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Wissenschaft weltoffen kompakt 2018

Facts and Figures on the International Nature of Study and Research in Germany

DZHW Deutsches Zentrum für
Hochschul- und Wissenschaftsforschung

DAAD Deutscher Akademischer Austauschdienst
German Academic Exchange Service

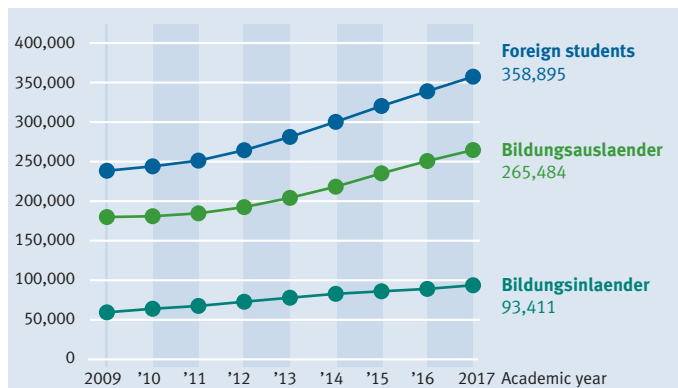
FOREIGN STUDENTS IN GERMANY

Foreign students at German higher education institutions fall into two distinct groups: **Bildungsinlaender** and **Bildungsauslaender**. Bildungsinlaender are students of other nationalities who have obtained their higher education entrance qualification in Germany, while Bildungsauslaender are students of other nationalities who have obtained their higher education entrance qualification outside Germany. Bildungsinlaender have usually lived in Germany for a long period and attended a German school before going to university here, whereas Bildungsauslaender usually come to Germany primarily in order to study here.



The **central data basis** on foreign students in Germany is the Federal Statistical Office's statistics on students and examinations. These data are collected by higher education institutions in accordance with statutory provisions, examined by the statistical offices of the federal states and passed on to the Federal Statistical Office.

1 | Foreign students, Bildungsauslaender and Bildungsinlaender, since 2009



2 | German and foreign students by type of higher education institution (HEI) in 2017, number and in % of all students at German HEI



Students	All higher education institutions (HEIs)		Universities		Universities of applied sciences (UAS)	
	Number	in %	Number	in %	Number	in %
German students	2,448,115	87.2	1,560,073	86.1	888,042	89.2
Foreign students	358,895	12.8	251,007	13.9	107,888	10.8
Bildungsauslaender	265,484	9.5	197,516	10.9	67,968	6.8
Bildungsinlaender	93,411	3.3	53,491	3.0	39,920	4.0

3 | Bildungsauslaender by type of mobility, since 2005, number and in % of all Bildungsauslaender at German higher education institutions

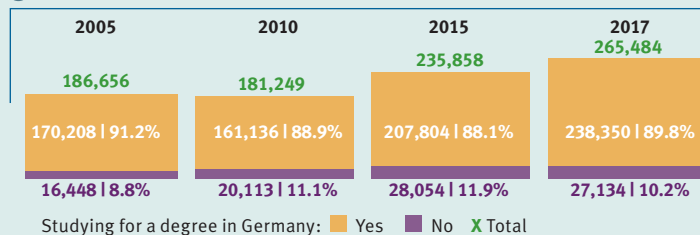


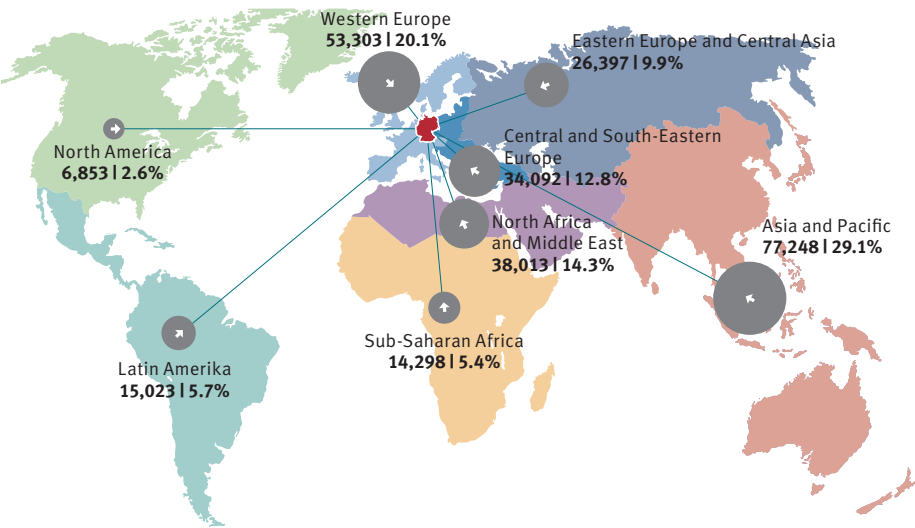
Fig. 1–3

Source: Federal Statistical Office of Germany; DZHW calculation

Deviations from 100 % are due to rounding.

The academic year is taken as the basis for determining the number of students. Using this method, students of the winter semester 2016/17 are defined as students of the academic year 2017.

