Chapter B: ICT students and graduates

Students of and graduates from ICT fields of education (in short ICT students and graduates) are **defined** by the International Standard Classification of Education: Fields of Education and Training 2013 used in the Czech Republic **(CZ-ISCED-F 2013).** ICT-related studies correspond to the broad filed of education **Information and Communication Technologies (class 06)** of this classification that involves detailed defined fields of education as follows:

Database and network design and administration (0612);

Software and applications development and analysis (0613);

ICT not elsewhere classified (0619) and

Inter-disciplinary programmes and qualifications involving ICT (0688).

Note: The 0619 and 0688 fields of education are merged into one category called here Inter-disciplinary and other ICT fields.

Detail description of **ISCED-F 2013** is available here: https://unesdoc.unesco.org/ark:/48223/pf0000235049

Education at universities presented in this chapter for Czechia belongs to the tertiary level of education and **includes bachelor, follow-up master, master and doctoral study programmes.** Master and follow-up master study programmes together are called here master programmes. Studies can be delivered in full-time, distance, or combined type of education.

Data for the Czech Republic were obtained from data sources of the **Ministry of Education, Youth, and Sports (MEYS)**, namely from **the Union Information from Students' Registers (SIMS)**. The source database of SIMS is continually completed and updated, including retrospective corrections. Detailed information about the SIMS database is available here *(only in Czech)*: https://msmt.gov.cz/vzdelavani/vysoke-skolstvi/sdruzene-informace-matrik-studentu-sims.

Data on university students are always as at **31 December of the reference year**; data on graduates are **for the entire calendar year**.

Numbers of students and graduates are given **as headcount**, i.e. each student is included in a particular piece of data only once, including students, who study in more study programmes or fields of education at the same time. The total numbers of students and graduates thus do not have to be equal to the sums of students and graduates of respective types of study programmes or field of education.

Eurostat database was used for **the international comparisons.** Data about number of students of and graduates from ICT fields of education contain information for tertiary level of education, i.e. including, for example, higher vocational schools. For this reason, the data for the Czech Republic from Eurostat differ from the data published by the CZSO available in the SIMS database. The main reason is mainly a slightly different definition of levels of tertiary education.

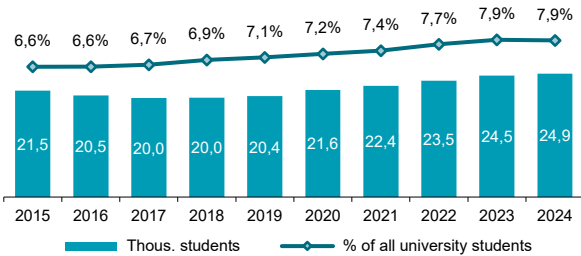**For more information on ICT students see***:* https://csu.gov.cz/students-of-ict-fields

Chapter B: ICT students and graduates

Table B.1 University students of ICT fields of education in Czechia by gender, age and citizenship

Number of students

	2022	2023	2024
Total	**23 494**	**24 508**	**24 933**
Men	19 318	20 111	20 315
Women	4 176	4 397	4 618
Age			
Under 20 years	3 039	3 056	3 021
20-24 years	15 303	16 133	16 780
25-29 years	3 554	3 642	3 562
30-34 years	884	900	837
35 + years	714	777	733
Citizenship			
Czech citizens, total	**15 895**	**16 540**	**16 974**
Men	13 530	14 034	14 255
Women	2 365	2 506	2 719
Foreigners, total	**7 599**	**7 968**	**7 960**
Slovakia	3 146	3 304	3 417
Ukraine	1 082	1 255	1 398
Russia	1 340	1 161	931
other countries	2 031	2 248	2 214

Chart B.1 University students of ICT fields of education in Czechia

Chart B.2 University students of ICT fields of education in Czechia by gender
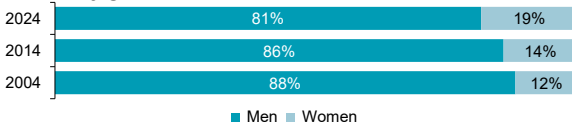
Chart B.3 University students of ICT fields of education in Czechia by citizenship

Source: Czech Statistical Office calculation based on MEYS database

Chapter B: ICT students and graduates

Chart B.4 Tertiary students of ICT fields of education in 2023 (% of all tertiary students)

