



This is an excerpt from the publication

“Wissenschaft weltoffen 2023”

Since 2001, the DAAD has been analysing data on the internationalisation of studies, research and higher education from Germany as well as from particularly relevant countries and regions such as the USA, the United Kingdom or Asia. The current edition presents the most important results and graphics.

These include figures on international students in Germany, data on mobility behaviour, an overview of students' countries of origin and host countries as well as developments in the field of doctorates. Special data analyses shed light on the status quo and trends at universities and research institutes during the Covid-19 pandemic.

The study integrates international data from OECD and UNESCO as well as national data from the Federal Statistical Office in Germany. In combination with other indicators, it provides a valid basis for long-term analyses.

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A guest article by Daniel Völk, Jonas Koopmann, Dr. Martina Kroher and Karsten Becker



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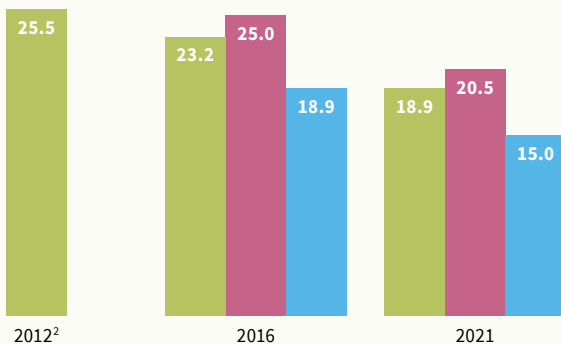
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In 2021, the share of all domestic students¹ from the sixth university semester with temporary study-related visits abroad is 19% overall. In 2016, this figure was 23%, down from 26% in 2012.² It may be assumed that the decrease in the mobility rate of four percentage points between 2016 and 2021 was due to some extent to the pandemic-related travel restrictions in 2020 and 2021. On the other hand, the fall of three percentage points between 2012 and 2016 was probably first and foremost a consequence of the tiered bachelor-master degree that was introduced at this time, with its more structured study and examination system; as a result, fewer semesters were required to obtain a degree.

Source: The Student Survey in Germany

The Student Survey in Germany represents an amalgamation into a single study of three major, previously independently conducted, long-term studies on the definition and analysis of higher education and students at German universities – the Social Survey, the Student Survey of the University of Konstanz and "best – Studying with disabilities and chronic illnesses". The first wave of this new study, which will be repeated every four years, took place in the 2021 summer semester. The survey addressed a nationwide representative sample of all students at German universities apart from those at colleges of public administration. In total, approximately 188,000 students at 250 universities responded. See also: <https://www.die-studierendenbefragung.de/en/the-student-survey>.

CS1 Share of internationally mobile domestic students in later semesters of all domestic students, by type of university, since 2012^{1,3}



Share in %: Total Universities UAS

Sources: DZHW, the Student Survey in Germany (2021), 20th and 21st Social Survey

Significantly higher mobility figures were found among students in later semesters at universities than at universities of applied sciences (UAS). However, there were similar downshifts in international mobility at both types of university between 2016 and 2021. Although the share

“ 31% of master’s students in later semesters have completed a study-related visit abroad.

of internationally mobile students in later semesters at universities was 25% in 2016, it dropped to 21% by 2021. The quota at UAS fell from 19% to 15% over the same period.

