

**IOP** Institute of Physics

# Physics Staff in UK Universities

Data Brief



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# Terms of Reference

A description of the data set used, and the terminology used throughout this report is given below.

## Source:

The data used in this report is gathered and licenced by the Higher Education Statistics Authority (HESA). The data concerns only staff members at Higher Education institutions and includes information on protected characteristics such as gender and ethnicity.

## Rounding:

Staff numbers are rounded up to the nearest 5.

If 0 staff are shown, that could represent 1 or 2 staff. If 0% is shown, that represents a number of staff greater than 0 but less than 0.5%. Blank cells represent no staff at all.

Percentages are calculated using unrounded totals, and so it's not always possible to replicate the percentage shown using the rounded totals indicated.

Percentages are only shown if 100% represents more than 22.5 staff and are usually rounded to the nearest 1% unless it's necessary to show more detail.

In summary, percentages are correct to within 1%, and staff numbers are correct to within 5.

## Tense:

Some statistics are written as "are" or "is". This refers to the most recent academic year for which data are available (2018/19).

## Location:

All statistics refer to staff at Higher Education institutions in the United Kingdom including Northern Ireland.

## Selected STEM subjects:

In this report, we compare Physics, Biosciences, Chemistry, Electronic & electrical & computer engineering, IT, systems sciences and computer software engineering, and Mathematics. When these are combined, this group is referred to as selected STEM (Science, Technology, Engineering and Maths) subjects in this report. This group of subjects have been selected to benchmark Physics against other subjects.

## Gender:

Gender in the document uses the classification in the HESA gender field, whose available options are Male, Female, and Other. Other includes intersex, androgyne, intergender, ambigender, gender fluid, polygender and gender queer.

## Nationality:

Nationality in this report is broken down into three categories. The three categories are:

- **United Kingdom (UK)** – this includes England, Wales, Scotland, Northern Ireland, Guernsey, Jersey and the Isle of Man.
- **European Union (EU)** – this includes all member nations of the EU.
- **Non-EU, Non-UK** – this includes all countries that are not included in either category above. In some parts of this report this category maybe referred to as non-EU.

For some members of staff, nationality is unknown. These represent a small number of the overall staff population and are not included in the following analysis.

## Ethnicity:

HESA provides a detailed ethnicity breakdown for staff in Higher Education. For this analysis ethnicities are grouped together as there are too few staff members in some ethnicities to provide a meaningful more detailed breakdown. The groupings used are as follows:

- Asian
- Black
- Mixed
- Other
- White

However, a detailed breakdown is provided in a table at the beginning of every ethnicity section which provides the overall rounded totals for each ethnicity. The ethnicities are as follows:

- Asian or Asian British – Bangladeshi
- Asian or Asian British – Indian
- Asian or Asian British – Pakistani
- Black or Black British – African
- Black or Black British – Caribbean
- Chinese
- Mixed
- Other
- Other Asian background
- Other Black background
- White

Ethnicity isn't known for every member of staff and these staff members are excluded from the analysis.

## Summary

This report details the statistics for Physics staff in Higher Education in the UK. Physics is compared to all other academic disciplines grouped together as well as a more detailed analysis of Physics compared to selected STEM subjects. The data set used to understand staff trends in Higher Education was provided by the Higher Education Statistics Authority and includes data for the academic years 2012/13 to 2018/19 (the most recent year available). Characteristics such as gender, nationality, ethnicity and age have been included, as well as information on salary, in order to gain an understanding of the Physics staff population and how it compares to other areas within academia.

### **The key messages identified in this report are as follows:**

- The total number of staff for Physics in Higher Education, including academic and non-academic staff members, increased by 27% from 2012/13 to 2018/19.
- The number of academic staff in Physics increased by 30% from 2012/13 to 2018/19.
- The number of female academic staff members in Physics increased by 46% and now make up 20% of academic contracts in Physics compared to 17% in 2012/13.
- There are 91% more female Physics professors in 2018/19 than there were in 2012/13.
- Staff from the EU represent 27% of academic staff in 2018/19 (up 51% from 2012/13), and staff from non-EU, non-UK countries represent 18% of academic contracts in 2018/19 (up 55% from 2012/13).
- For Physics, the number of Asian academic staff has increased by 70% and number of black academic staff has increased by 100%.
- Black and minority ethnic people are underrepresented in Physics academic (16%) and non-academic staff (10%). Black and minority ethnic people are also underrepresented as Physics professors (7%).
- The age of Physics staff is skewed towards younger age groups. The age group with the greatest proportion of staff in is 31 to 35 years old which represents 17% of all Physics staff.
- Female Physics staff are more likely to be in the lower salary bands compared to their male colleagues.