4 | **Bildungsauslaender, in 2017, by region of origin,**
number and in % of all Bildungsauslaender at German higher education institutions



Total number of Bildungsauslaender at German higher education institutions 265,484
(including 257 students who could not be classified by region)

5 | **Bildungsauslaender from the top 20 countries of origin, in 2017, number and in % of all Bildungsauslaender at German higher education institutions**

Country of origin	Number	in %
China	34,997	13.2
India	15,308	5.8
Russia	11,295	4.3
Austria	10,575	4.0
Italy	8,550	3.2
Cameroon	7,425	2.8
France	7,335	2.8
Iran	7,123	2.7
Ukraine	7,000	2.6
Turkey	6,953	2.6
Bulgaria	6,823	2.6
Spain	6,220	2.3
USA	5,839	2.2
South Korea	5,575	2.1
Poland	5,339	2.0
Syria	5,090	1.9
Morocco	5,034	1.9
Indonesia	4,669	1.8
Tunesia	4,489	1.7
Pakistan	4,409	1.7
Total	265,484	100.0

6 | Bildungsauslaender, in 2017, by type of degree and type of higher education institution,
number and in % of all Bildungsauslaender at German higher education institutions

	Total		Universities		UAS	
	Number	in %	Number	in %	Number	in %
Bachelor's degree	96,877	36.5	55,013	27.9	41,864	61.6
Master's degree	94,770	35.7	74,798	37.9	19,972	29.4
PhD	26,223	9.9	26,203	13.3	20	0.0
Other degrees	20,480	7.7	18,879	9.6	1,601	2.4
Not studying for a degree	27,134	10.2	22,627	11.5	4,507	6.6
Total	265,484	100.0	197,520	100.0	67,964	100.0

Fig. 4-7

Source: Federal Statistical Office of Germany

Deviations from 100% are due to rounding.

The academic year is taken as the basis for determining the number of students. Using this method, students of the winter semester 2016/17 are defined as students of the academic year 2017.

1

The presentation of the subject groups follows the new typology of subject groups of the Federal Statistical Office. Therefore, the subject Informatics now belongs to the subject group Engineering and the subjects Educational Sciences and Psychology to the subject group Law, Economics and Social Sciences.

7 | Bildungsauslaender, in 2017, by subject group¹ and type of higher education institution,
number and in % of all Bildungsauslaender at German higher education institutions

	Total		Universities		UAS	
	Number	in %	Number	in %	Number	in %
Engineering	98,274	37.0	63,540	32.2	34,734	51.1
Law, Economics and Social Sciences	69,123	26.0	43,700	22.1	25,423	37.4
Humanities	32,824	12.4	32,000	16.2	824	1.2
Mathematics, Natural Sciences	27,898	10.5	25,951	13.1	1,947	2.9
Medicine, Health Sciences	14,426	5.4	13,257	6.7	1,169	1.7
Art, Art History	14,360	5.4	12,068	6.1	2,292	3.4
Agricult., Forestry a. Food Sciences, Vet. Medicine	6,034	2.3	4,761	2.4	1,273	1.9
Other	2,545	1.0	2,239	1.1	306	0.5
Total	265,484	100.0	197,516	100.0	67,968	100.0

BILDUNGSAUSLAENDER IN THE FEDERAL STATES

8 | Bildungsauslaender, in 2012 and 2017, by federal state, number and in % of all students in the relevant state

Federal state	2012		2017		Changes in the numbers 2012–2017 in %
	Number	in %	Number	in %	
Berlin	20,291	13.2	27,733	15.4	36.7
Saxony	10,358	9.3	15,283	13.7	47.5
Brandenburg	4,952	9.6	6,433	13.1	29.9
Thuringia	3,652	6.8	5,882	11.6	61.1
Saarland	3,197	11.9	3,603	11.6	12.7
Bremen	3,668	11.0	4,115	11.3	12.2
Saxony-Anhalt	4,592	8.2	6,095	11.2	32.7
Baden-Wuerttemberg	27,384	8.9	37,742	10.4	37.8
Bavaria	22,052	6.9	34,553	9.1	56.7
Hesse	17,598	8.4	22,483	9.0	27.8
Hamburg	6,403	7.5	8,639	8.5	34.9
North Rhine-Westphalia	43,819	7.3	61,154	7.9	39.6
Lower Saxony	11,627	7.2	16,036	7.8	37.9
Rhineland-Palatinate	8,335	7.1	9,253	7.6	11.0
Mecklenb.-W. Pomerania	1,946	4.8	2,678	7.0	37.6
Schleswig-Holstein	2,979	5.5	3,802	6.3	27.6
Total	192,853	8.1	265,484	9.5	37.7

9 | Incoming Erasmus students, in 2016, by federal state, number and in % of all students in the relevant state

Federal state	Number	in %
Berlin	2,712	1.5
Bremen	492	1.4
Brandenburg	629	1.3
Saxony	1,330	1.2
Baden-Wuerttemberg	4,144	1.2
Bavaria	4,170	1.1
Saarland	313	1.0
Thuringia	445	0.9
Rhineland-Palatinate	1,011	0.8
Hamburg	766	0.8
Lower Saxony	1,210	0.6
Saxony-Anhalt	331	0.6
Mecklenb.-W. Pomerania	219	0.6
Hesse	1,355	0.6
North Rhine-Westphalia	3,955	0.5
Schleswig-Holstein	294	0.5
Total	23,376	0.8

