

**GUIDELINE ON PROGRAMME
DIVERSIFICATION AND ADDRESSING
THE NATIONAL TRAINING NEEDS**

Ministry of Higher Education

2020

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4. Scope for programme diversification and addressing national training needs

1. NATIONAL TRAINING NEEDS

#	MAIN FIELD	FIELD OF EDUCATION AND TRAINING	ISCED CODE
1	Education	Education science	0111
2		Teacher training for children with special needs	0113
3		Teacher training with subject specialization	0114
4	Arts and Humanities	Audio-visual techniques and media production	0211
5		Fashion, interior and industrial design	0212
6		Fine arts	0213
7		Handicrafts	0214
8		Music and performing arts	0215
9		Religion and theology	0221
10		History and archeology	0222
11		Philosophy and ethics	0223
12		Language acquisition	0231
13		Literature and linguistics	0232
14	Social Sciences, Journalism and Information	Economics	0311
15		Political science and civics	0312
16		Psychology	0313
17		Sociology and cultural studies	0314
18		Journalism and reporting	0321
19		Library, information and archival studies	0322
20	Business, Administration and Law	Accounting and taxation	0411
21		Finance, banking and insurance	0412
22		Specialisms in management and administration	0413
23		Wholesale and retail trade	0416
24		Specialisms in Law	0421
25	Natural Sciences, Mathematics and Statistics	Biology	0511
26		Biochemistry	0512
27		Environmental science	0521
28		Chemistry	0531
29		Earth science	0532
30		Physics	0533
31		Mathematics	0541
32		Statistics	0542
33	Information and Communication	Database and network design and administration	0612
34		Software and applications development and analysis	0613
35	Engineering, Manufacturing and Construction	Chemical engineering and processes	0711
36		Environment protection technology	0712
37		Electricity and energy	0713
38		Electronics and automation	0714
39		Mechanics and metal trades	0715
40		Motor vehicles, ships and aircrafts	0716
41		Food processing	0721
42		Materials (glass, paper, plastic and wood)	0722
43		Architecture and town planning	0731
44		Building and civil engineering	0732
45	Agriculture, Forestry, Fisheries and Veterinary	Crop and livestock production	0811
46		Horticulture	0812
47		Forestry	0821
48		Fisheries	0831
49		Veterinary	0841
50	Health and Welfare	Dental studies	0911
51		Medicine	0912
52		Nursing and midwifery	0913
53		Medical diagnostic and treatment technology	0914
54		Therapy and rehabilitation	0915
55		Pharmacy	0916
56		Care of the elderly and disabled adults	0921
57		Child care and youth services	0922
58		Social work and counselling	0923
59	Services	Domestic services	1011
60		Hair and beauty services	1012
61		Hotels, restaurants and catering	1013
62		Sports	1014
63		Travel, tourism and leisure	1015
64		Community sanitation	1021
65		Occupational health and safety	1022
66		Military and defence	1031
67		Protection of persons and property	1032
68		Transport services	1041

Results is based on a nationwide assessment done in January 2019 by the Ministry of Higher Education to determine the national training needs

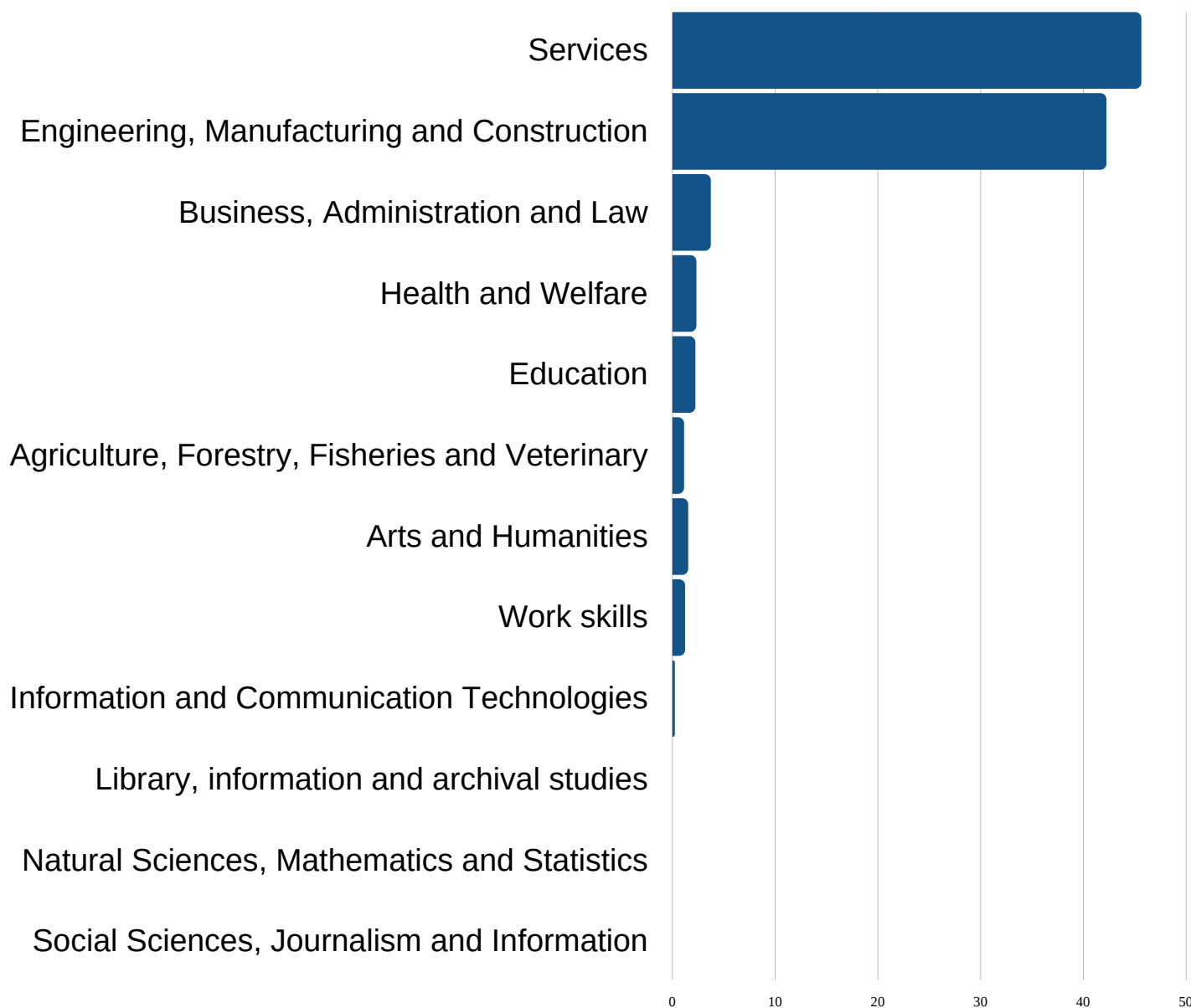
Field classification is based on International Standard Classification of Education (ISCED) by UNESCO

For classification details:

<http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-fields-of-education-and-training-2013-detailed-field-descriptions-2015-en.pdf>