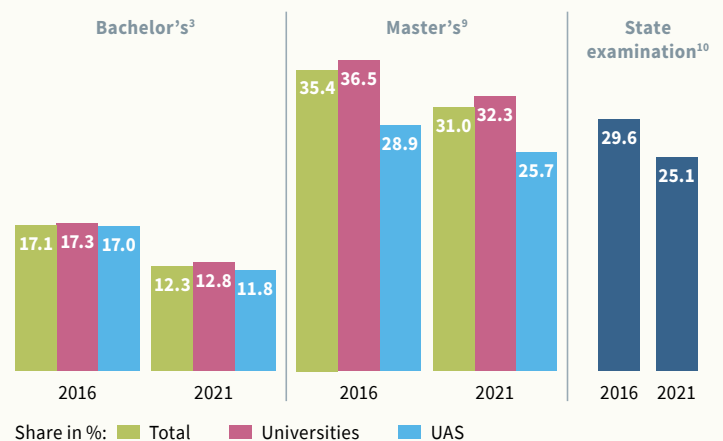
The quota of temporary study-related international mobility among domestic students in later semesters at German universities

The most reliable method of calculating the extent of temporary study-related international mobility is by carrying out a survey of corresponding data among the higher education graduates in any cohort. Any visits that the graduates undertook abroad during their studies can then be documented in full. Indeed, the amendment of the Higher Education Statistics Act in 2016 makes provision for a comprehensive survey of study-related visits abroad. Although the Federal Statistical Office now publishes highly specific data on graduates' temporary study-related international mobility, it appears that a number of universities and universities of applied sciences (UAS) are not yet in a position to record these mobility figures.⁴ Representational graduate surveys are another means of calculating the quota of study-related visits abroad. Unfortunately, no up-to-date, reliable findings that are based on graduate surveys are currently available. Therefore, previous editions of *Wissenschaft weltoffen* used the results of representational student surveys to draw conclusions on the scale of international mobility. In so doing, the mobility rate is presented with respect to students in later semesters as most will have completed their international mobility shortly before graduating. It may therefore be assumed that this quota approximately reflects the corresponding value for graduates. As they represent the whole of Germany, the findings of the Social Survey conducted by the DZHW are the most reliable source of data, enabling an analysis of the development in temporary study-related international mobility among students at German universities. Since 2021, the Social Survey has been continued as "The Student Survey in Germany". The current data from 2021 form the basis for calculating the quota of international mobility in this edition.

The reference group of students in later semesters was redefined to better reflect the study trajectories that are followed today. This group now includes all students from the sixth university semester.⁵ Admittedly, it is no longer possible to compare previous calculations of the quota of international mobility;⁶ however, these new figures are a more accurate reflection of the reality of studying. To analyse the different types of degree, it was decided that the group of students in later semesters in bachelor's programmes would also comprise all students from the sixth university semester, master's students from the fourth study programme semester⁷ and students from the ninth university semester in state examination programmes. The respective quotas refer to all students at German universities apart from international students, students in distance learning, part-time programmes⁸ and on-the-job degree programmes. These groups are excluded as they are subject to special restrictive conditions with regard to temporary study-related international mobility (distance learning, part-time and on-the-job degrees) or because it is difficult to distinguish between the various types of mobility (in the case of international students). Students in dual study programmes are taken into consideration, however. The project design of "The Student Survey in Germany" also makes allowance for any students (in later semesters) who currently reside in other countries for the purpose of studying as these visits abroad are factored into the mobility quota.