FOREIGN FIRST-YEAR STUDENTS AND GRADUATES

10 | German and foreign first-year students and graduates, in 2006, 2011 and 2016, number and in % of all first-year students or graduates at German higher education institutions

	2006		2011		2016	
	Number	in %	Number	in %	Number	in %
First-year students						
German first-year students	281,409	81.6	430,629	83.0	391,396	76.8
Foreign first-year students	63,413	18.4	88,119	17.0	118,364	23.2
<i>Bildungsauslaender</i>	53,554	15.5	72,886	14.1	101,294	19.9
<i>Bildungsinlaender</i>	9,859	2.9	15,233	2.9	17,070	3.3
Graduates						
German graduates	239,713	90.2	353,839	90.2	442,566	90.0
Foreign graduates	25,991	9.8	38,332	9.8	49,112	10.0
<i>Bildungsauslaender</i>	20,397	7.7	30,386	7.7	38,593	7.8
<i>Bildungsinlaender</i>	5,594	2.1	7,946	2.0	10,519	2.1

Fig. 8

Source: Federal Statistical Office of Germany; DZHW calculation

2012 = WS 2011/12;

2017 = WS 2016/17.

Fig. 9

Source: DAAD

An academic year in the Erasmus+ statistics begins on June 1st of the prior year and ends on May 31st of the following year. 2016 = 6/1/2015 until 5/31/2017.

Excluding placements.

The proportions of all students relate to the winter semester 2015/16.

Fig. 10

Source: Federal Statistical Office of Germany

First-year students: The sum of the number of first-year students in a summer semester and the following winter semester is the number for the year. 2016 = first-year students SS 2016 + WS 2016/17.


Graduates: An examination year includes the graduates of a winter semester and the following summer semester.

2016 = graduates WS 2015/16 + SS 2016.

GERMAN STUDENTS ABROAD

On the topic of international mobility of German students or graduates, a distinction is made between temporary study-related visits abroad as part of a domestic study programme (temporary study-related visits abroad) and study-related visits abroad with the aim of taking a degree abroad (degree-related international mobility).

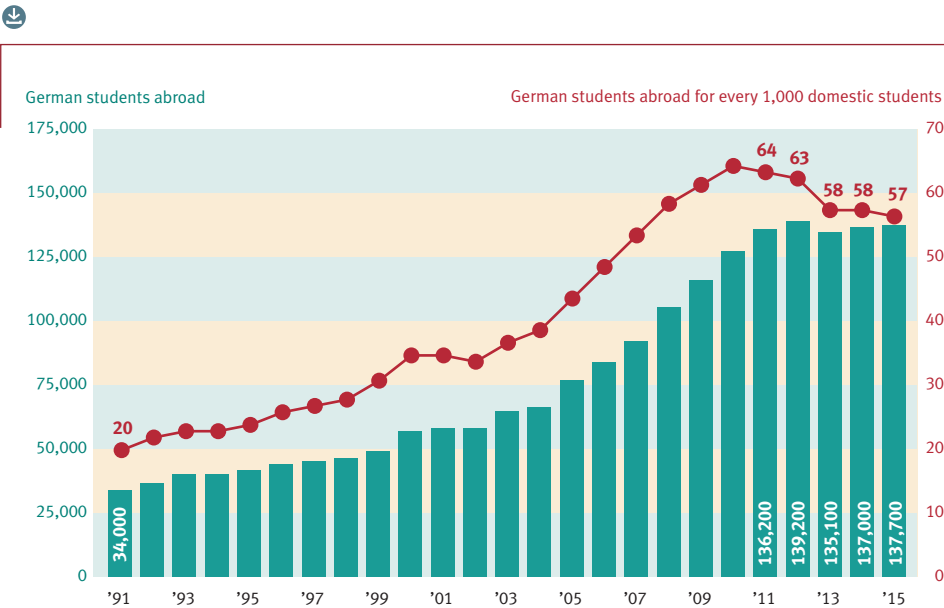
The findings on **degree-related international mobility** were collected by the Federal Statistical Office of Germany in statistical offices abroad. However, these statistics do not only include German students aiming to obtain a degree abroad, because in some cases, unknown numbers of Erasmus students and other students on temporary study-related visits abroad are included in the data.



Since there are no official statistics regarding the total number of **temporary study-related visits abroad** by German students, this can currently only be estimated on the basis of student and graduate surveys. The differences in the proportions of international mobility between the various surveys are the result of different survey periods, sampling and methodologies. However, official data is available relating to the subsection of temporary study or placement visits abroad as part of the EU's Erasmus programme. These Erasmus visits represent about one third of all temporary study-related visits abroad made by German students.

DEGREE-RELATED INTERNATIONAL MOBILITY

11 | German students abroad, since 1991, extrapolation



A number of countries have changed their recording of mobile students from abroad. In Austria, for example, they now collect data on international students (non-resident students) instead of foreign students (non-citizen students) as they did before. This contributes significantly to the reduction of the number of German students abroad since 2013.