Updated July 2020

2.1 FOREIGN EMPLOYMENT IN THE COUNTRY BY FIELD OF EMPLOYMENT

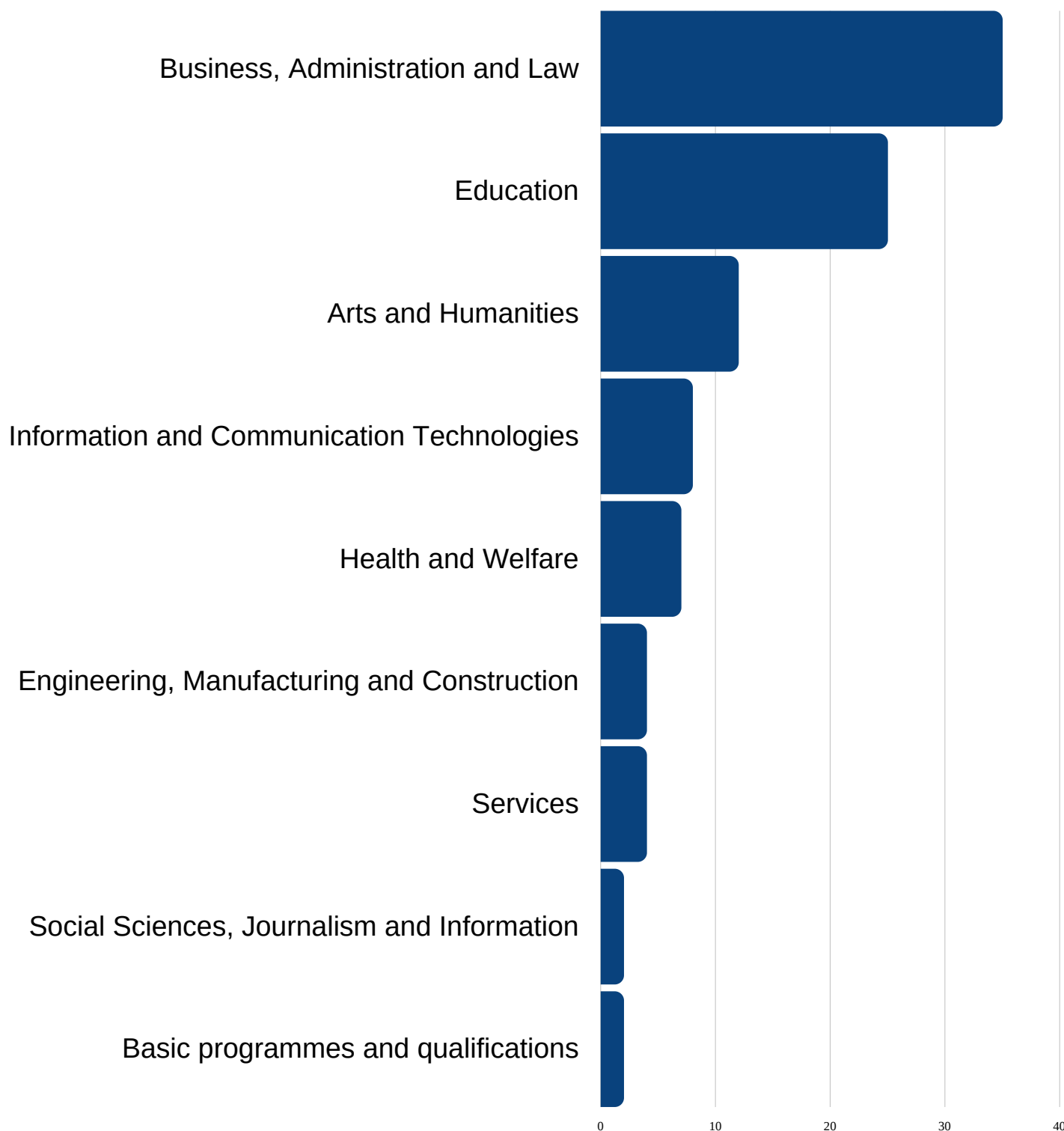


*Data gathered from Ministry of
Economic Development, 2019*

Between 2013 and 2018 there were 79,572 foreign workers employed in service sector

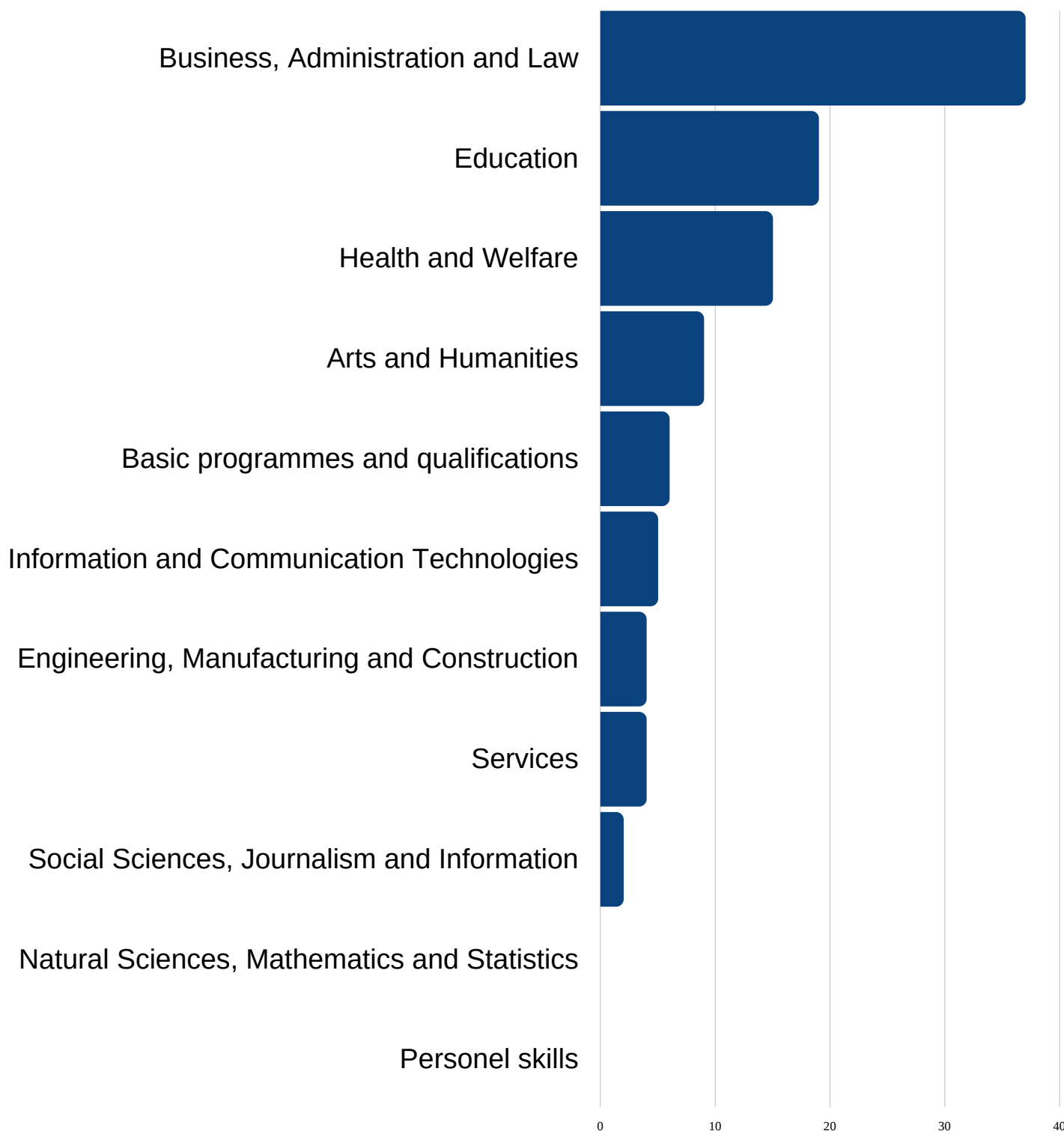
Between 2013 and 2018 there were 73,588 foreign workers employed in Engineering, manufacturing and construction sector