## All Staff

An analysis of all staff, that is including academic and non-academic staff, is first considered.

**Table 1** shows how the number of staff employed for each subject has changed with time. Biosciences has a high number of staff with more than double any other selected STEM subject.

Discipline	Academic Year						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	5,895	6,385	6,855	6,990	7,090	7,280	7,510
(112) Biosciences	18,165	19,435	19,865	19,700	19,905	20,175	20,245
(113) Chemistry	5,160	5,595	5,695	5,740	5,805	5,870	5,910
(119) Electrical, electronic & computer engineering	5,060	5,285	5,555	5,675	5,665	5,760	5,945
(121) IT, systems sciences & computer software engineering	8,380	8,670	8,605	8,640	9,080	9,585	10,060
(122) Mathematics	5,020	5,380	5,390	5,520	5,575	5,725	5,840

**Table 1:** HESA data for staff by subject from 2012/13 to 2018/19.

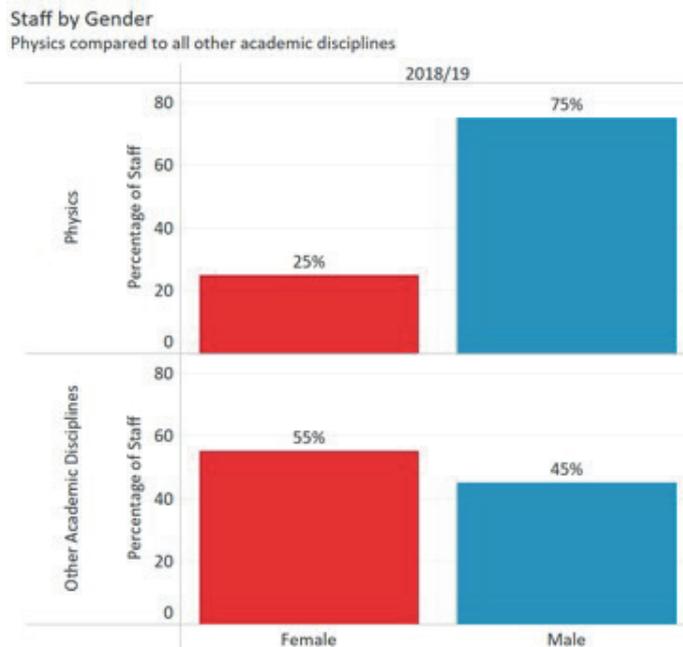
**Table 2** shows the percentage increase each year from the previous year in the number of staff for Physics and selected STEM subjects. Physics had the largest overall increase in staff numbers (27%) from 5,895 to 7,510, an increase of 1,615 total staff members, and even though Biosciences has the greatest number of staff, it saw the smallest increase in staff numbers over the same time period. Physics saw the largest increase in the staffing numbers in 2013/14 and 2014/15 which saw the number of Physics staff increase by 8% and 7%, respectively. From 2015/16, the increase in Physics staff was between 1% and 3%. Chemistry saw the greatest percentage increase in staff numbers (8%) in 2013/14, however, after this academic year, the percentage increase in staff numbers for Chemistry was 1 or 2%.

Discipline	2012/13	Academic Year / Year on Year Change						Total Change
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
(114) Physics	5,895	8%	7%	2%	1%	3%	3%	27%
(112) Biosciences	18,165	7%	2%	-1%	1%	1%	0%	11%
(113) Chemistry	5,160	8%	2%	1%	1%	1%	1%	15%
(119) Electrical, electronic & computer engineering	5,060	4%	5%	2%	0%	2%	3%	17%
(121) IT, systems sciences & computer software engineering	8,380	3%	-1%	0%	5%	6%	5%	20%
(122) Mathematics	5,020	7%	0%	2%	1%	3%	2%	16%