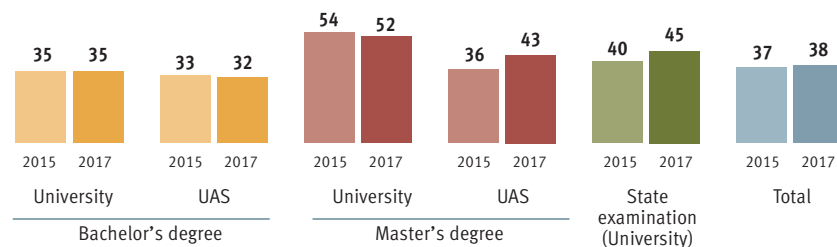
Fig. 11, 12
Source: Federal Statistical
Office of Germany;
country-specific
reference periods

12 | Major host countries of German students abroad, in 2015, number and in % of all German students abroad

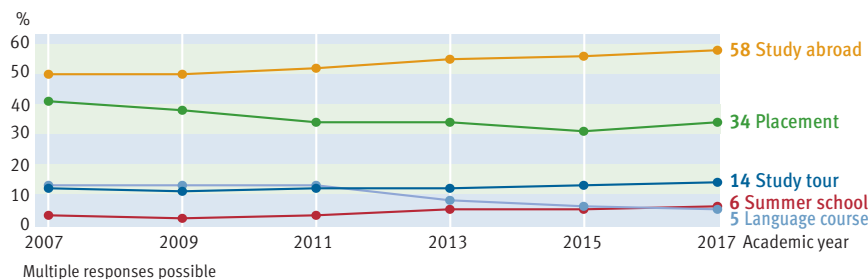
	Number	in %
Austria	27,563	20.2
Netherlands	21,530	15.8
United Kingdom	15,410	11.3
Switzerland	14,647	10.7
USA	10,145	7.4
China	7,536	5.5
France	6,406	4.7
Sweden	4,422	3.2
Denmark	3,316	2.4
Hungary	3,106	2.3
Spain	2,497	1.8
Canada	1,809	1.3
Italy	1,507	1.1
Portugal	1,422	1.0
Norway	1,306	1.0
Australia	1,147	0.8
Poland	1,090	0.8
New Zealand	983	0.7
Belgium (fläm.)	930	0.7
Romania	898	0.7
Total	136,367	100

TEMPORARY STUDY-RELATED VISITS ABROAD

13 | German students in later semesters with study-related visits abroad, in 2015, by type of higher education institution and type of degree, in % of all students in later semesters



14 | German students with study-related visits abroad, since 2007, by major types of visit, in % of all internationally mobile German students



15 | Major host countries of German students for study-related visits abroad, in 2017, in %

	in %		in %
United Kingdom	12	Austria	3
USA	12	Switzerland	3
France	9	Poland	3
Spain	9	South Africa	3
Italy	5	Japan	3
Netherlands	4	Ireland	3
Finland	4	Canada	2
Sweden	4	Russia	2
China	4	Czech Rep.	2
Australia	3	Norway	2

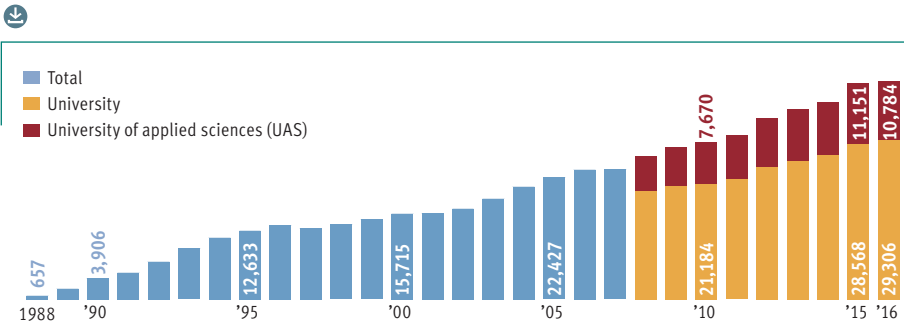
Fig. 13, 15
Source: DAAD/DZHW Mobility Survey 2017

Students in later semesters: bachelor: 5th–10th semester of higher education (s. o. h. e.), master: 3rd–6th specialised semester, state examination: 8th–12th s. o. h. e.

Fig. 14
Source: DAAD/DZHW Mobility Survey 2007–2017

ERASMUS VISITS

16 | Erasmus participants from Germany, since 1988, by type of higher education institution



17 | Average duration of visits abroad by Erasmus participants from Germany, since 2003, by type of visit

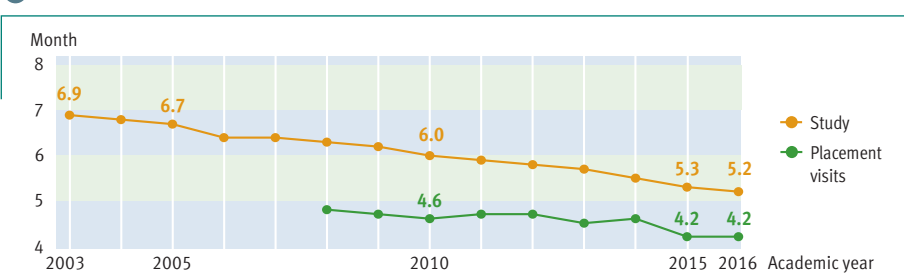


Fig. 16–18
Source: DAAD, Erasmus statistics

Erasmus statistics until 2014: An academic year in the Erasmus statistics (until 2014) begins in the winter semester and ends in the summer semester of the following year. 2014 = WS 2013/14 + SS 2014.