2.2 PROGRAMMES OFFERED BY HIGHER EDUCATION INSTITUTIONS BY FIELD OF STUDY



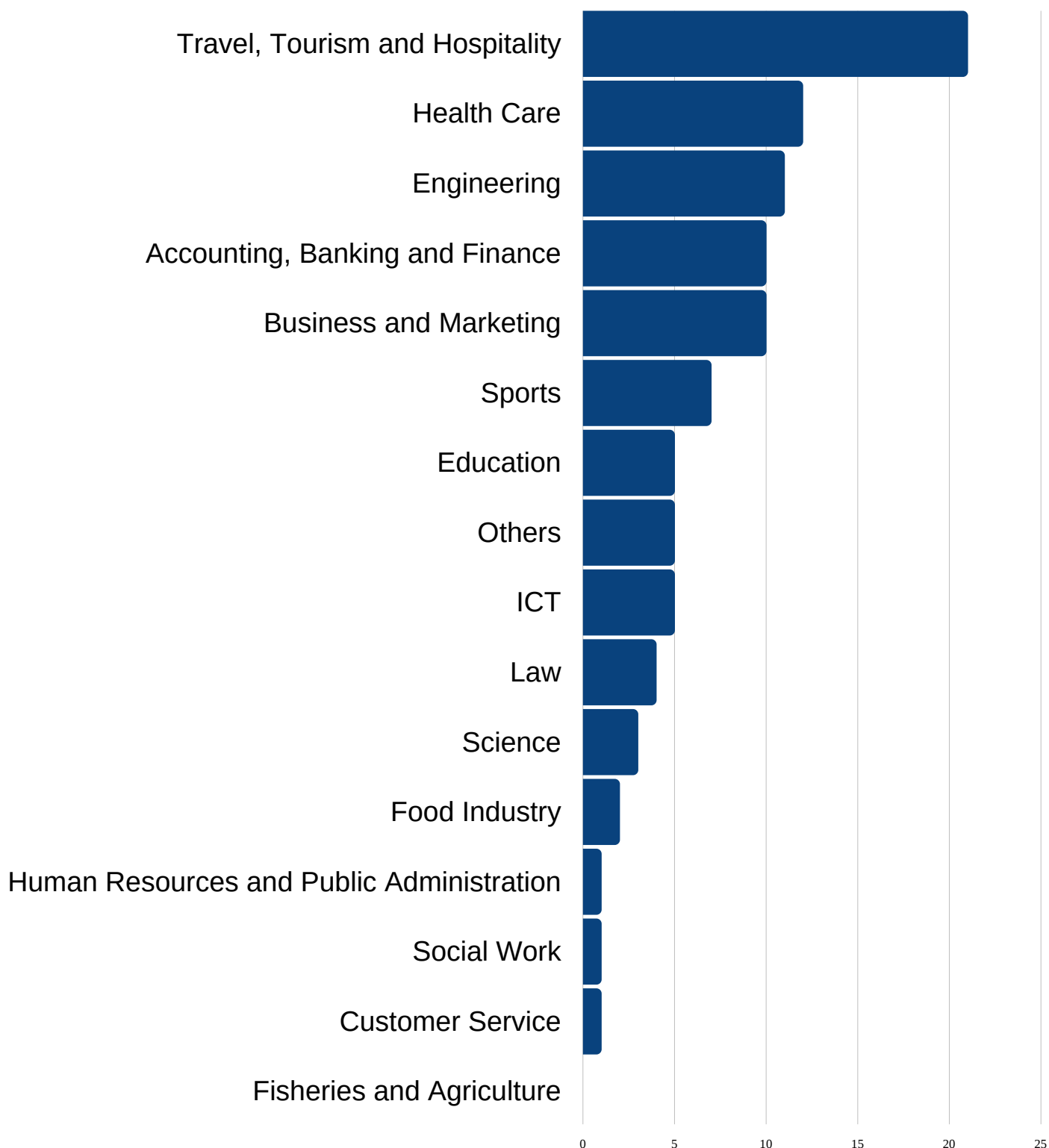
Results based on Annual Higher Education Statistics 2019, Ministry of Higher Education

2.3 STUDENT ENROLLMENT IN HIGHER EDUCATION BY FIELD OF STUDY



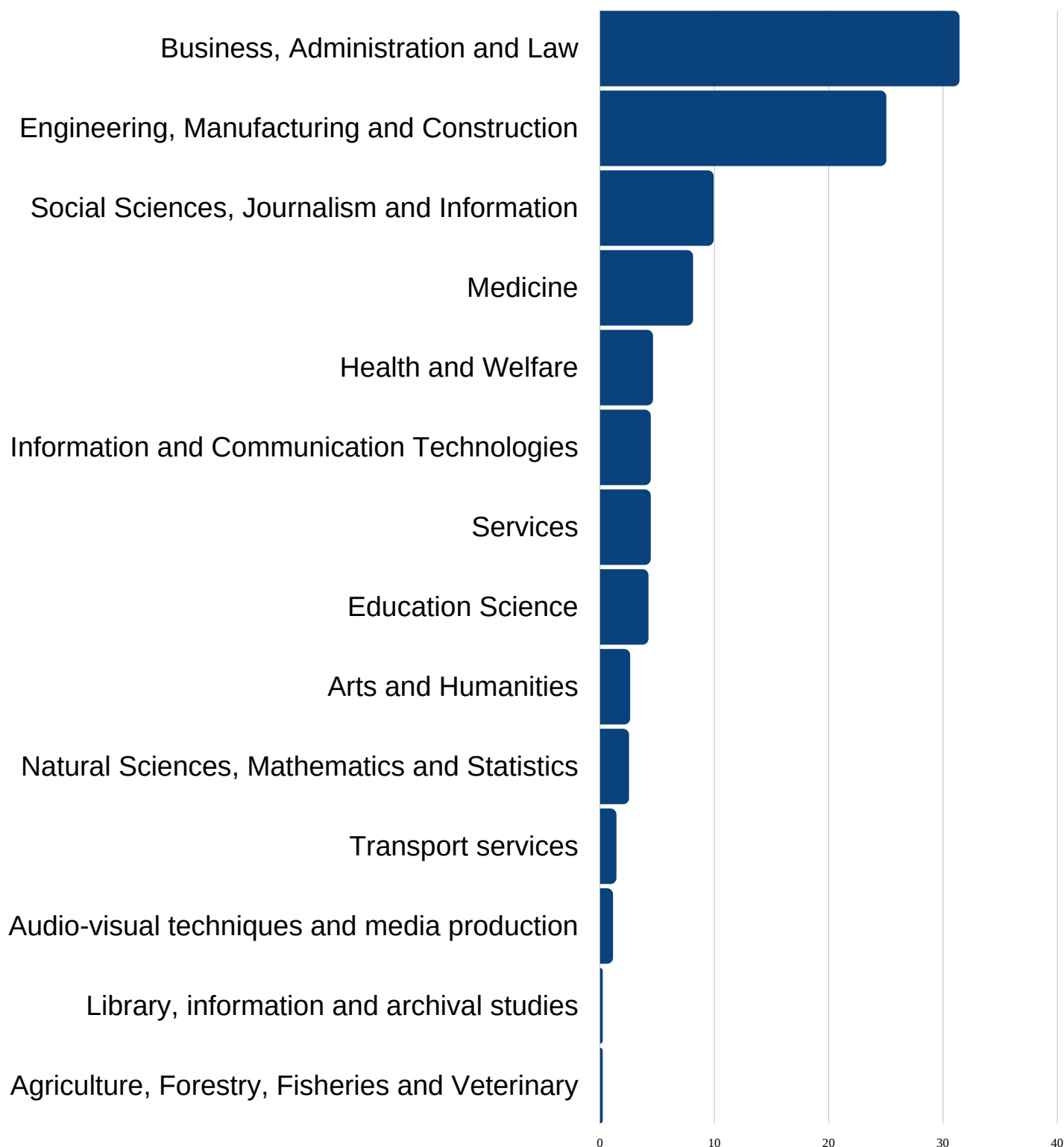
Results based on Annual Higher Education Statistics 2019, Ministry of Higher Education