**Table 2:** HESA data for the percentage change from the previous year in staff for 2012/13 to 2018/19.

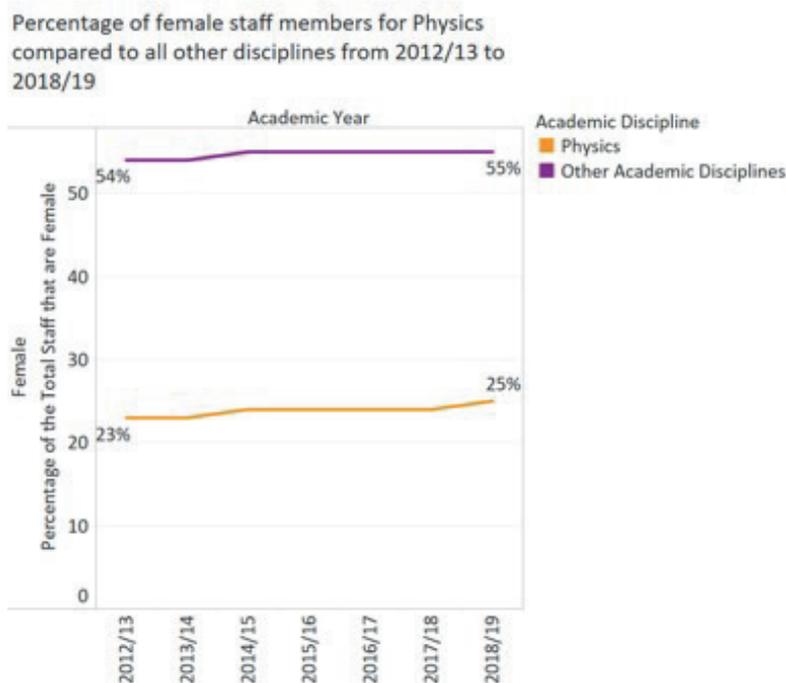
# Gender

In the academic year 2018/19, 25% of staff in Physics departments were female. This is significantly lower than the average for all other disciplines where the proportion of staff that were female is 55%.



**Figure 1:** Staff by gender for Physics and all other academic disciplines combined

Over time, an increasing number of staff in Physics departments are female. Over the period from 2012/13 to 2018/19, the proportion of Physics staff that are female increased from 23% to the 25% stated above. During the same time period, the proportion of female staff in all other disciplines increased by one percentage point, see Figure 2.



**Figure 2:** Percentage of Physics staff in higher education that are female from 2012/13 to 2018/19

**Table 3** shows the total number of staff by gender for Physics and selected STEM subjects from 2012/13 to 2018/19. In 2012/13, the number of female staff in Physics was lower than in Mathematics however by 2018/19, the number of female staff in Physics was greater than the number in Mathematics. Chemistry still has more female staff than Physics, however, the difference between the two subjects has reduced over time.

Gender	Discipline	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Female	(114) Physics	1,325	1,450	1,620	1,660	1,695	1,775	1,875
	(112) Biosciences	9,075	9,745	10,005	9,980	10,160	10,350	10,360
	(113) Chemistry	1,710	1,895	1,915	1,940	2,020	2,050	2,090
	(119) Electrical, electronic & computer engineering	1,065	1,125	1,175	1,240	1,220	1,230	1,340
	(121) IT, systems sciences & computer software engineering	2,425	2,555	2,540	2,525	2,720	2,770	2,900
	(122) Mathematics	1,515	1,590	1,615	1,660	1,690	1,705	1,730
Male	(114) Physics	4,565	4,935	5,230	5,330	5,395	5,505	5,635
	(112) Biosciences	9,090	9,690	9,865	9,720	9,745	9,830	9,885
	(113) Chemistry	3,445	3,700	3,780	3,795	3,785	3,820	3,820
	(119) Electrical, electronic & computer engineering	3,995	4,160	4,380	4,435	4,445	4,530	4,605
	(121) IT, systems sciences & computer software engineering	5,955	6,110	6,065	6,115	6,365	6,815	7,160
	(122) Mathematics	3,505	3,790	3,775	3,860	3,885	4,015	4,115

**Table 3:** The total number of staff by subject from 2012/13 to 2018/19 by gender.

From **Table 4** below, the number of female staff in Physics increased by 42%. This increase only produced a two percentage points increase in the overall proportion of Physics staff who are female in Higher Education (see Figure 2). This is because during the same time period, male Physics staff increased by 1,070 (an increase of 23%). This increase in male Physics staff numbers is nearly twice that of the increase in female Physics staff numbers.