Country	%
Finland	11,2%
Estonia	10,9%
Luxembourg	10,3%
Latvia	8,6%
Hungary	8,4%
Germany	7,9%
Romania	7,4%
Lithuania	7,2%
Czechia	7,0%
Spain	6,7%
Ireland	6,5%
Slovenia	6,5%
Slovakia	6,3%
Austria	6,2%
Bulgaria	5,9%
Poland	5,9%
EU27	5,5%
Denmark	5,4%
Sweden	5,3%
Croatia	5,3%
Malta	5,1%
Netherlands	4,7%
Belgium	4,4%
Cyprus	4,3%
Greece	4,1%
Portugal	3,4%
France	3,2%
Italy	2,2%
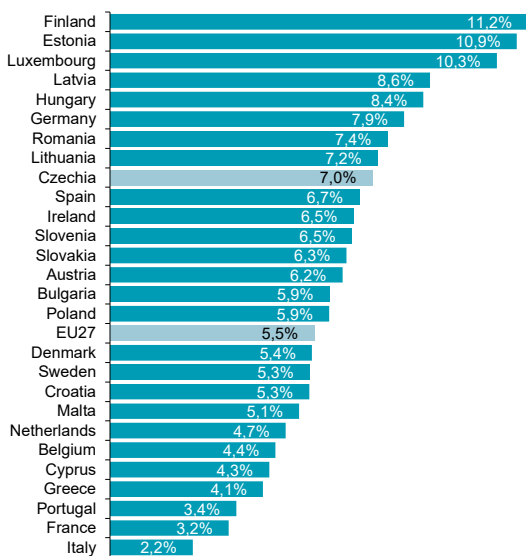
Chart B.5 Tertiary students of ICT fields of education in 2023 (% of population aged 20 to 29 years)

Country	%
Finland	5,6%
Latvia	3,7%
Estonia	3,5%
Greece	3,4%
Spain	3,1%
Germany	2,8%
Ireland	2,5%
Lithuania	2,5%
Austria	2,5%
Slovenia	2,4%
Bulgaria	2,4%
Hungary	2,2%
Czechia	2,2%
EU27	2,1%
Romania	2,1%
Denmark	2,1%
Sweden	2,0%
Poland	2,0%
Croatia	2,0%
Netherlands	2,0%
Cyprus	1,8%
Belgium	1,7%
Slovakia	1,5%
Malta	1,4%
Portugal	1,3%
France	1,2%
Luxembourg	0,9%
Italy	0,8%

Source: Eurostat and Czech Statistical Office own calculations
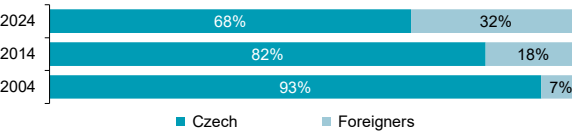
Chapter B: ICT students and graduates

Table B.2 University students of ICT fields of education in Czechia by selected characteristics

Number of students

	2022	2023	2024
Total	**23 494**	**24 508**	**24 933**
Students of public universities	22 639	23 471	23 846
Students of private universities	861	1 053	1 100
Studies			
Full-time studies	20 926	21 828	22 279
Distance and combined studies	2 586	2 715	2 680
Study programme			
Bachelor	17 200	17 953	18 319
Master	5 411	5 635	5 692
Doctoral	893	926	932
Field of study			
Software and applications development and analysis	17 467	18 598	18 910
Database and network design and administration	945	937	956
Inter-disciplinary and other ICT fields	5 114	5 028	5 109

Chart B.6 University students of ICT fields of education in Czechia by studies

	Full-time studies	Distance and combined studies
2024	89%	11%
2014	84%	16%
2004	88%	12%

Chart B.7 University students of ICT fields of education in Czechia by study programme