2.4 PROSPECTIVE STUDENTS' INTEREST BY FIELD OF STUDY



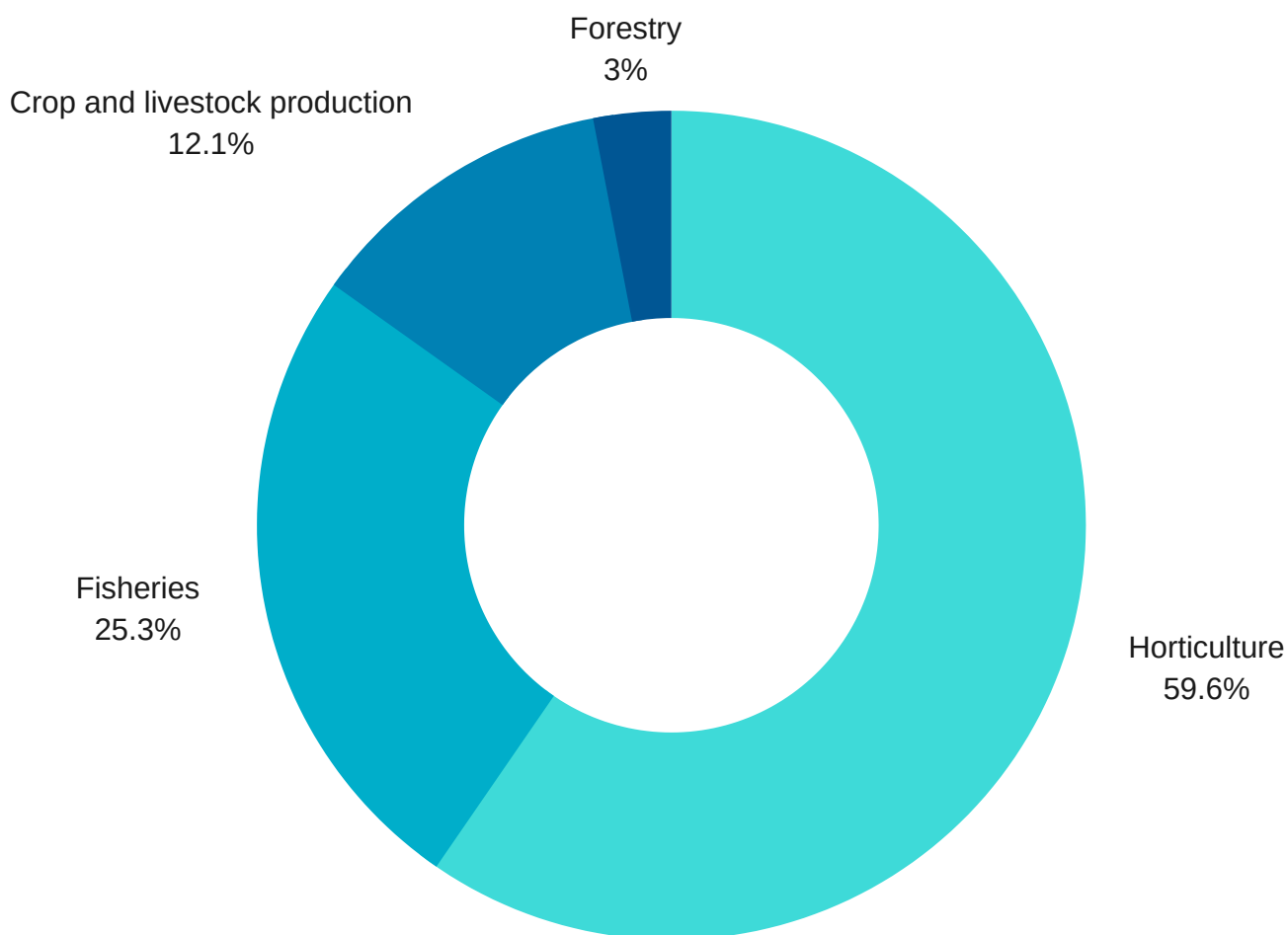
*Results based on a study conducted
by Ministry of Higher Education to
analyze school leavers career
interests, 2020*

2.5 STUDENT REQUESTS FOR HIGHER EDUCATION LOAN BY FIELD OF STUDY



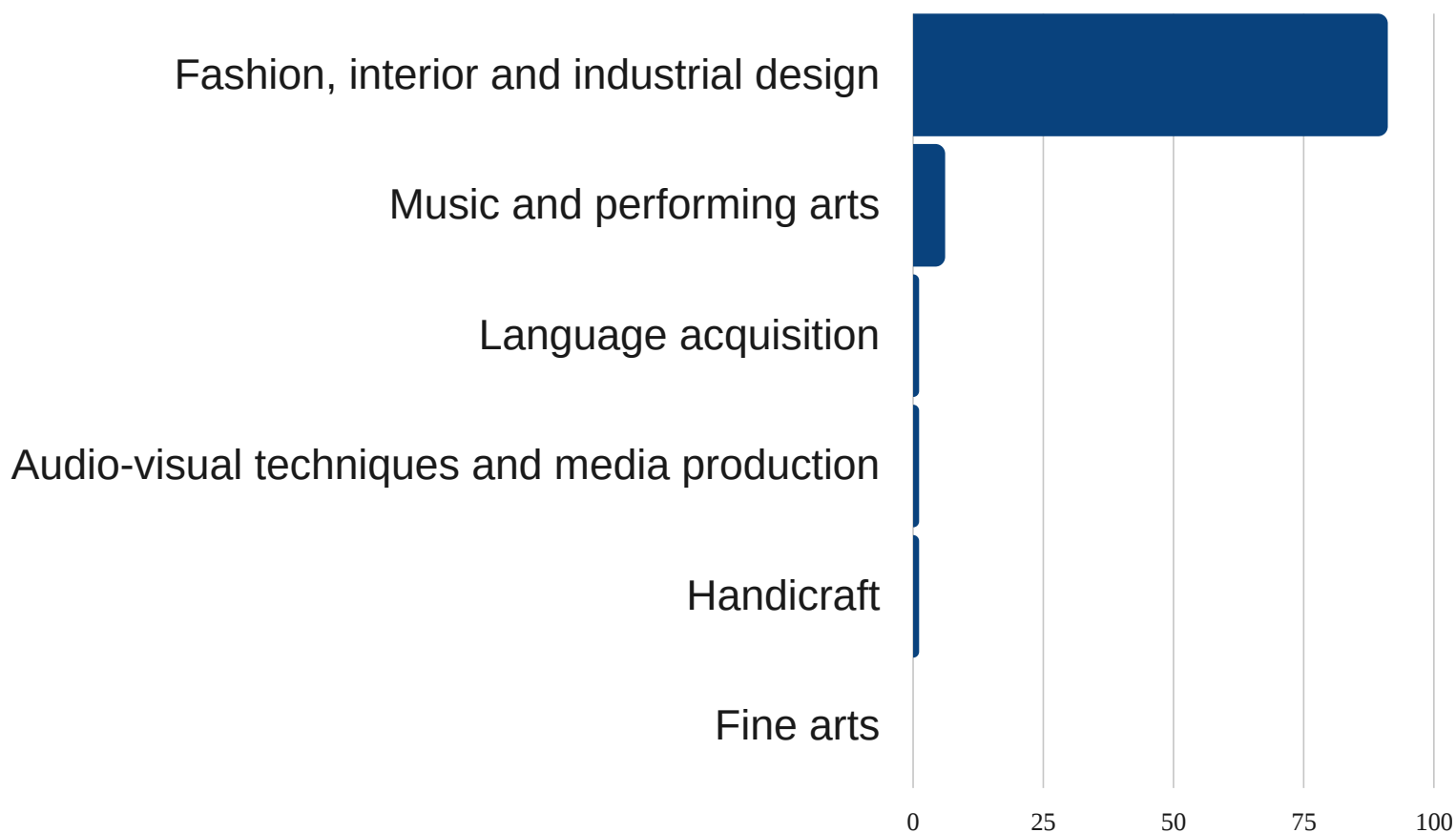
*Based on the data in the year 2018
and 2019, Ministry of Higher
Education*