The largest increases in staff numbers, for most selected STEM subjects for both male and female staff, occurred between 2012/13 and 2014/15. From 2012/13 to 2013/14, the number of staff in Physics increased by 9% and 8% for female and male staff, respectively. From 2013/14 to 2014/15, female Physics staff saw the largest increase of any comparable subject across the time period looked at (12%).

Comparing the increase of female staff in Physics to other selected STEM subjects, Physics has seen the largest increase (42%). Other selected STEM subjects saw an increase in female staff of between 14-26%, the highest increase after Physics is seen in Electrical, electronic & computer engineering (26%). Physics also saw the largest percentage increase for male staff (23%). Other selected STEM subjects saw an increase in male staff of between 9-20%, the largest increase being seen in IT, systems sciences & computer software engineering (20%).

Gender	Discipline	Academic Year / Year on Year Increase							Total Change
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Female	(114) Physics	1,325	9%	12%	2%	2%	5%	6%	42%
	(112) Biosciences	9,075	7%	3%	0%	2%	2%	0%	14%
	(113) Chemistry	1,710	11%	1%	1%	4%	1%	2%	22%
	(119) Electrical, electronic & computer engineering	1,065	6%	4%	6%	-2%	1%	9%	26%
	(121) IT, systems sciences & computer software engineering	2,425	5%	-1%	-1%	8%	2%	5%	20%
	(122) Mathematics	1,515	5%	2%	3%	2%	1%	1%	14%
Male	(114) Physics	4,565	8%	6%	2%	1%	2%	2%	23%
	(112) Biosciences	9,090	7%	2%	-1%	0%	1%	1%	9%
	(113) Chemistry	3,445	7%	2%	0%	0%	1%	0%	11%
	(119) Electrical, electronic & computer engineering	3,995	4%	5%	1%	0%	2%	2%	15%
	(121) IT, systems sciences & computer software engineering	5,955	3%	-1%	1%	4%	7%	5%	20%
	(122) Mathematics	3,505	8%	0%	2%	1%	3%	2%	17%

**Table 4:** HESA data for the percentage change from the previous year in staff by gender for 2012/13 to 2018/19.

# Nationality

Comparing staff in Physics departments to staff in all other academic disciplines in **Figure 3**, Physics has the highest proportion of staff from the European Union (EU) (22%) and other non-EU, non-UK countries (15%).

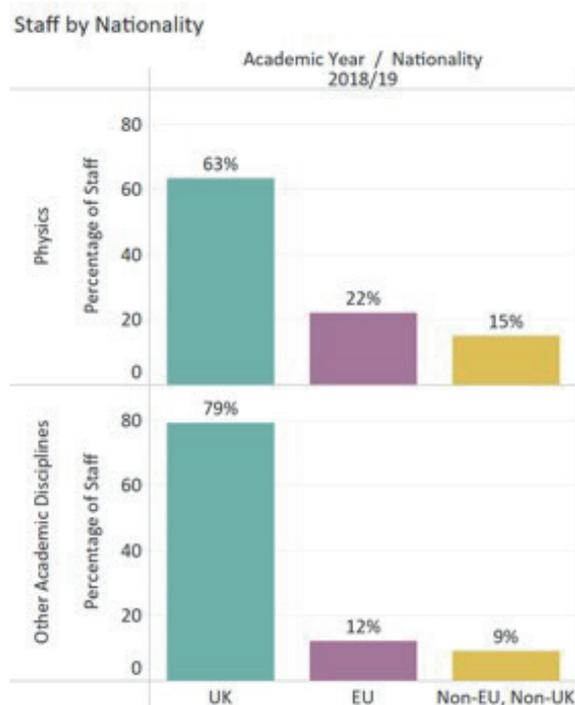


Figure 3: HESA data for 2018/19 by nationality for Physics and all other academic disciplines

Figure 4 shows that the percentage of Physics staff from the EU and Non-EU, Non-UK countries has increased steadily over time with the exception of staff from the EU in 2018/19 which saw a small decrease from the year before. Both EU and non-EU, non-UK staff have increased at approximately the same rate.