	Bachelor	Master	Doctoral
2024	73%	23%	4%
2014	69%	27%	4%
2004	67%	29%	4%

Chart B.8 University students of ICT fields of education in Czechia by field of study
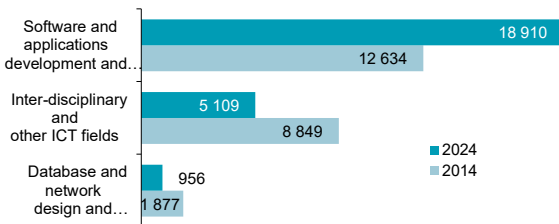
Software and applications development and… — 18 910 (2024), 12 634 (2014)
Inter-disciplinary and other ICT fields — 5 109 (2024), 8 849 (2014)
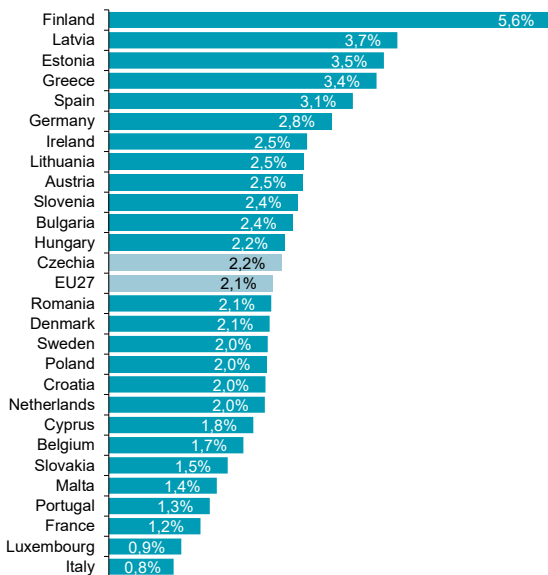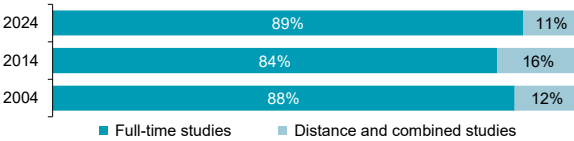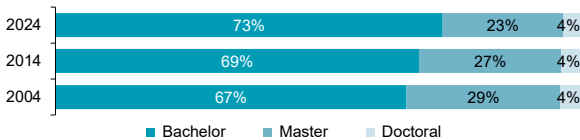Database and network design and… — 956 (2024), 1 877 (2014)

Source: Czech Statistical Office calculation based on MEYS database

Chapter B: ICT students and graduates

Chart B.9 Tertiary students of ICT fileds of education by study programme in 2023
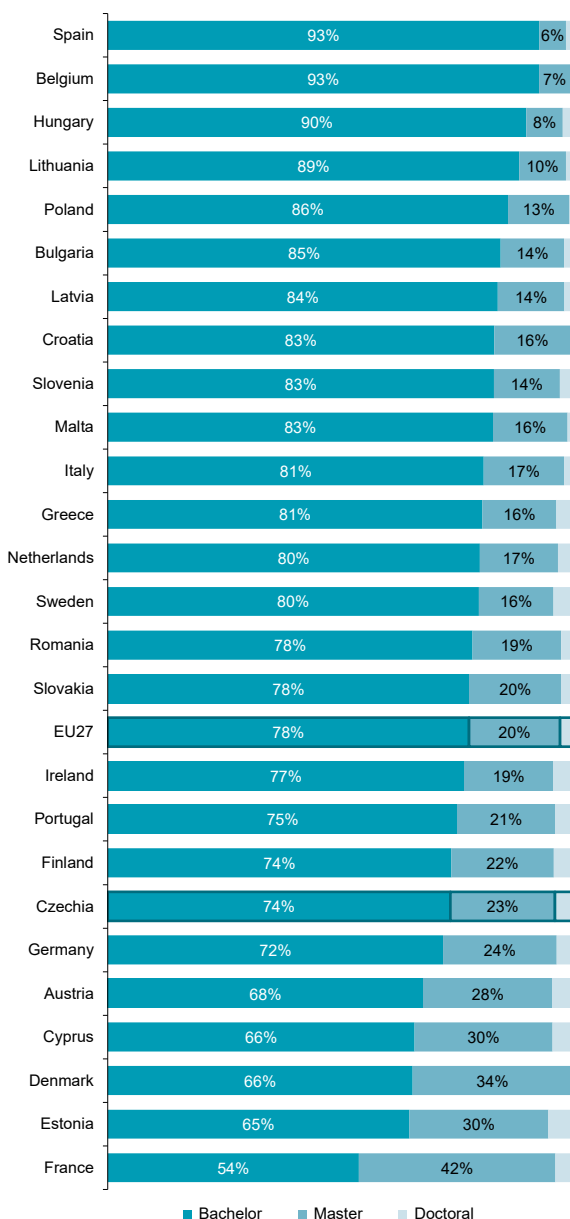
Country	Bachelor	Master	Doctoral
Spain	93%	6%	
Belgium	93%	7%	
Hungary	90%	8%	
Lithuania	89%	10%	
Poland	86%	13%	
Bulgaria	85%	14%	
Latvia	84%	14%	
Croatia	83%	16%	
Slovenia	83%	14%	
Malta	83%	16%	
Italy	81%	17%	
Greece	81%	16%	
Netherlands	80%	17%	
Sweden	80%	16%	
Romania	78%	19%	
Slovakia	78%	20%	
EU27	78%	20%	
Ireland	77%	19%	
Portugal	75%	21%	
Finland	74%	22%	
Czechia	74%	23%	
Germany	72%	24%	
Austria	68%	28%	
Cyprus	66%	30%	
Denmark	66%	34%	
Estonia	65%	30%	
France	54%	42%	