3.1 FOREIGN EMPLOYMENT BY FIELD: AGRICULTURE, FORESTRY, FISHERIES AND VETERINARY



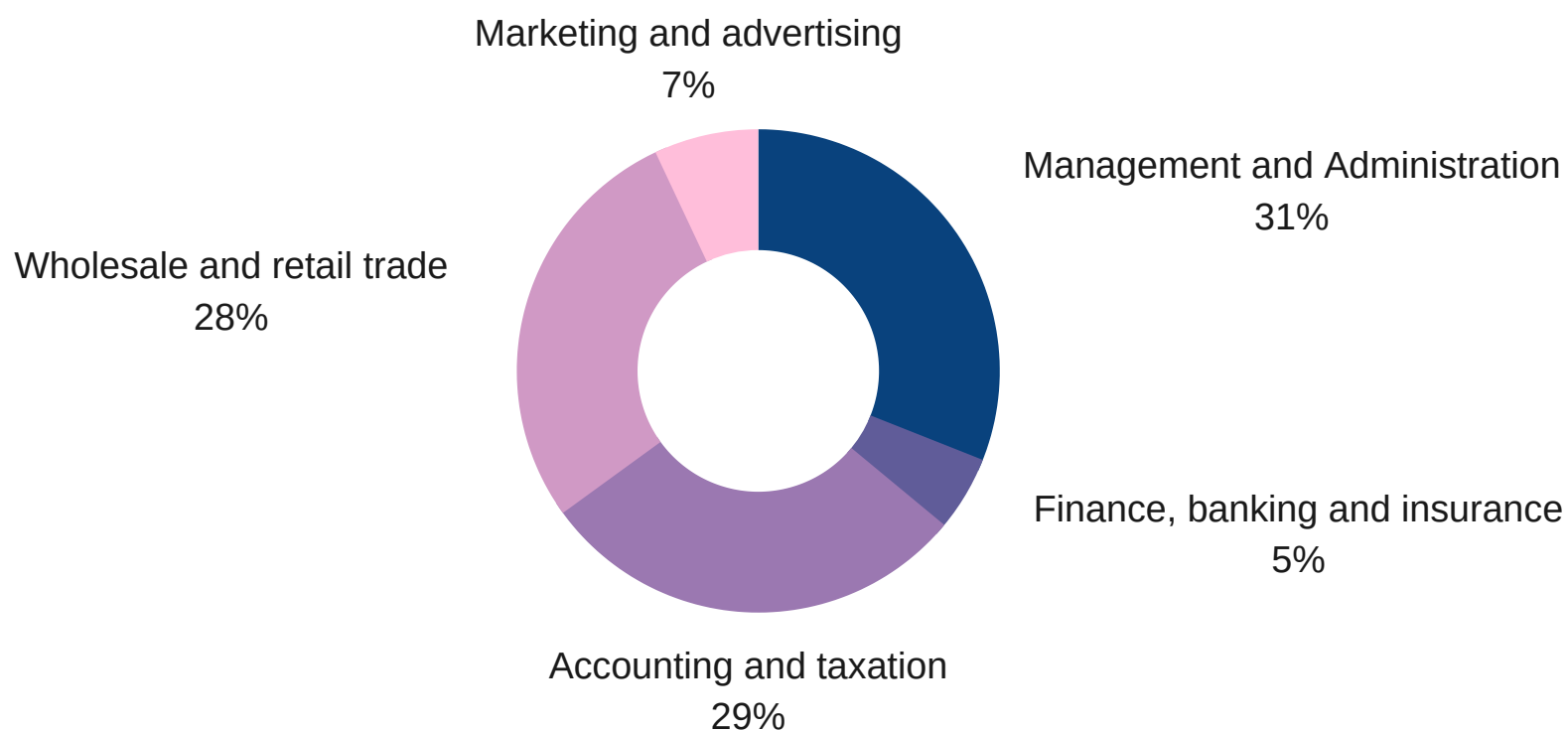
Between 2013 and 2018 there were 1392 foreign workers employed in the field of Agriculture, Forestry, Fisheries and Veterinary.

3.2 FOREIGN EMPLOYMENT BY FIELD: ARTS AND HUMANITIES



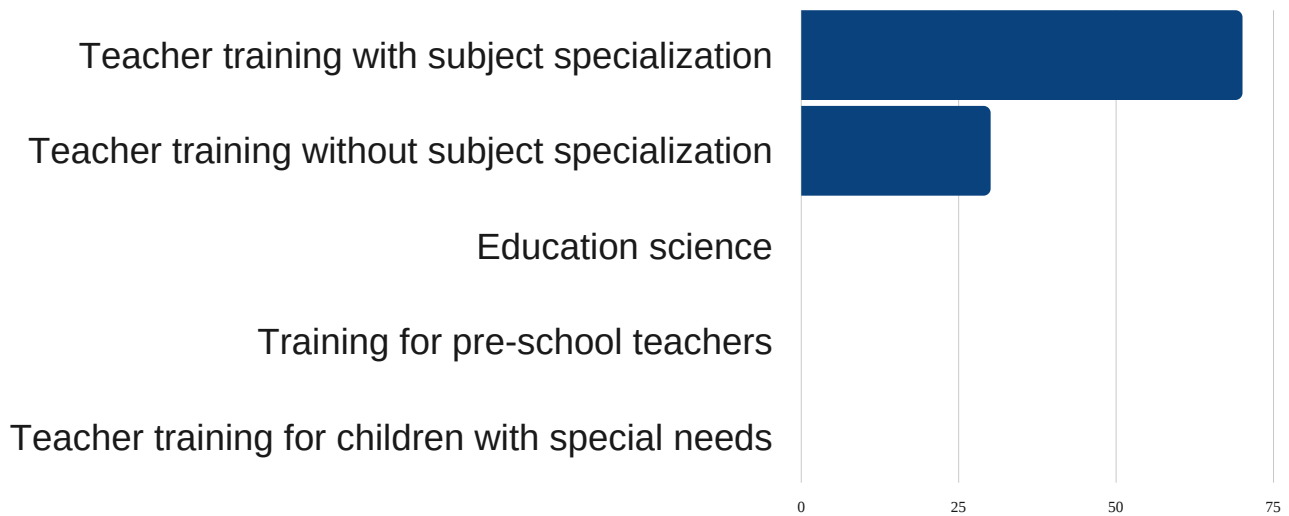
Between 2013 and 2018 there were 1923 foreign workers employed in the field of Arts and Humanities.

3.3 FOREIGN EMPLOYMENT BY FIELD: BUSINESS, ADMINISTRATION AND LAW



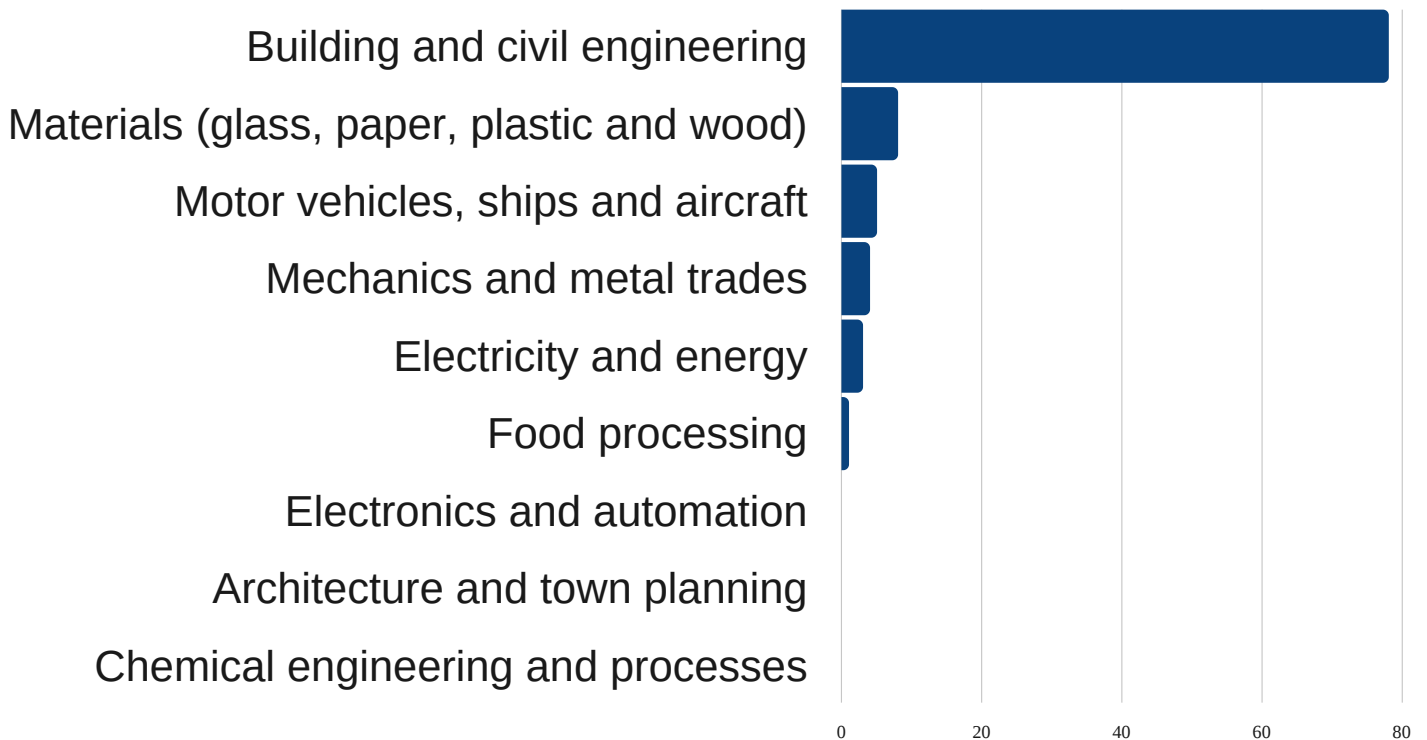
Between 2013 and 2018 there were 4422 foreign workers employed in the field of Business, Administration and Law