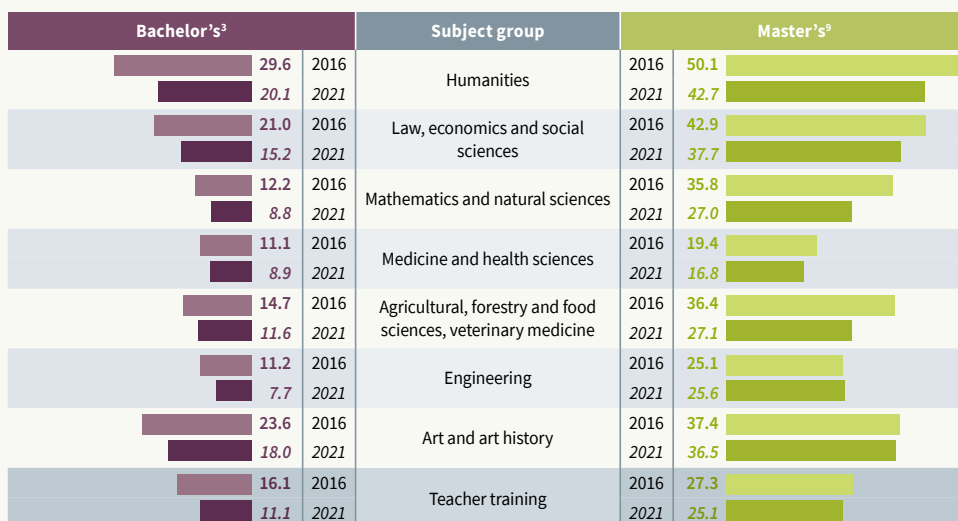
The highest mobility rate can be observed among master's students in later semesters, 31% of whom have gained study-related experience abroad in 2021. At the same time, the higher proportion of international mobility compared to bachelor's programmes is also due to the longer total study duration of master's students (including their bachelor's studies). Furthermore, there are noticeable variations between the types of university: while 32% of the reference group at universities spent time abroad, this applies to just 26% of students at UAS. Compared to the recalculated figures for 2016 according to the new basis, international mobility in master's programmes has declined. At the time, 35% of master's students in later semesters indicated that they had experience abroad, 36% at universities and 29% at UAS. Due to their shorter total study duration, international mobility among bachelor's students is substantially below that among master's students. 12% of bachelor's students in later semesters travelled to other countries for the purpose of studying: 13% at universities, 12% at UAS. Once again, the situation is very different to that five years previously; in 2016, the quota was 17% at both universities and UAS. Finally, students in later semesters in the state examination programmes indicate a mobility rate of 25% in 2021, roughly five percentage points below that of 2016.

CS2 Share of internationally mobile domestic students in later semesters of all domestic students in later semesters, by type of degree and university, in 2016 and 2021¹



Sources: DZHW, the Student Survey in Germany (2021), 21st Social Survey

CS3 Share of internationally mobile domestic students in later semesters of all domestic students in later semesters, by type of degree and subject group, in 2016 and 2021¹



Share of all domestic students in later semesters in %

Sources: DZHW, the Student Survey in Germany (2021), 21st Social Survey

CS4 Internationally mobile domestic students by type of university and visit, in 2016 and 2021¹¹

Type of visit	2016			2021		
	Total	Universities	UAS	Total	Universities	UAS
	Share of all internationally mobile students in %, multiple answers					
Study cycle abroad	56.6	59.1	49.9	63.4	66.7	53.8
Placement visit abroad/practical phase	30.0	29.6	30.8	24.2	22.9	27.8
Language course	5.1	5.7	3.4	2.0	2.1	1.8
Study trip	11.3	10.2	14.3	6.0	4.9	9.2
Project work	5.9	5.2	7.7	3.5	3.2	4.5
Summer school	3.4	3.1	4.0	2.0	1.6	3.1
Other visit	4.8	5.2	3.7	6.0	6.5	4.5

Sources: DZHW, the Student Survey in Germany (2021), 21st Social Survey

Sizeable variations in international mobility can also be observed across the individual subject groups. It is helpful to differentiate the figures according to the type of degree, however, as the relationship between bachelor's and master's programmes varies from one discipline to the next. Most notably, international mobility is above average among bachelor's students in later semesters in the humanities (20%) and art and art history (18%). Course contents, particularly those focusing on foreign languages, literatures and cultures, are much more likely to lead directly to students spending time abroad during their degree than the curricula of other subjects. In addition, above-average proportions of students of law, economics and social sciences (15%) complete visits abroad. This may be chiefly

attributed to the greater interest in other countries that is clearly exhibited by economics students (18%), while the international mobility of those studying law and social sciences (13% each) or education and psychology (11%) tends to be average. By comparison, insignificant mobility rates are primarily found among bachelor's students of engineering (8%), mathematics and natural sciences, and in medicine and health sciences (9% each). The proportion of those in later semesters studying information technologies, classified in the engineering subject group, who undertake visits abroad is extremely low (7%). Nonetheless, it may be assumed that the natural sciences and some of the engineering study programmes, which undoubtedly have a strong international focus, maintain extensive virtual international connections that are not covered here.

