



COLLEGIUM  
DA VINCI

 [cdv.pl](http://cdv.pl)

STUDY  
PROGRAMME

# Information Technology

Level of studies

**First-cycle degree  
programme**

Study mode

**Full-time**

Title

**Engineer's  
degree**

Duration

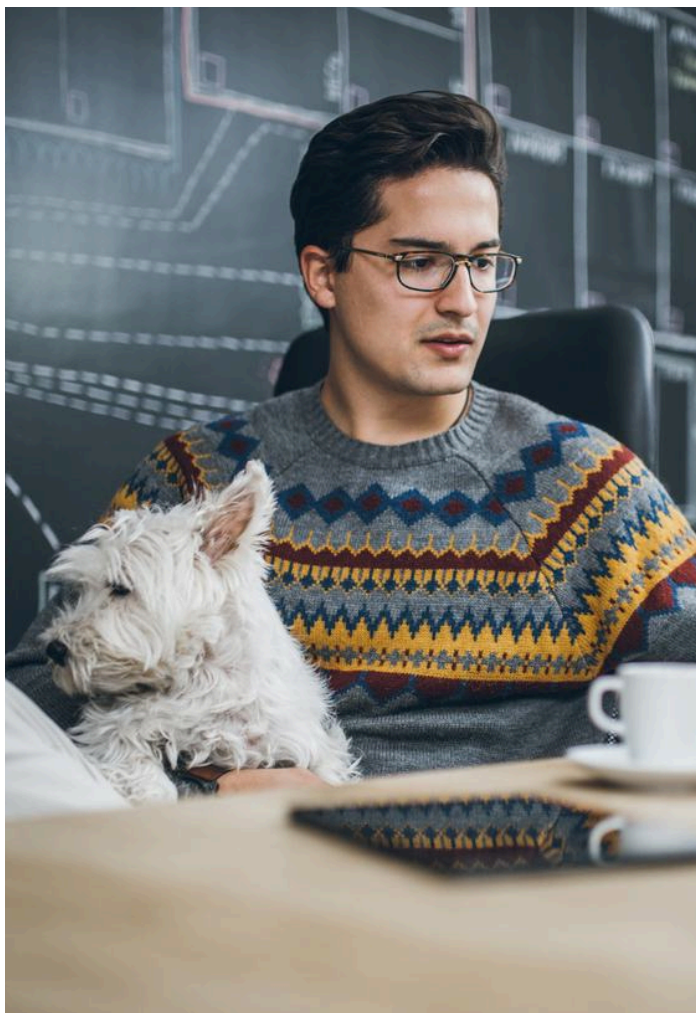
**3,5 years**

Language of instruction

**English**

Programme cycle

**2026 - 2030**



### Interdisciplinary modules

6 modules | 243 hours

This is a general education block. It will provide you with the very universal competences that nowadays no good professional can do without, regardless of the business sector. These include: 2 individual predisposition and talent tests, tutoring (i.e. mentoring in development), a foreign language of your choice.

**Area:** general knowledge and competences

**Profile:** common to all undergraduate students

**Status:** compulsory, according to the list

**Number of hours:** 243 (full-time)

**Duration:** 1-4 semester

[Go to these modules](#)

### Study programme modules

23 modules | 1150 hours

This is a set of practical subjects closely related to the course you are studying. A solid core curriculum that will provide you with the latest knowledge and key skills needed in the industry.

**Area:** industry-specific knowledge and competences

**Profile:** common to all students in this course

**Status:** compulsory, as listed

**Number of hours:** 1150 (full-time)

**Duration:** 1-7 semester

[Go to these modules](#)

### Elective modules

12 modules | 600 hours

This is a set of subjects that you choose by yourself - according to your needs and interests. You have dozens of subjects at your disposal - both in disciplines directly related to your field of study and interdisciplinary. They allow you to determine the content of your own education.

**Area:** branch-related and interdisciplinary knowledge and competences

**Profile:** individual for each student

**Status:** individually selected from a list\*

**Number of hours:** 600 (full-time)\*\*

**Duration:** 1-7 semester

\*Each academic year the list of available modules is slightly different. We modify it for our students in response to the popularity of their chosen subjects and changing market trends.

\*\*During your studies you choose 12 modules, each of 5 ECTS credits

[Go to these modules](#)

### Internships

3 modules | 964 hours

Full-time student internship in a company of your choice. Essential and highly valuable experience on your educational path. Your first steps in your profession under the guidance of more experienced colleagues in the industry.

**Area:** practical work experience

**Profile:** individual for each student

**Status:** individually selected\*

**Number of hours:** 964 (full-time)

**Duration:** 2-7 semester

\*You will be assisted in gaining them by the university's Career Office, which will facilitate your contact with companies cooperating with the university.