■ Bachelor ■ Master ▢ Doctoral

Source: Eurostat and Czech Statistical Office own calculations

Chapter B: ICT students and graduates

Table B.3 University graduates from ICT fields of education in Czechia by gender, age and citizenship

Number of graduates

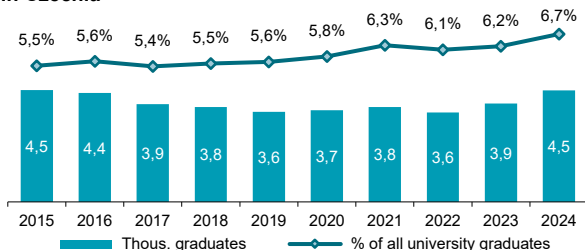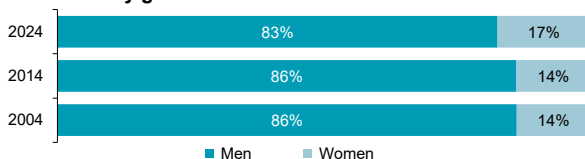|	2022	2023	2024
Total	**3 585**	**3 947**	**4 466**
Men	2 962	3 216	3 689
Women	623	731	777
Age			
20-24 years	1 936	2 057	2 253
25-29 years	1 383	1 590	1 789
30-34 years	154	174	261
35 + years	112	126	162
Citizenship			
Czech citizens, total	**2 579**	**2 846**	**3 165**
Men	2 206	2 417	2 691
Women	373	429	474
Foreigners, total	**1 006**	**1 101**	**1 301**
Slovakia	683	679	710
Russia	111	126	167
Ukraine	58	74	104
other countries	154	222	320

Chart B.10 University graduates from ICT fields of education in Czechia

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
% of all university graduates	5,5%	5,6%	5,4%	5,5%	5,6%	5,8%	6,3%	6,1%	6,2%	6,7%
Thous. graduates	4,5	4,4	3,9	3,8	3,6	3,7	3,8	3,6	3,9	4,5

Chart B.11 University graduates from ICT fields of education in Czechia by gender

	Men	Women
2024	83%	17%
2014	86%	14%
2004	86%	14%

Chart B.12 University graduates from ICT fields of education in Czechia by citizenship
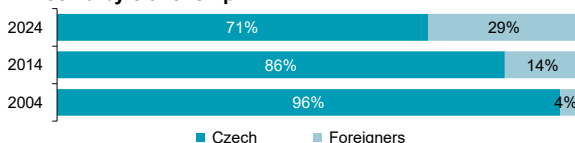
	Czech	Foreigners
2024	71%	29%
2014	86%	14%
2004	96%	4%

Source: Czech Statistical Office calculation based on MEYS database

Chapter B: ICT students and graduates

Chart B.13 Tertiary graduates from ICT fields of education in 2023 (% of all tertiary graduates)