Moreover, below-average international mobility (11%) is characteristic of teacher training programmes. Compared to 2016, almost all subject groups in bachelor's programmes in 2021 saw a decrease in the number of students in later semesters undertaking temporary study-related visits abroad, most notably in the humanities, where the mobility rate plunged from 30% to 20%.

In master's programmes, too, the highest international mobility rate for 2021 is found in the humanities (43%), law, economics and social sciences (38%) and art and art history (37%). Economics alone scores a remarkable 44%. By contrast, below-average percentages can be chiefly observed among students in later semesters in medicine and health sciences (17%) and teacher training (25%). Some significant differences emerge between students in 2016 and 2021; art and art history (37% each) and engineering (2016: 25%, 2021: 26%) are the only subject groups reporting a small or no downshift.

The most important means of studying in another country is to embark on a temporary study cycle abroad. In total, 63% of all domestic internationally mobile students¹¹ completed a study visit at a foreign

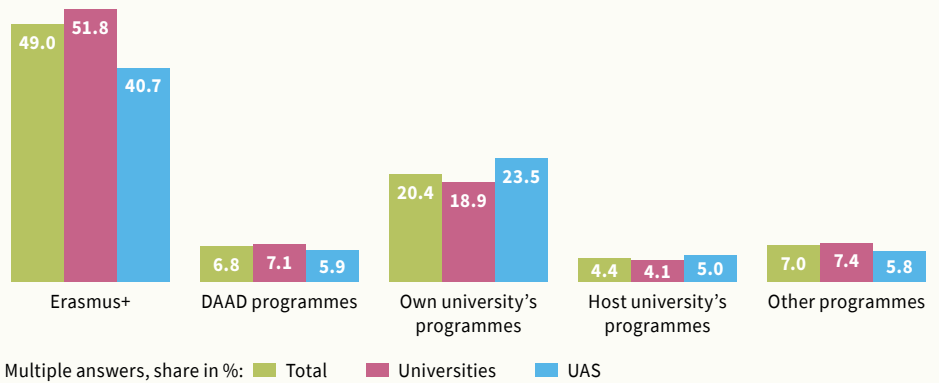
university¹² in 2021. Their share at universities, 67%, is considerably higher than that at UAS, where just 54% of internationally mobile students were temporarily enrolled at a foreign university for the purpose of studying. Compared to the situation in 2016, when the percentage was 57%, the proportion of those studying abroad

“ 63% of internationally mobile students have completed a study visit at a foreign university.

has risen significantly. This applies to internationally mobile students at both universities (2016: 59%) and UAS (2016: 50%). By contrast, the share of students carrying out a placement visit abroad saw a similar loss in 2021, down to 24%, compared to 30% five years ago. This decline is even somewhat more marked at universities (2021: 23%; 2016: 30%) than at UAS (2021: 28%; 2016: 31%). Thus, following a convergence in the frequency of placement visits abroad, a greater gap has re-appeared between internationally mobile students at universities and UAS. The other forms of visits abroad – language courses (2%), study trips (6%), project work (4%), summer school (2%) and other visits (6%) – are far less common than a study cycle abroad or a placement visit, with their shares all in single digits. With the exception of other visits abroad, they are of diminishing relevance compared to 2016. These developments suggest that the overall reduction in study-related international mobility between 2016 and 2021 is mainly due to a smaller number of placement visits abroad, but also to the drop in language courses, study trips, project work and summer schools. On the other hand, in terms of study visits, it may be assumed that there was no major decrease here, or rather, that this decrease was lower than that of placement visits abroad.