[See more](#)



Name of the subject / course	Credit	Semester	ECTS	Teaching hours
1 Introduction to studying	Z	1	1	23
1 Introduction to studying	Z			23
2 Language module I	O	2	5	50
1 Foreign language	O			40
2 Foreign language e-learning	Z			10
3 Language module II	O	3	5	50
1 Foreign language	O			40
2 Foreign language e-learning	Z			10
4 Language module III	E	4	5	50
1 Foreign language	E			40
2 Foreign language e-learning	Z			10
5 Humanities module	O	1	5	50
1 Ethical dilemmas	O			25
2 Critical analysis of the contemporary world	O			25
6 Group tutoring	Z	2	4	20
1 Group tutoring	Z			12
2 Individual tutoring	Z			8
<b>Total</b>			<b>25</b>	<b>243</b>



Name of the subject / course	Credit	Semester	ECTS	Teaching hours
<b>1 Algorithms and data structures</b>	O	1	5	50
1 Algorithms and data structures - lecture	Z			20
2 Algorithms and data structures - laboratory	O			30
<b>2 Mathematics for IT specialists</b>	O	1	5	50
1 Mathematical analysis	O			20
2 Linear algebra	O			10
3 Probability	O			20
<b>3 Introduction to programming</b>	O	1	5	50
1 Mathematical basics of programming	O			10
2 Introduction to programming - lecture	Z			10
3 Introduction to programming - laboratory	O			30
<b>4 Introduction to ICT</b>	O	1	5	50
1 Introduction to ICT - lecture	Z			10
2 Introduction to ICT - laboratory	O			25
3 Logic and set theory	O			15
<b>5 Databases</b>	O	2	5	50
1 Database systems - lecture	Z			20
2 Database systems - laboratory	O			30
<b>6 Operating systems</b>	O	2	5	50
1 Operating systems - lecture	O			20
2 Operating systems - laboratory	O			30
<b>7 Object-oriented programming</b>	O	2	5	50
1 Object-oriented programming - lecture	Z			15
2 Object-oriented programming - laboratory	O			35
<b>8 Structured programming</b>	O	2	5	50
1 Low-level programming - laboratory	O			25
2 Systems programming - laboratory	O			25
<b>9 Machine learning in Python</b>	O	2	5	50
1 Machine learning in Python - lecture	Z			10
2 Machine learning in Python - laboratory	O			40



Name of the subject / course	Credit	Semester	ECTS	Teaching hours
10 Content Management Systems (CMS)	O	3	5	50
1 Content Management Systems (CMS) - lecture	Z			10
2 Content Management Systems (CMS) - laboratory	O			40
11 IT project management	O	3	5	50
1 Theoretical foundations of IT project management - lecture	Z			6
2 IT project management as teamwork - laboratory	O			44
12 Software engineering	O	3	5	50
1 Software engineering - lecture	O			20
2 Software engineering - laboratory	O			30
13 Computer networks	O	3	5	50
1 Computer networks - lecture	Z			20
2 Computer networks - laboratory	O			30
14 Security foundations	O	4	5	50
1 Number theory in security	O			10
2 Security foundations - lecture	Z			20
3 Security foundations - laboratory	O			20
15 Internet Technologies	O	4	5	50
1 Internet Technologies - lecture	O			15
2 Internet Technologies - laboratory	O			25
3 UI/UX Design for web applications	O			10
16 Introduction to embedded systems	O	4	5	50
1 Introduction to electronics - lecture	O			15
2 Introduction to electronics - laboratory	O			15
3 Programmable logic devices - lecture	O			5
4 Programmable logic devices - laboratory	O			15
17 Computer architecture	O	5	5	50
1 Computer architecture	Z			15
2 Computer architecture and distributed processing - laboratory	O			35



Name of the subject / course		Credit	Semester	ECTS	Teaching hours
18	Mobile applications	O	5	5	50
	1 Basics of mobile applications for the Android platform	Z			20
	2 Mobile Application Design	O			30
19	Artificial Intelligence	O	5	5	50
	1 Artificial Intelligence - lecture	Z			20
	2 Artificial Intelligence - laboratory	O			30
20	Big Data	O	6	5	50
	1 Big Data - lecture	Z			15
	2 Big Data - laboratory	O			35
21	Diploma team project 1	O	6	5	50
	1 Diploma seminar 1	Z			10
	2 Diploma team project 1	O			40
22	IoT and Cloud Computing	O	6	5	50
	1 IoT and Cloud Computing - lecture	Z			15
	2 IoT and Cloud Computing - laboratory	O			35
23	Diploma team project 2	O	7	5	50
	1 Diploma seminar 2	Z			10
	2 Diploma team project 2	O			40
Total				115	1150



## Elective modules proposed in the academic year 2025/2026

### Course modules

Advanced artificial intelligence	Advanced mobile application development	Advanced object oriented programming
Basics of accelerating applications with NVIDIA CUDA in C/C++	Boardroom Global Challenge	Building single page applications
Concurrent programming	Content management system	Digital immersion
Excel 365 for programmers and analysts	IT Project management	Modern advanced JavaScript/TypeScript
Music in video games	Symfony framework: from scratch to REST API	The Modelling Toolbox
UX/UI - design process of digital products	Consumer decision-making psychology	



## Internships

Nazwa przedmiotu / kursu	Zaliczenie	Semestr	ECTS	Godziny dydaktyczne
1 Introduction to work placements	Z	2	0	1
1 Meeting with the coordinator	Z			1
2 Building a career development path (iP121)	Z	5	0	3
1 Building a career development path (iP121)	Z			3
3 Work placement	Z	7	33	960
1 Work placement at an employer	Z			960
Total			33	964



## Physical education

You definitely won't be without PE classes as well. You'll take a total of 60 hours of physical education classes in semesters 1 and 2. You'll have a choice of gym, spinning, yoga, squash, table tennis - depending on your strength and mood.

### Are you looking for additional and more detailed information?

Details of the number of hours are available in the [BIP](#) (Public Information Bulletin).