.

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