New Erasmus+ statistics since 2015: An academic year begins on June 1st of the prior year and ends on May 31st of the following year. 2016 = 6/1/2015 until 5/31/2017.

18 | Erasmus participants from Germany, in 2016, by major host countries

	Number		Number
Spain	6,490	Austria	1,273
France	5,881	Poland	1,086
United Kingdom	5,145	Portugal	977
Sweden	2,614	Denmark	961
Italy	2,320	Belgium	884
Turkey	2,231	Czech Rep.	780
Finland	1,807	Hungary	770
Netherlands	1,574	Greece	320
Norway	1,535	Estonia	307
Ireland	1,408	Latvia	241

INTERNATIONAL MOBILITY OF STUDENTS

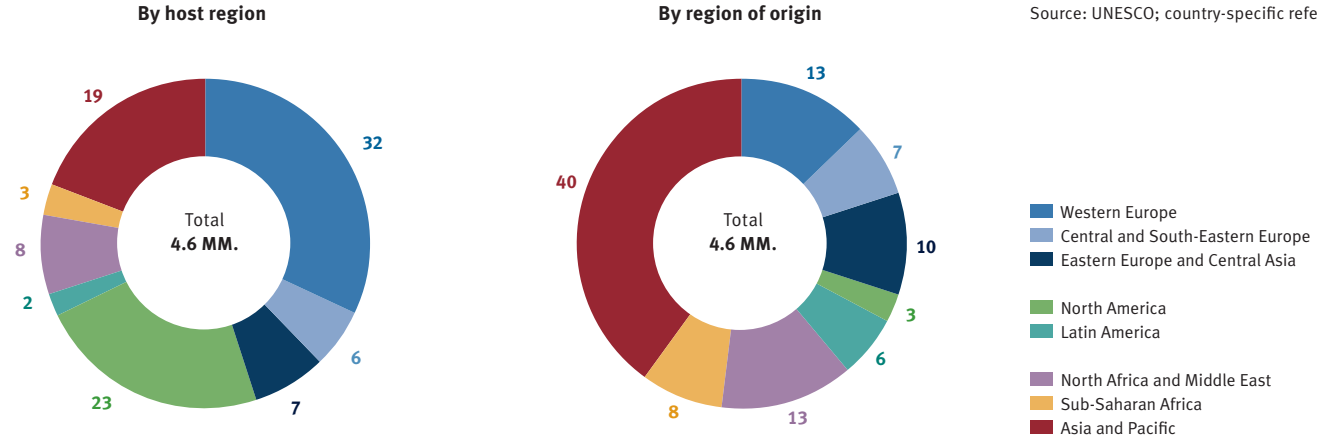
“Wissenschaft weltoffen” uses **UNESCO data on international students** for its presentation of international student mobility and Germany’s position as a host country in international comparison. However, it must be observed that these figures usually differ from the equivalent data in the national statistics, because in some cases, different groups are defined as students. The UNESCO, for example, categorises all persons as students who are assigned to levels 5 to 8 (ISCED 2011) according to the „International Standard Classification of Education“ (ISCED). In addition to studying at bachelor’s and master’s level (ISCED level 6 and 7), this also includes doctoral students (ISCED level 8) and so-called „short tertiary education programmes“ (ISCED level 5), which are not counted as higher education in Germany and therefore are not part of the higher education statistics.

As far as possible, UNESCO **actually reports data on international students** in all countries. The term “international students” refers to students who have moved from their country of origin with the purpose of studying, according to the criterion of country of prior education or the criterion of prior/usual residence (“non-resident students”). In relation to Germany, this definition covers the group of all Bildungsausländer. These data are not available for all countries, e.g. Italy, Russia, South Korea or Turkey. Their figures relate to students who are not citizens of the host country (“non-citizen students”).

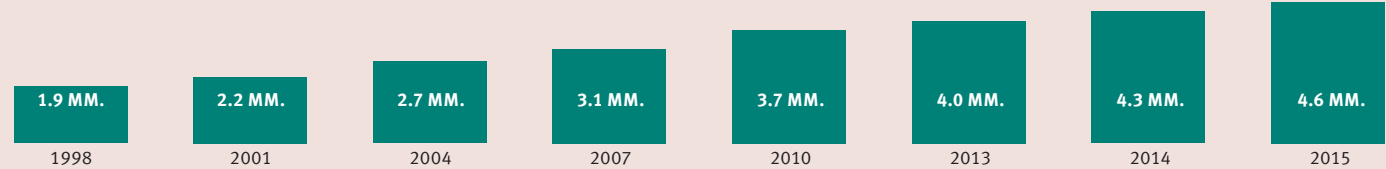
19 | International students by host region and region of origin, in 2015, in %