Country	%
Luxembourg	9,7%
Estonia	9,0%
Ireland	8,4%
Finland	8,3%
Romania	7,3%
Sweden	7,0%
Hungary	6,2%
Denmark	6,1%
Latvia	5,9%
Spain	5,7%
Austria	5,6%
Czechia	5,6%
Germany	5,6%
Croatia	5,5%
Slovenia	5,2%
Malta	5,2%
Lithuania	5,0%
Bulgaria	4,9%
Slovakia	4,8%
Poland	4,8%
EU27	4,7%
Netherlands	4,6%
France	3,8%
Greece	3,7%
Belgium	3,0%
Portugal	2,9%
Cyprus	2,8%
Italy	1,6%
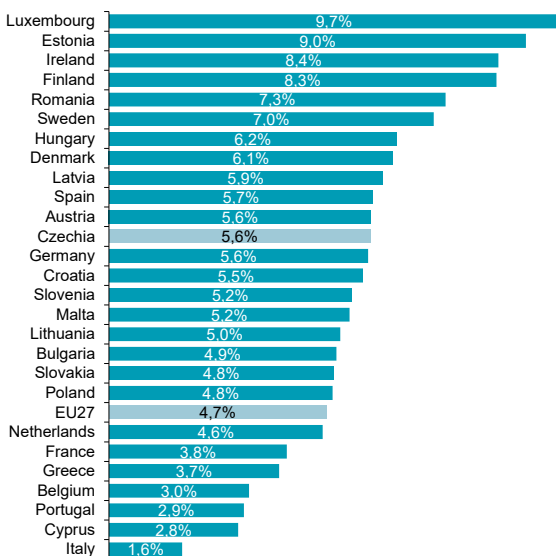
Graf B14 Tertiary graduates from ICT fields of education in 2023 (% of population aged 20 to 29 years)
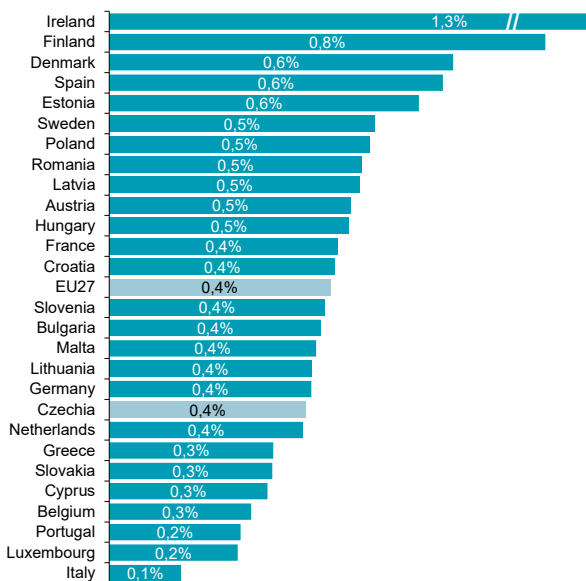
Country	%
Ireland	1,3%
Finland	0,8%
Denmark	0,6%
Spain	0,6%
Estonia	0,6%
Sweden	0,5%
Poland	0,5%
Romania	0,5%
Latvia	0,5%
Austria	0,5%
Hungary	0,5%
France	0,4%
Croatia	0,4%
EU27	0,4%
Slovenia	0,4%
Bulgaria	0,4%
Malta	0,4%
Lithuania	0,4%
Germany	0,4%
Czechia	0,4%
Netherlands	0,4%
Greece	0,3%
Slovakia	0,3%
Cyprus	0,3%
Belgium	0,3%
Portugal	0,2%
Luxembourg	0,2%
Italy	0,1%

Source: Eurostat and Czech Statistical Office own calculations

Chapter B: ICT students and graduates

Table B.4 University graduates from ICT fields of education in Czechia by selected characteristics

		Number of graduates	
	2022	**2023**	**2024**
Total	**3 585**	**3 947**	**4 466**
Graduates from public universities	3 535	3 875	4 339
Graduates from private universities	50	72	127
Studies			
Full-time studies	3 269	3 602	4 046
Distance and combined studies	316	345	420
Study programme			
Bachelor	2 197	2 395	2 664
Master	1 302	1 477	1 686
Doctoral	86	75	116
Field of study			
Software and applications development and analysis	2 264	2 663	3 133
Database and network design and administration	279	240	244
Inter-disciplinary and other ICT fields	1 042	1 044	1 091

