

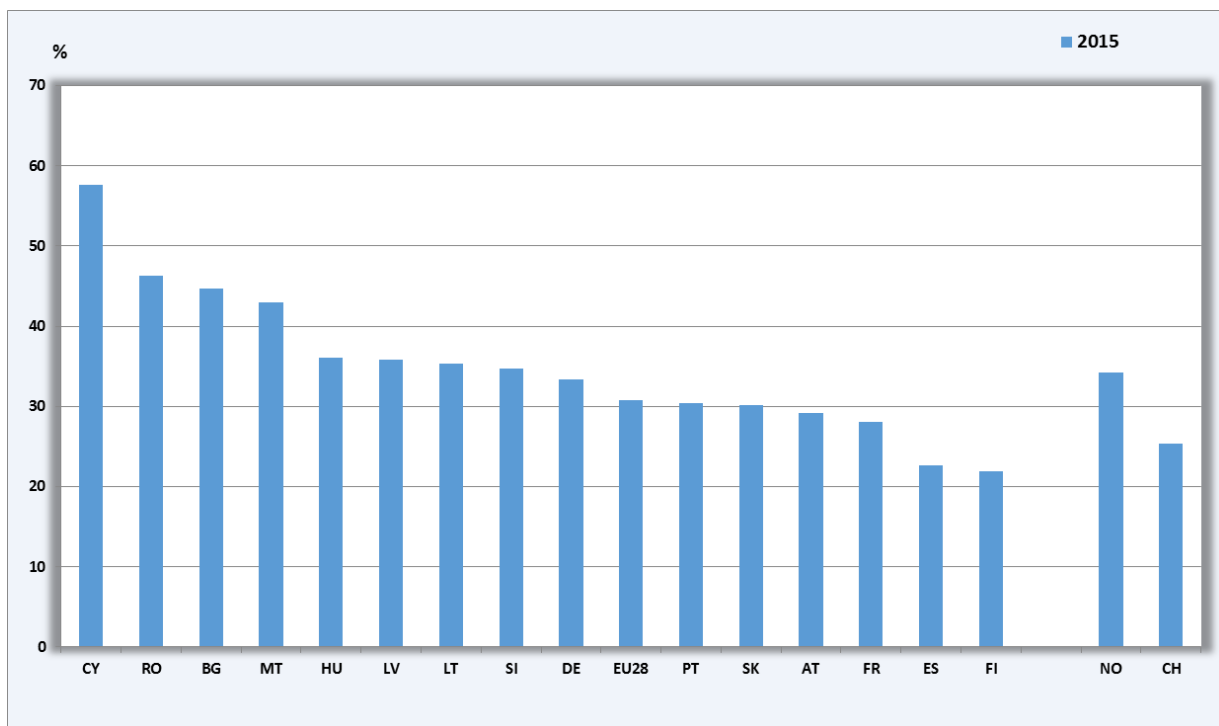
20. How many IVET students graduate in STEM subjects?

Indicator 2050: STEM graduates from upper secondary IVET

IVET can support technological innovation by providing relevant skills. At medium level of education, IVET produces graduates in STEM subjects (science, technology, engineering, and mathematics) which are of considerable importance to technological activities and progress across the EU.

The indicator below is defined as the number of graduates from upper secondary vocational education (ISCED 3) who successfully completed their studies in STEM subjects, expressed as a percentage of all graduates from upper secondary vocational education. EU averages are estimated from available country data.

Figure 1 STEM graduates from upper secondary IVET (% of total)



Source: Cedefop calculations based on Eurostat data/UOE data collection on education.

Key points

It is estimated that, on average across the EU, 30.8% of graduates from upper secondary VET obtained a qualification in STEM subjects in 2015. The highest share was found in Cyprus (57.6%). Romania, Bulgaria, and Malta also report percentages above 40%. Spain and Finland had the lowest shares (below 25%).

Among the two non-EU countries for which data are available, Norway (at 34.3%) had a percentage of upper secondary VET graduates in STEM subjects above the EU average, while the share in Switzerland (at 25.4%) was lower than the EU average.

Table 1 STEM graduates from upper secondary IVET (% of total)

Country code	Country	2015		Recent change			
		Value	Flag	Range	Country	EU28	
EU28	European Union (28)	30.8	b	'13-'15	↘	-0.3	
BE	Belgium		b	'13-'14	↗	1.4	↘ -0.5
BG	Bulgaria	44.7	b	'13-'15	↗	0.3	↘ -0.3
CZ	Czech Republic		b	'13-'14	↗	1.7	↘ -0.5
DK	Denmark		b	'13-'14	↗	0.4	↘ -0.5
DE	Germany	33.4	b				
EE	Estonia		b	'13-'14	↘	-4.6	↘ -0.5
IE	Ireland		b z				
EL	Greece		b				
ES	Spain	22.6	b	'13-'15	↗	0.9	↘ -0.3
FR	France	28.1	b	'13-'15	↘	-0.3	↘ -0.3
HR	Croatia		b				
IT	Italy		b				
CY	Cyprus	57.6	b	'13-'15	↗	1.1	↘ -0.3
LV	Latvia	35.8	b	'13-'15	↘	-6.2	↘ -0.3
LT	Lithuania	35.3	b	'13-'15	↗	1.3	↘ -0.3
LU	Luxembourg		b	'13-'14	↗	0.8	↘ -0.5
HU	Hungary	36.1	b	'13-'15	↗	2.9	↘ -0.3
MT	Malta	43.0	b	'13-'15	↘	-8.7	↘ -0.3
NL	Netherlands		b	'13-'14	↘	-0.1	↘ -0.5
AT	Austria	29.2	b	'13-'15	↗	1.1	↘ -0.3
PL	Poland		b	'13-'14	↗	4.8	↘ -0.5
PT	Portugal	30.4	b	'13-'15	↘	-1.8	↘ -0.3
RO	Romania	46.3	b	'13-'15	↘	-5.2	↘ -0.3
SI	Slovenia	34.7	b	'13-'15	↗	0.5	↘ -0.3
SK	Slovakia	30.2	b	'13-'15	↗	0.9	↘ -0.3
FI	Finland	22.0	b	'13-'15	↘	-2.0	↘ -0.3
SE	Sweden		b	'13-'14	↘	-0.7	↘ -0.5
UK	United Kingdom		b				
MK	The Former Yugoslav Republic of Macedonia		b				
IS	Iceland		b				
NO	Norway	34.3	b	'13-'15	↘	-0.2	↘ -0.3
CH	Switzerland	25.4	b	'13-'15	↘	-1.2	↘ -0.3
TR	Turkey		b				

Arrows ↗ or ↘ signal a positive or negative change. Arrow → indicates: no change.

The UOE back reconstruction of the 2010 values based on ISCED 2011 is not yet available.

The EU28 values are based on 25 countries (missing: HR, IT, UK), with partial information for BE, CZ, DK, DE, EE, EL, LU, NL, PL, SE.

(b) Break after 2010. Therefore baseline data not included. (z) Eurostat: "not applicable".

Source: Cedefop calculations based on Eurostat data/UOE data collection on education.

Please cite this document as: Cedefop (2018). 20. How many IVET students graduate in STEM subjects? Indicator 2050: STEM graduates from upper secondary IVET, (2017 update) In: Cedefop. *Statistics and indicators: Statistics and graphs*. <http://www.cedefop.europa.eu/en/publications-and-resources/statistics-and-indicators/statistics-and-graphs/20-how-many-ivet-students>