3.4 FOREIGN EMPLOYMENT BY FIELD: EDUCATION



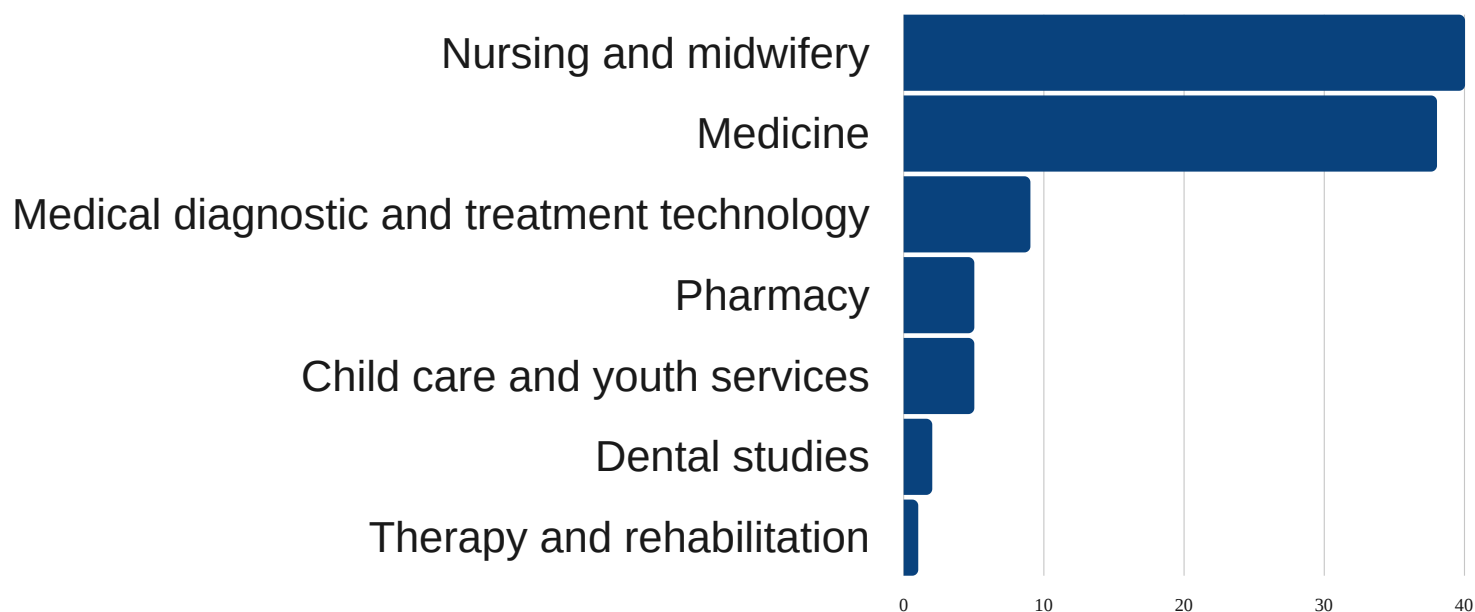
Between 2013 and 2018 there were 3342 foreign workers employed in the field of Education

3.5 FOREIGN EMPLOYMENT BY FIELD: ENGINEERING, MANUFACTURING AND CONSTRUCTION



Between 2013 and 2018 there were 61214 foreign workers employed in the field of Engineering, Manufacturing and Construction.

3.6 FOREIGN EMPLOYMENT BY FIELD: HEALTH AND WELFARE

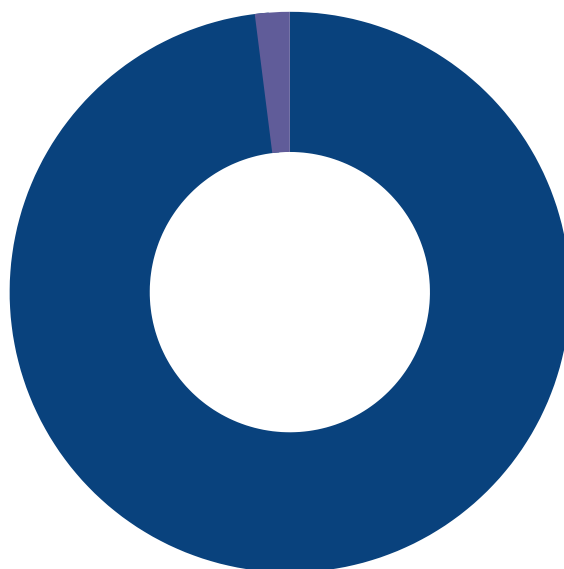


Between 2013 and 2018 there were 3135 foreign workers employed in the field of Health and Welfare.

3.7 FOREIGN EMPLOYMENT BY FIELD: INFORMATION AND COMMUNICATION TECHNOLOGIES

Software and applications development and analysis

2%



Database and network design and administration

98%

Between 2013 and 2018 there were 222 foreign workers employed in the field of Information and Communication Technologies.