Chart B.15 University graduates from ICT fields of education in Czechia by studies

Year	Full-time studies	Distance and combined studies
2024	91%	9%
2014	89%	11%
2004	86%	14%

■ Full-time studies ■ Distance and combined studies

Chart B.16 University graduates from ICT fields of education in Czechia by study programme

Year	Bachelor	Master
2024	60%	38%
2014	58%	40%

■ Bachelor ■ Master ■ Doctoral

Chart B.17 University graduates from ICT fields of education in Czechia by field of study
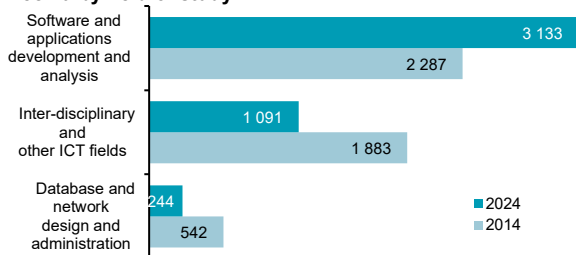
Field	2024	2014
Software and applications development and analysis	3 133	2 287
Inter-disciplinary and other ICT fields	1 091	1 883
Database and network design and administration	244	542

■2024 ■2014
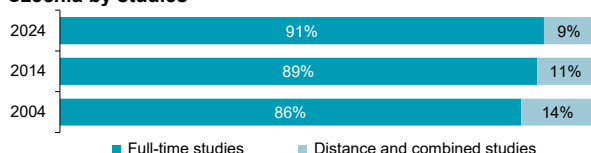
Source: Czech Statistical Office calculation based on MEYS database

Chart B.18 Tertiary graduates from ICT fields of education by study programme in 2023
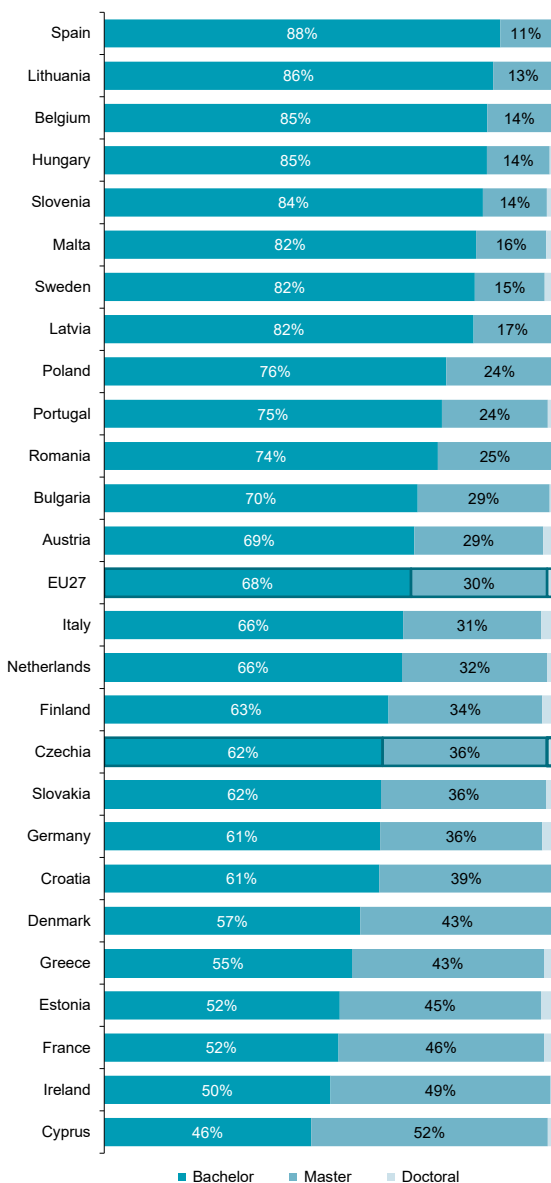
Country	Bachelor	Master
Spain	88%	11%
Lithuania	86%	13%
Belgium	85%	14%
Hungary	85%	14%
Slovenia	84%	14%
Malta	82%	16%
Sweden	82%	15%
Latvia	82%	17%
Poland	76%	24%
Portugal	75%	24%
Romania	74%	25%
Bulgaria	70%	29%
Austria	69%	29%
EU27	68%	30%
Italy	66%	31%
Netherlands	66%	32%
Finland	63%	34%
Czechia	62%	36%
Slovakia	62%	36%
Germany	61%	36%
Croatia	61%	39%
Denmark	57%	43%
Greece	55%	43%
Estonia	52%	45%
France	52%	46%
Ireland	50%	49%
Cyprus	46%	52%