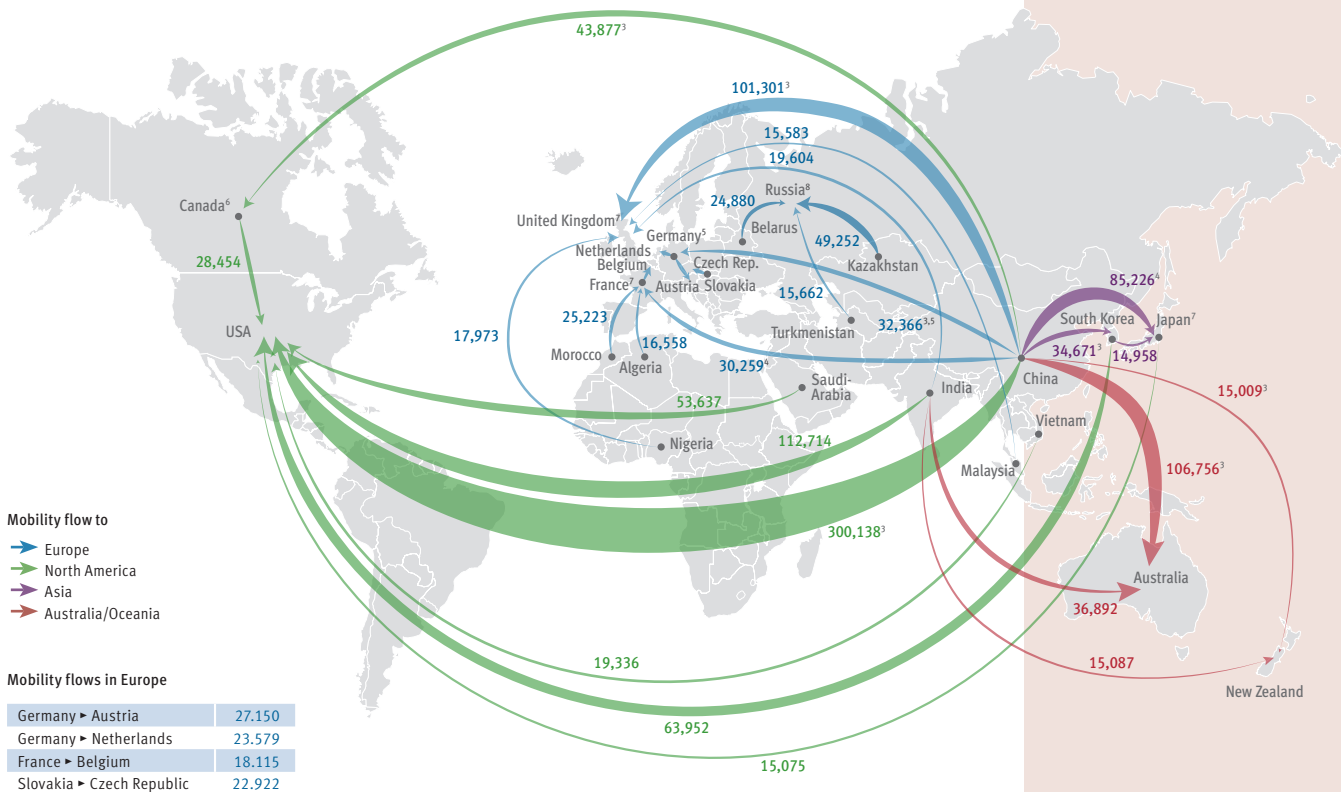
Fig. 19, 20
Source: UNESCO; country-specific reference periods



20 | International students worldwide, since 1998



21 | Major international student mobility flows, in 2015^{1,2}



22 | International students, in 2015, by key host country and key country of origin, number and in % of all international students studying worldwide

Host country	Number	in %	Host country	Number	in %
USA	907,251	19.7	China ³	837,849	20.5
United Kingdom	428,724	9.3	India	253,926	6.2
Australia	294,438	6.4	Germany	137,700	3.4
Germany ⁹	235,858	5.1	South Korea	108,033	2.6
France ⁷	235,123	5.1	Saudi-Arabia	86,471	2.1
Russia ⁷	213,347	4.6	France	80,714	2.0
China ³	167,295	3.6	Kazakhstan	77,954	1.9
Canada ⁶	151,244	3.3	Nigeria	75,539	1.9
Japan	132,685	2.9	USA	67,670	1.7
Italy	90,419	2.0	Malaysia	64,482	1.6
Other countries	1,753,012	38.0	Other countries	2,308,832	56.1

23 | Mobility balances in major host countries and countries of origin, in 2015, number and in % of all incoming and outgoing students

Country	Outgoing		Internationally mobile students		Incoming	
	Number			in %	Number	
Vietnam	63,702	96			4	2,874
India	253,926	86			14	41,993
China ³	837,849	83			17	167,295
South Korea	108,033	67			33	54,540
Germany ⁹	137,700	37			63	235,858
France ⁷	80,714	25			75	235,123
South Africa ⁷	7,451	15			85	42,594
United Kingdom	31,075	7			93	428,724
USA	67,670	7			93	907,251
Australia	12,027	4			96	294,438

Fig. 21–23

Source: UNESCO, country-specific reference periods

1 It should be noted that China and Singapore could not be included as host countries because no data on international students' countries of origin was available here.