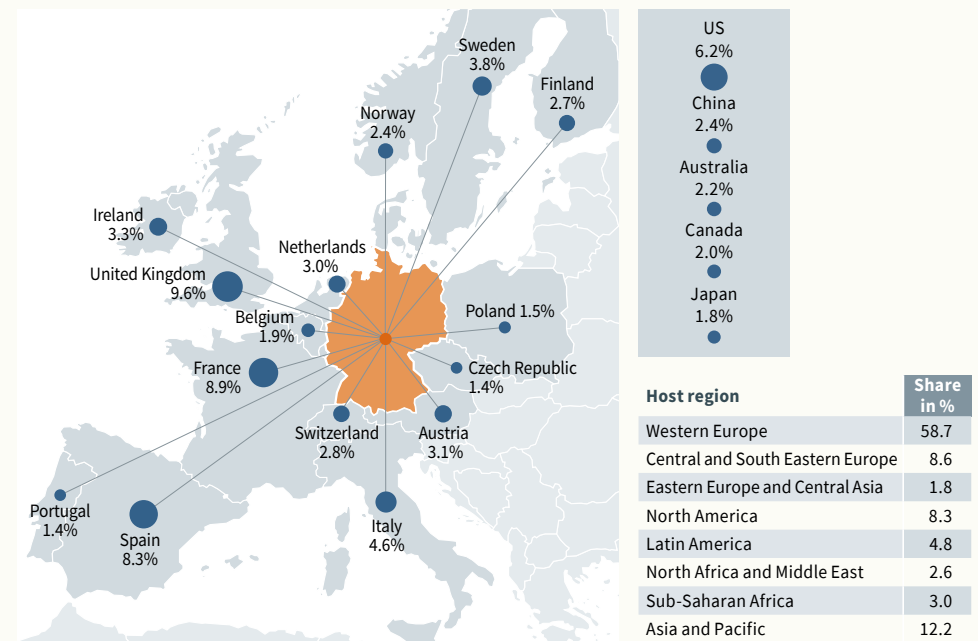
The overwhelming majority or 75% of internationally mobile students achieved their visits abroad with the support of funding programmes,

CS5 Share of internationally mobile domestic students spending time abroad as part of a funding programme of all internationally mobile domestic students, in 2021¹¹



Source: DZHW, the Student Survey in Germany (2021)

CS6 Study-related temporary visits abroad undertaken by domestic students by host region and key host countries, in 2021¹¹



Source: DZHW, the Student Survey in Germany (2021)

indicating shares of 77% at universities and 70% at UAS. As expected, the Erasmus+ programme played the most important role in this regard. Approximately half of internationally mobile students (49%) went abroad through this programme. In second place are programmes organised by students' own universities, with roughly one fifth of the relevant group taking advantage of this option for their visits abroad. The shares of students benefiting from the DAAD programmes,

programmes offered by the host universities or other international mobility programmes vary between 7% and 4%. It is important to bear in mind, however, that some students do not recognise DAAD programmes as such and thus fail to cite them in questionnaires where they apply through their own university as part of DAAD project funding.

Western Europe is the most popular host region for study-related visits abroad undertaken by domestic students, with 59% of all visits taking place there. This is not just a consequence of the study expectations associated with the highly developed higher education and economic systems in Western

European countries but also a result of the extremely popular Erasmus+ programme in which all countries in Western Europe are involved during the period under review. Moreover, the proximity of neighbouring countries, plus students' experience of them on holiday trips and their familiarity with the local language, to some extent at least, are likely to also be deciding factors. Overall, 12% of study-related visits abroad were to Asia and Pacific and 9% to Central and South Eastern Europe. 8% of students flew to North America for their visits abroad. By contrast, visits to Latin America (5%), Sub-Saharan Africa, North Africa and Middle East (3% each) plus Eastern Europe and Central Asia (2%) were less common. These findings suggest that the majority of countries that are particularly relevant for the international mobility of students from Germany are in Western Europe. Thus, 10% of visits abroad saw students travel to the United Kingdom, 9% to France, 8% to Spain, 5% to Italy and 4% to Sweden. With a share of 6%, the US is the only non-Western European country ranking among the ten key countries.