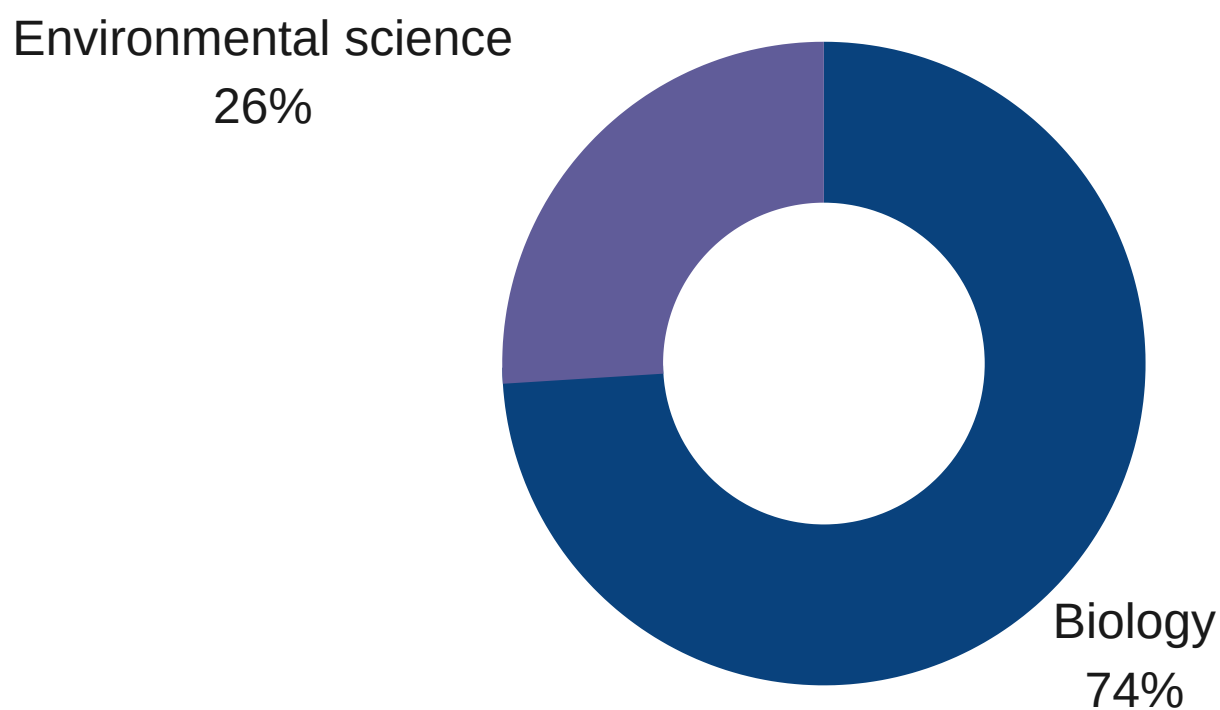
3.8 FOREIGN EMPLOYMENT BY FIELD: LIBRARY, INFORMATION AND ARCHIVAL STUDIES



Museum studies
100%

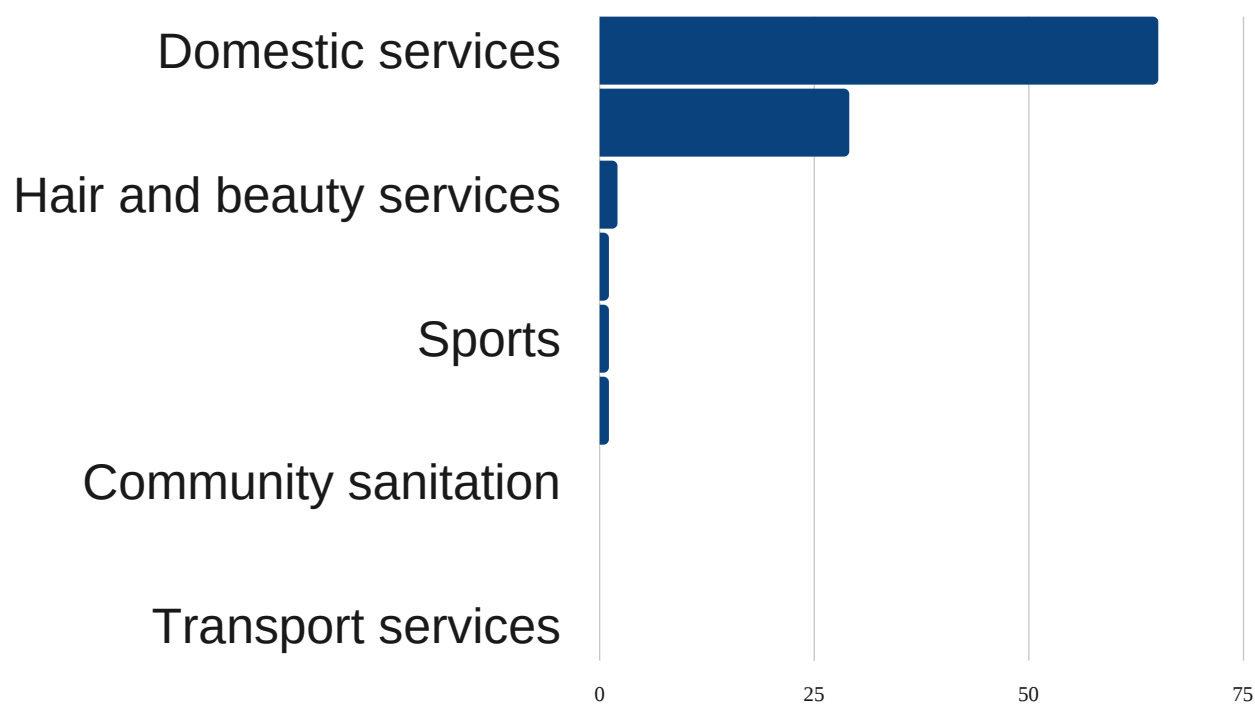
Between 2013 and 2018 there were 1 foreign worker employed in the field of Library, Information and Archival studies.

3.9 FOREIGN EMPLOYMENT BY FIELD: NATURAL SCIENCES, MATHEMATICS AND STATISTICS



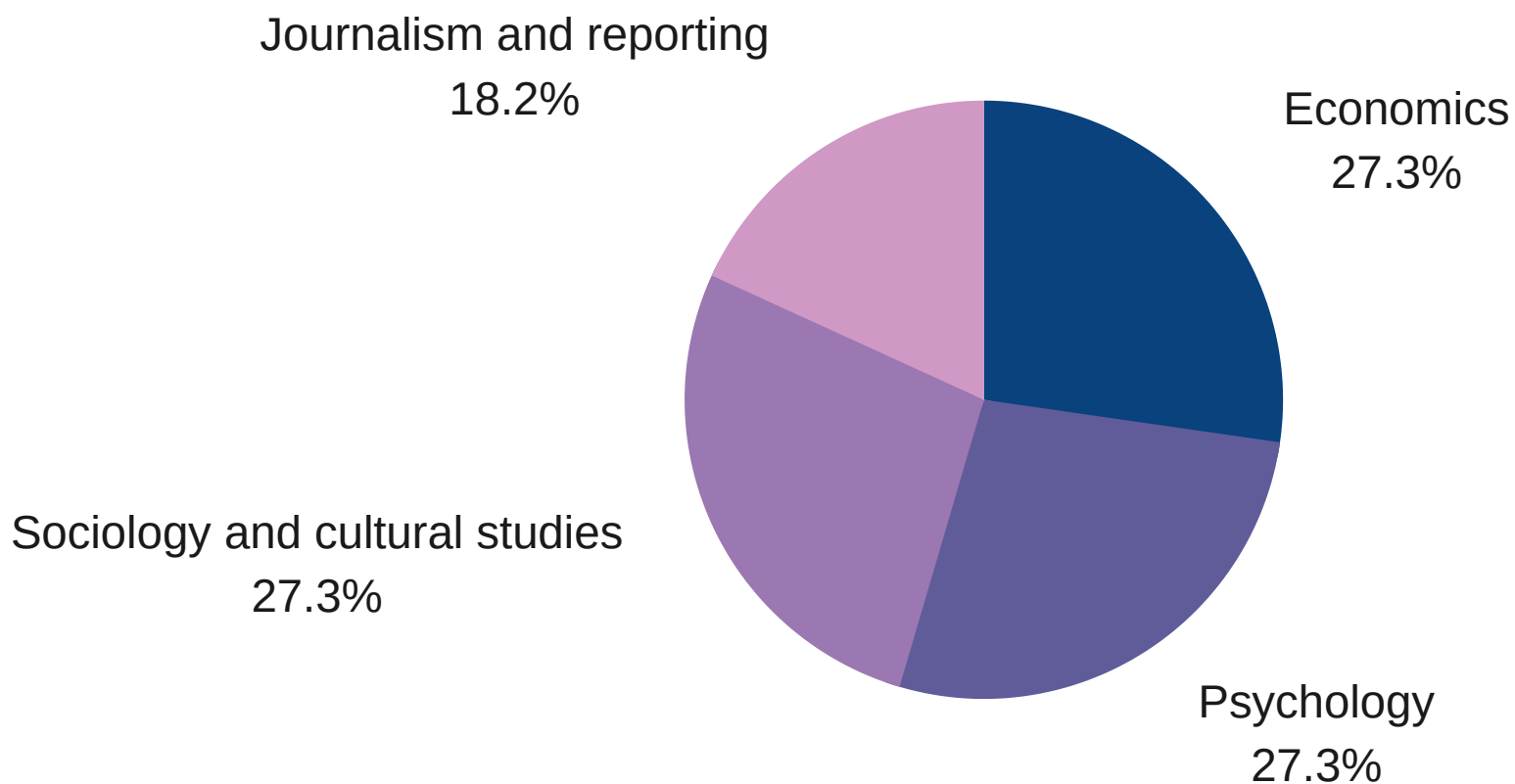
Between 2013 and 2018 there were 15 foreign workers employed in the field of Natural sciences, Mathematics and Statistics.

3.10 FOREIGN EMPLOYMENT BY FIELD: SERVICES



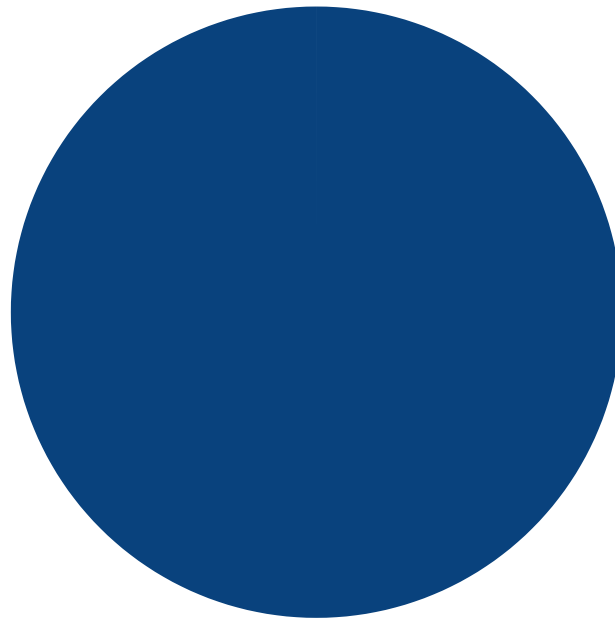
Between 2013 and 2018 there were 61779 foreign workers employed in the field of Services.