2 Only host countries with at least around 15,000 incoming students from one country of origin.

3 Incl. Hongkong and Macao.

4 Unclear whether Hongkong and Macao are included.

5 Source: Federal Statistical Office of Germany, student statistics incl. doctoral students, WS 2015/16.

6 Academic year 2013.

7 Academic year 2014.

8 Academic year 2014 in order to guarantee data comparability.

9 Source: Federal Statistical Office of Germany, student statistics incl. doctoral students.

MOBILITY OF ACADEMICS AND RESEARCHERS

The mobility of academics and researchers in Germany includes both the foreign academics in Germany and German academics abroad. In relation to foreign academics in Germany, a distinction is made between **foreign staff at German higher education institutions and at non-university research institutes**, using data collected by the Federal Statistical Office of Germany as part of their higher education statistics, and **funded visits by foreign researchers**, using data collected from the relevant funding organisations by the German Academic Exchange Service (DAAD) and the German Centre for Research on Higher Education and Science Studies (DZHW) in the scope of “Wissenschaft weltoffen”. **Funded visits by German academics and researchers abroad** are also included in the data.



The DAAD and DZHW surveys only cover visits which were funded by the organisations surveyed. Visits which were supported by funds from other German and international sources are not included. The data presented here therefore include a large proportion of, but not all, funded visits by German and foreign academics and researchers.

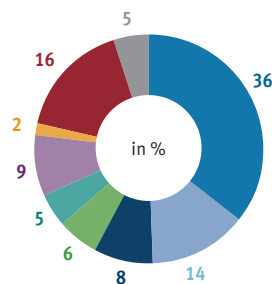
FOREIGN STAFF AT GERMAN HIGHER EDUCATION INSTITUTIONS

24 | Foreign academic staff at German higher education institutions, in 2016, by regions of origin and key countries of origin, total number and in %

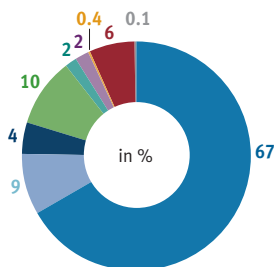


By region of origin

Total number of foreign staff
(45,858)



Professors
(3,184)



- Western Europe
- Central and South-Eastern Europe
- Eastern Europe and Central Asia
- North America
- Latin America
- North Africa and Middle East
- Sub-Saharan Africa
- Asia and Pacific
- No classification by region

Total number of foreign staff

Country of origin	Number	Country of origin	Number
Italy	3,185	Austria	621
China	2,615	Switzerland	299
Austria	2,481	USA	263
India	2,257	Italy	251
USA	2,187	Netherlands	233
Russia	2,090	United Kingdom	184
Spain	2,010	France	137
France	1,765	Spain	107
United Kingdom	1,604	Russia	83
Iran	1,507	Greece	74

25 | Foreign academic staff at German higher education institutions, in 2010, 2013 and 2016,



by staff group, number and in % of the total academic staff

	2010		2013		2016	
	Number	in %	Number	in %	Number	in %
German academic staff total	291,936	90.0	331,373	89.6	340,894	88.1
Foreign academic staff total ¹	32,431	10.0	38,474	10.4	45,858	11.9
Professors	2,484	0.8	2,891	0.8	3,184	0.8
Other academic staff	29,947	9.2	35,583	9.6	42,674	11.0

Fig. 24–25:

Source: Federal Statistical Office of Germany

Total number of academic staff, including artistic staff at colleges of art and music as well as professors.

The year specified is the calendar year.

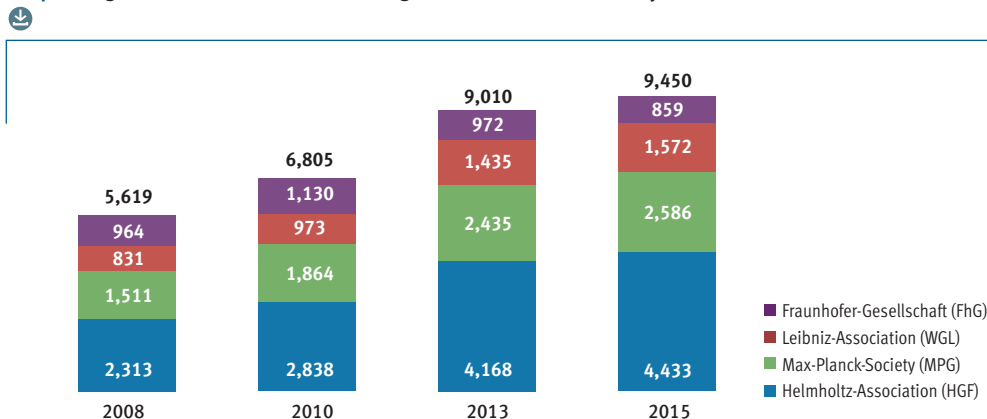
Deviations from 100 % are due to rounding.

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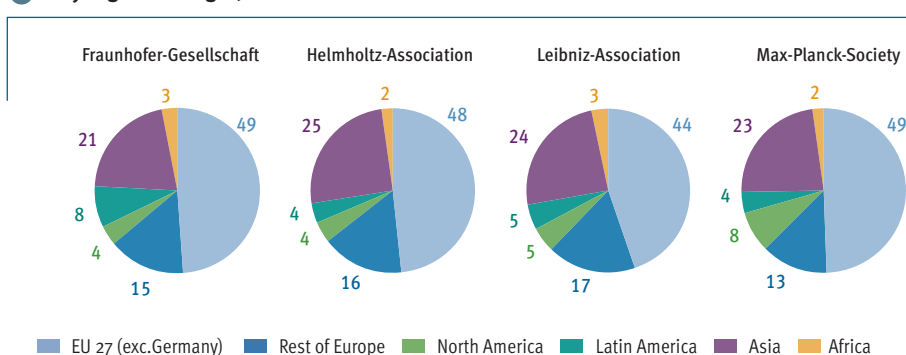
Including staff that is stateless, as well as with unexplained and unknown nationality.