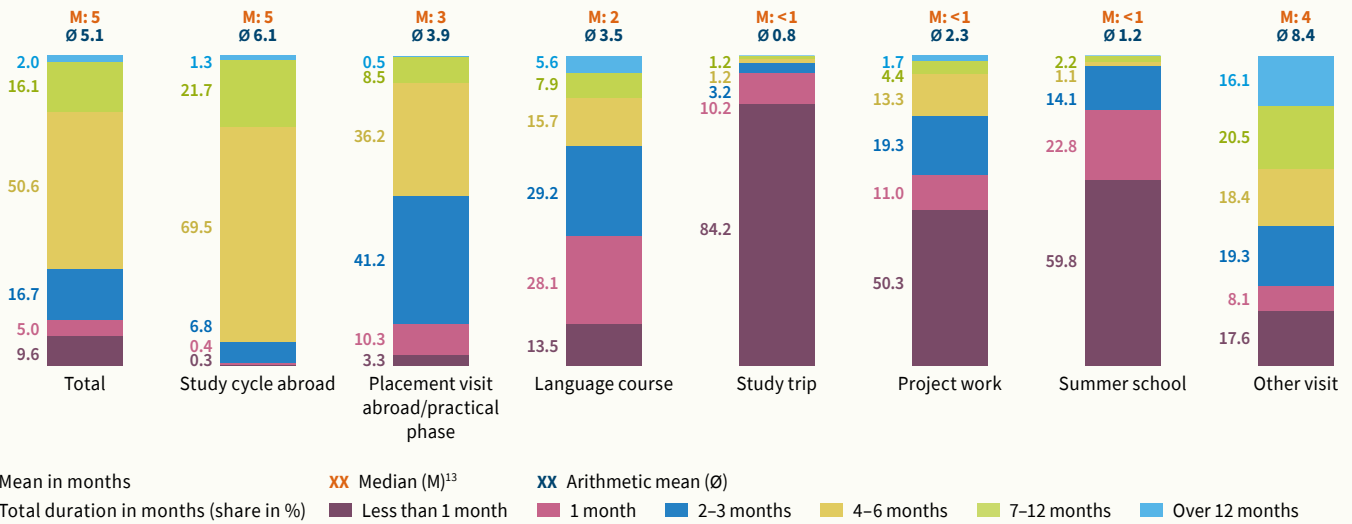
* Footnotes

- 1 Students holding German citizenship and *Bildungsinlaender*, not including international students and students in part-time, distance learning and on-the-job degree programmes.
- 2 Not including students who were undertaking a temporary study-related visit abroad at the time of the survey.
- 3 Students from the sixth university semester.
- 4 Federal Statistical Office (2022c). Prüfungen an Hochschulen, 2021. Fachserie 11, Reihe 4.2. Wiesbaden.
- 5 Kroher, M. et al (2023). The Student Survey in Germany (SiD): 22nd Social Survey. The economic and social situation of students in Germany in 2021. Berlin: Federal Ministry of Education and Research. P. 78 ff
- 6 The Social Surveys from 1997 to 2016 defined students in later semesters as students in the 9th to the 14th university semesters at universities and the 7th to the 11th university semesters at UAS.
- 7 The number of university semesters includes all semesters completed after enrolling at a university in Germany for the first time; by contrast, the number of study programme semesters refers to the semesters completed in one particular degree programme.
- 8 Part-time students refers exclusively to students in official part-time degree programmes. Students who are enrolled in a full-time programme but who organise their studies themselves in such a way that they are studying part-time, whether during certain periods or wholly, are not excluded from calculations of the international mobility rate.
- 9 Students from the fourth study programme semester.
- 10 Students from the ninth university semester.
- 11 Students holding German citizenship and *Bildungsinlaender*, not including international students.
- 12 For the first time, the study entitled "The Student Survey in Germany" also included students who had been enrolled at a foreign university and, in some cases, obtained a university degree there prior to embarking on their studies in Germany. They account for 4.8% of all internationally mobile students in Germany. As they have spent time abroad, they were factored in when calculating the mobility rate. However, these visits are not included in the types of international mobility presented as they are not temporary.
- 13 The median is the value at the exact centre of a series of data that is arranged according to size. A median of four months means that half of the visits lasted less than four months and the other half for longer than four months. It has the advantage of being less susceptible to outliers than the arithmetic mean.
- 14 Excluding students who were enrolled at or who obtained a university degree from a foreign university before embarking on their studies.