■ Bachelor ■ Master ■ Doctoral

Source: Eurostat and Czech Statistical Office own calculations

Chapter B: ICT students and graduates

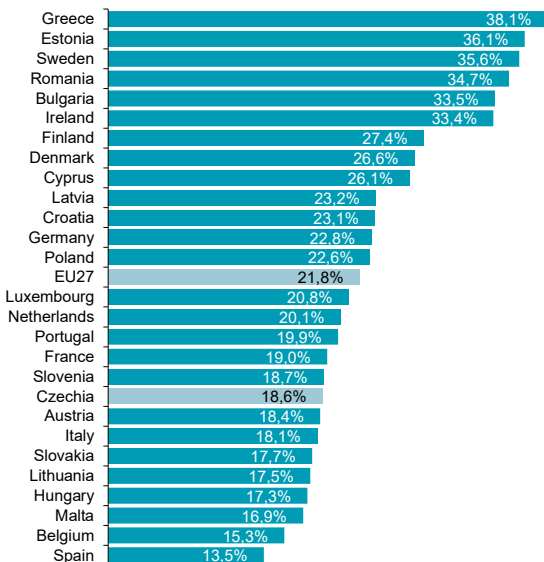## Chart B.19 Share of women among all tertiary students of ICT fields of education in 2023

Country	Share
Sweden	32,6%
Estonia	32,1%
Romania	31,4%
Greece	28,9%
Bulgaria	28,1%
Finland	25,5%
Denmark	24,7%
Croatia	22,2%
Cyprus	22,2%
Germany	22,1%
Ireland	22,0%
Luxembourg	20,5%
EU27	20,3%
Austria	20,2%
Latvia	20,1%
Slovenia	19,5%
Portugal	18,4%
France	18,4%
Czechia	17,7%
Malta	17,4%
Poland	17,0%
Lithuania	16,9%
Netherlands	16,8%
Spain	15,9%
Italy	15,7%
Hungary	15,1%
Belgium	14,9%
Slovakia	14,8%
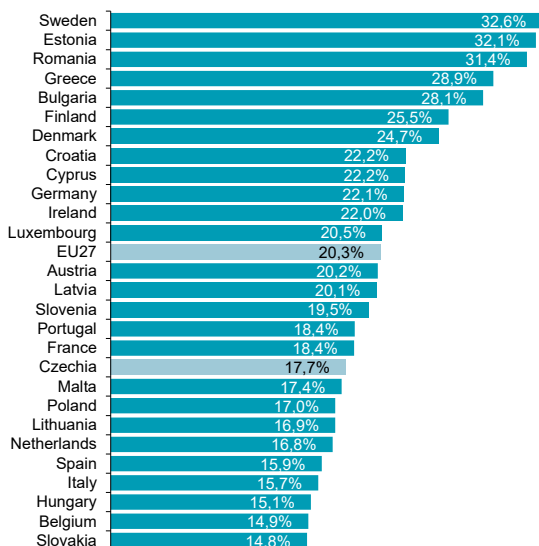
Chart B.20 Share of women in EU countries among all tertiary graduates from ICT fields of education in 2023

Country	Share
Greece	38,1%
Estonia	36,1%
Sweden	35,6%
Romania	34,7%
Bulgaria	33,5%
Ireland	33,4%
Finland	27,4%
Denmark	26,6%
Cyprus	26,1%
Latvia	23,2%
Croatia	23,1%
Germany	22,8%
Poland	22,6%
EU27	21,8%
Luxembourg	20,8%
Netherlands	20,1%
Portugal	19,9%
France	19,0%
Slovenia	18,7%
Czechia	18,6%
Austria	18,4%
Italy	18,1%
Slovakia	17,7%
Lithuania	17,5%
Hungary	17,3%
Malta	16,9%
Belgium	15,3%
Spain	13,5%

Source: Eurostat and Czech Statistical Office own calculations