FOREIGN STAFF AT NON-UNIVERSITY RESEARCH INSTITUTES

26 | Foreign academic staff at the four largest German non-university research institutions, since 2008



27 | Foreign academic staff at the four largest German non-university research institutions, in 2015, by region of origin, in %¹



28 | Proportion of foreign academic staff at the four largest German non-university research institutions, since 2008, in % of the total academic staff

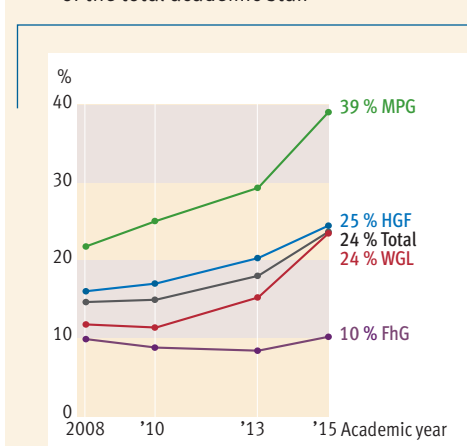


Fig. 26–28

Source: Federal Statistical Office of Germany; DZHW calculation

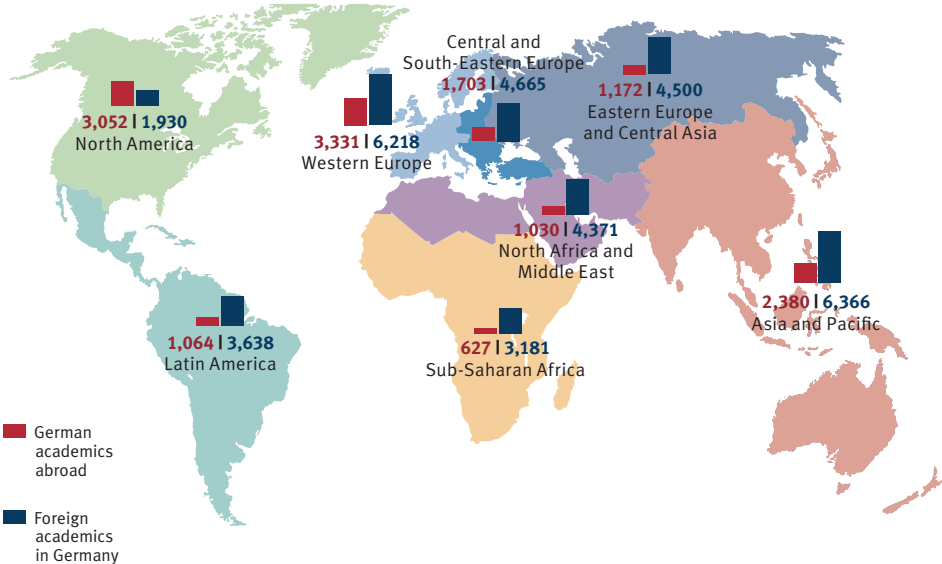
Comparability of the reporting period 2014 with previous reporting periods is reduced due to a change in the data collection.

Deviations from 100 % are due to rounding

¹ Different regional classification as predefined by the Federal Statistical Office of Germany.

FUNDED MOBILITY OF ACADEMICS AND RESEARCHERS (GERMAN AND FOREIGN ACADEMICS)

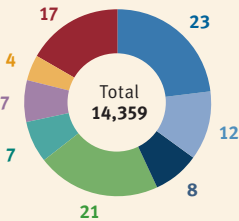
29 | Funded visits of German academics abroad and foreign academics in Germany, in 2015, by host region and region of origin



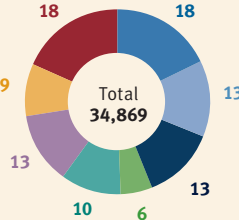
The 29 German and 1.353 foreign academics whose host regions or regions of origin are not known have not been taken into account.

Fig. 29
Source: Numbers of the funding organisations;
DZHW calculation

German academics abroad, in %



Foreign academics in Germany, in %



- Western Europe
- Central and South-Eastern Europe
- Eastern Europe and Central Asia
- North America
- Latin America
- North Africa and Middle East
- Sub-Saharan Africa
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Wissenschaft weltoffen



The main edition of “Wissenschaft weltoffen” contains comprehensive data and facts on the internationalisation of study and research in Germany. At www.wissenschaft-weltoffen.de you can download it as a PDF free of charge. The upcoming issue focuses on „Internationalisation of the administration at higher education institutions“ as its main topic. It will be published in July 2018. We also present additional data and information on the “Wissenschaft weltoffen” website. There, you will find comprehensive charts, information on other evaluation options and a detailed glossary.

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