“ Approximately half of internationally mobile students spent time abroad via the Erasmus+ programme.

Internationally mobile students spent an average of 5.1 months in another country, with the median¹³ likewise at five months. Roughly half of all visits abroad (51%) lasted between four and six months. These averages arise from the frequency of study visits. Students who were enrolled at a foreign university spent an average of 6.1 months (median: 5 months) in another country. The share of those who studied at a university abroad for four to six months was 70%. Indeed, 22% of visits lasted between seven and twelve months. Placement visits abroad and other practice-based periods spent in another country were much shorter. On average, they lasted 3.9 months (median: 3 months); in 41% of placements, students spent two to three months abroad and in 36%, four to six months. Language courses attended abroad were of similar duration, with an average of 3.5 months; however, the median was just 2 months. The difference between the two averages is calculated based on the clusters at the poles of the time scale: 42% of language courses had a maximum duration of one month, while 29% were longer than 3 months. The other types of visit were achieved over much shorter periods: projects carried out overseas took an average of 2.3 months (median: less than 1 month), attendance at summer schools 1.2 months

CS7 Average duration of study-related temporary visits abroad undertaken by domestic students by type of visit, in 2021^{11,14}



Source: DZHW, the Student Survey in Germany (2021)

(median: less than 1 month) and study trips 0.8 months (median: less than 1 month). With respect to these types of visit, over half of the visits in question were shorter than one month.

“ On average, a study-related visit lasted 5.1 months.

It can therefore be safely assumed that degree programmes involving compulsory visits abroad encourage international mobility among students. As visits abroad are core curricular elements of these degree programmes, students receive unfailing organisational support by being offered appropriate options, for example. In 2021, 5.7% of domestic students were enrolled in degree programmes with compulsory visits abroad. Despite this relatively low share, its significance for the international mobility of students should not be underestimated. Around 22% of all students with study-related temporary visits abroad are in degree programmes that require a period abroad. Conversely, at the time of the survey, 56% of all students in degree programmes in which periods abroad are an inherent part of the curriculum have undertaken at least one study-related visit abroad. Particularly high shares of students in degree programmes with compulsory visits abroad are encountered in the humanities (14%) and economics (12%), yet are comparatively rare in medicine and health sciences (1%) as well as in information technologies, other fields of engineering, agricultural, forestry and food sciences, and veterinary medicine (2% each).

CS8 Share of domestic students in degree programmes with compulsory visits abroad of all domestic students, by selected subject groups and fields of study, in 2021¹¹

Subject group	Share in %
Humanities	14.0
Economics	12.2
Law	5.1
Social sciences	4.7
Sports science	4.6
Art and art history	4.2
Administration	4.2
Education	3.9
Natural sciences	2.6
Agricultural, forestry and food sciences, veterinary medicine	2.2
Other engineering	2.1
Information technology	2.1
Medicine and health sciences	1.2
Total	5.7

Source: DZHW, the Student Survey in Germany (2021)