3.11 FOREIGN EMPLOYMENT BY FIELD: SOCIAL SCIENCES, JOURNALISM AND INFORMATION



Between 2013 and 2018 there were 10 foreign workers employed in the field of Social sciences, Journalism and Information

3.12 FOREIGN EMPLOYMENT BY FIELD: WORK SKILLS



Work skills
100%

Between 2013 and 2018 there were 1248 foreign workers employed in the field of Work skills.

	A	B	C	D	E	F	G
1	SCOPE FOR PROGRAMME DIVERSIFICATION AND ADDRESSING NATIONAL TRAINING NEEDS						
2	1	2	3	4	5	6	7
3	FIELD OF EDUCATION AND TRAINING	IN NATIONAL TRAINING NEEDS REQUIREMENT	RANK BY FOREIGN EMPLOYMENT (1 BEING HIGHEST EMPLOYED FIELD, 58 BEING LOWEST EMPLOYED FIELD)	RANK BY PROGRAMMES OFFERED FROM HEIS (1 BEING MOST OFFERED, 44 LEAST OFFERED)	PRIORITY TO DESIGN NEW PROGRAMMES	RANK BY STUDENTS' INTEREST IN THE FIELD (1 BEING HIGHEST INTEREST, 17 BEING LOWEST INTEREST)	RANK BY STUDENTS' REQUEST FOR HELS (1 BEING HIGHEST REQUEST, 30 BEING LOWEST REQUEST)
4	Building and civil engineering	YES	1	33	HIGH	3	1
5	Domestic services	YES	2	42	HIGH	17	30
6	Hotel, restaurants and catering	YES	3	44	HIGH	12	30
7	Materials (glass, paper, plastic and wood)	YES	4	40	HIGH	17	30
8	Motor vehicles, ships and aircraft	YES	5	44	HIGH	17	30
9	Mechanics and metal trades	YES	6	38	HIGH	17	30
10	Wholesale and retail trade	YES	13	44	HIGH	17	30
11	Hair and beauty services	YES	14	44	HIGH	17	30
12	Medicine	YES	16	34	HIGH	2	9
13	Horticulture	YES	17	44	HIGH	17	30
14	Protection of persons and property	YES	21	43	HIGH	17	30
15	Fisheries	YES	23	44	HIGH	17	30
16	Medical diagnostic and treatment technology	YES	25	35	HIGH	17	30
17	Electronics and automation	YES	28	44	HIGH	17	30
18	Crop and livestock production	YES	29	44	HIGH	17	30
19	Architecture and town planning	YES	30	44	HIGH	17	12
20	Child care and youth services	YES	32	44	HIGH	17	30
21	Music and performing arts	YES	34	44	HIGH	17	30
22	Dental studies	YES	35	44	HIGH	17	20
23	Forestry	YES	36	44	HIGH	17	30
24	Therapy and rehabilitation	YES	40	41	HIGH	17	6
25	Handicrafts	YES	41	44	HIGH	17	30
26	Biology	YES	42	36	HIGH	17	30
27	Occupational health and safety	YES	43	44	HIGH	17	30
28	Education science	YES	44	44	HIGH	17	30
29	Environmental science	YES	48	44	HIGH	17	14
30	Veterinary	YES	50	44	HIGH	16	28
31	Fine arts	YES	51	44	HIGH	17	17
32	Economics	YES	52	44	HIGH	17	15
33	Sociology and cultural studies	YES	54	44	HIGH	17	21
34	Library, information and archival studies	YES	55	44	HIGH	17	27
35	Transport services	YES	57	44	HIGH	17	30
36	Biochemistry	YES	58	44	HIGH	17	13
37	Environment protection technology	YES	58	44	HIGH	17	25
38	History and archeology	YES	58	44	HIGH	17	30
39	Specialisms in management and administration	YES	58	44	HIGH	17	30
40	Specialisms in Law	YES	58	44	HIGH	17	30
41	Chemistry	YES	58	44	HIGH	17	30
42	Physics	YES	58	44	HIGH	17	30
43	Mathematics	YES	58	44	HIGH	17	30
44	Statistics	YES	58	44	HIGH	17	30
45	Care of the elderly and disabled adults	YES	58	44	HIGH	17	30
46	Military and defence	YES	58	44	HIGH	17	30
47	Motor vehicles, ships and aircrafts	YES	58	39	HIGH	17	3
48	Earth science	YES	58	37	HIGH	11	30
49	Political science and civics	YES	58	32	HIGH	17	29
50	Philosophy and ethics	YES	58	31	HIGH	17	30
51	Fashion, interior and industrial design	YES	8	24	MEDIUM	17	22
52	Travel, tourism and leisure	YES	19	15	MEDIUM	1	10
53	Sports	YES	20	17	MEDIUM	17	26
54	Food processing	YES	22	28	MEDIUM	17	30
55	Finance, banking and insurance	YES	26	20	MEDIUM	17	11
56	Pharmacy	YES	31	18	MEDIUM	17	30
57	Community sanitation	YES	33	29	MEDIUM	17	30
58	Chemical engineering and processes	YES	37	27	MEDIUM	17	30
59	Teacher training for children with special needs	YES	45	16	MEDIUM	17	30
60	Software and applications development and analysis	YES	47	23	MEDIUM	17	30

	A	B	C	D	E	F	G
61	Journalism and reporting	YES	56	25	MEDIUM	17	19
62	Hotels, restaurants and catering	YES	58	22	MEDIUM	6	23
63	Literature and linguistics	YES	58	21	MEDIUM	17	30
64	Social work and counselling	YES	58	19	MEDIUM	14	30
65	Teacher training with subject specialization	YES	7	3	LOW	7	8
66	Electricity and energy	YES	9	11	LOW	17	30
67	Work skills	YES	10	12	LOW	15	30
68	Accounting and taxation	YES	12	6	LOW	17	5
69	Nursing and midwifery	YES	15	7	LOW	17	16
70	Database and network design and administration	YES	27	4	LOW	9	7
71	Language acquisition	YES	38	10	LOW	17	30
72	Audio-visual techniques and media production	YES	39	13	LOW	17	18
73	Psychology	YES	53	14	LOW	17	30
74	Religion and theology	YES	58	5	LOW	17	24
75	Marketing and advertising	NO	24	26	MEDIUM	5	30
76	Management and Administration	NO	11	1	LOW	4	2
77	Teacher training without subject specialization	NO	18	2	LOW	17	30
78	Training for pre-school teachers	NO	46	9	LOW	17	30
79	Law	NO	49	8	LOW	10	4
80	Others	NO	58	30	HIGH	8	30
81							
82							
83	FOOTNOTES:						
84	1. FIELD OF EDUCATION AND TRAINING CLASSIFIED BY ISCED CLASSIFICATION						
85	2. FIELD OF EDUCATION AND TRAINING CATEGORIZED BY REPRESENTATION IN NATIONAL TRAINING NEEDS						
86	YES- INDICATING THIS IS A FIELD IN THE NATIONAL TRAINING NEEDS						
87	NO- INDICATING IT IS NOT A FIELD IN THE NATIONAL TRAINING NEEDS						
88	3. RANK BY FOREIGN EMPLOYMENT CATEGORY (1 TO 58)						
89	1 BEING HIGHEST EMPLOYED CATEGORY BY FOREIGNERS AND 58 BEING LOWEST EMPLOYED CATEGORY BY FOREIGNERS						
90	4. RANK OF PROGRAMMES OFFERED BY HEIS (1 BEING MOST OFFERED AND 44 BEING LEAST OFFERED)						
91	1 BEING MOST OFFERED AND 44 BEING LEAST OFFERED BY HIGHER EDUCATION INSTITUTIONS						
92	5. PRIORITY TO DESIGN NEW PROGRAMMES BASED ON FIELD FOUR						
93	1-15 LOW PRIORITY						
94	15-30 MEDIUM PRIORITY						
95	30-44 HIGH PRIORITY						
96	6. RANK BY STUDENTS' INTEREST IN THE FIELD (1 BEING HIGHEST INTEREST, 17 BEING LOWEST INTEREST)						
97	7. RANK BY STUDENTS' REQUEST FOR HELS (1 BEING HIGHEST REQUEST, 30 BEING LOWEST REQUEST)						
98	HELS (HIGHER EDUCATION LOAN SCHEME)						