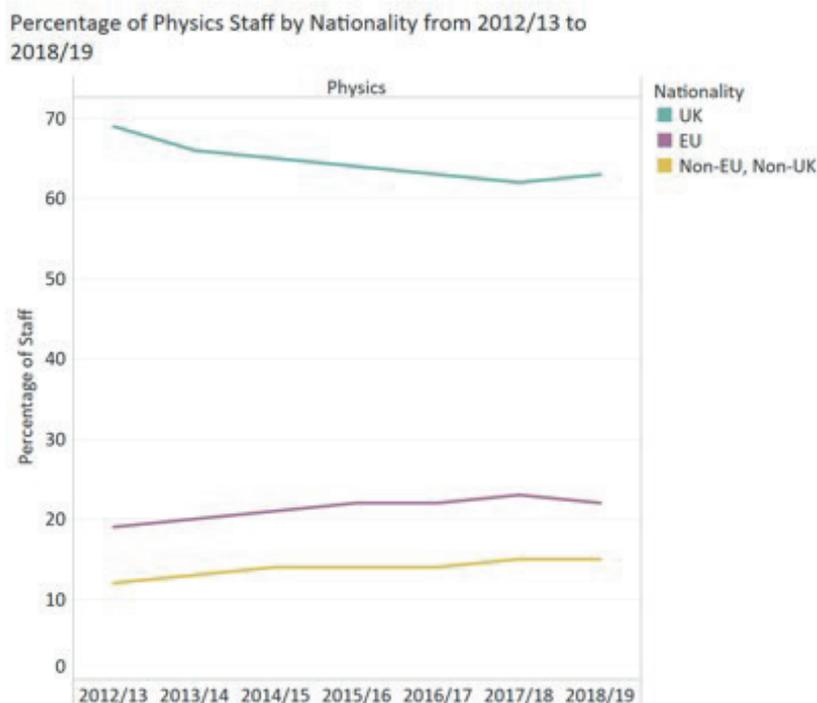


Figure 4: HESA data showing the nationality of Physics staff over time.

The number of Physics staff from the UK is greater than the number of Chemistry staff and Mathematics staff from the UK. The same is true for staff from the EU, and for non-EU, non-UK countries with the exception of the academic years 2012/13 and 2014/15 where Mathematics had more non-EU staff than Physics.

Nationality	Discipline	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
UK	(114) Physics	3,945	4,110	4,330	4,385	4,440	4,505	4,680
	(112) Biosciences	13,245	13,920	14,050	13,785	13,910	13,990	13,885
	(113) Chemistry	3,685	3,900	3,850	3,840	3,865	3,935	3,990
	(119) Electrical, electronic & computer engineering	3,330	3,425	3,470	3,460	3,390	3,380	3,420
	(121) IT, systems sciences & computer software engineering	5,915	5,960	5,850	5,730	5,970	6,065	6,220
	(122) Mathematics	3,140	3,205	3,195	3,260	3,275	3,305	3,320
EU	(114) Physics	1,090	1,255	1,425	1,495	1,560	1,635	1,665
	(112) Biosciences	2,775	3,155	3,450	3,635	3,745	3,860	3,870
	(113) Chemistry	765	930	975	1,055	1,125	1,110	1,055
	(119) Electrical, electronic & computer engineering	690	740	830	900	920	935	970
	(121) IT, systems sciences & computer software engineering	1,215	1,375	1,445	1,560	1,655	1,890	2,010
	(122) Mathematics	1,010	1,175	1,205	1,240	1,325	1,385	1,460
Non-EU, Non-UK	(114) Physics	710	820	945	985	1,005	1,090	1,105
	(112) Biosciences	1,755	1,950	2,020	2,035	2,085	2,215	2,345
	(113) Chemistry	595	640	700	715	760	800	830
	(119) Electrical, electronic & computer engineering	985	1,055	1,210	1,290	1,325	1,430	1,545
	(121) IT, systems sciences & computer software engineering	1,085	1,195	1,230	1,290	1,375	1,565	1,770
	(122) Mathematics	770	870	895	940	925	1,010	1,040

**Table 5:** HESA data for staff by nationality from 2012/13 to 2018/19

**Table 6** shows how the proportion of staff for each nationality has changed over time for each subject. For Physics and all selected STEM subjects, the proportion of staff members who are from the UK has decreased year on year with the exception of Physics and Chemistry in 2018/19. This year saw a one percentage point increase for UK staff members for Physics and Chemistry.

The opposite trend is true for staff members from the EU and non-EU, non-UK countries. As seen in Table 6 the proportion of staff members from these nationalities increase each year for most subjects except a one percentage point decrease in Physics and Chemistry staff from the EU from 2017/18 to 2018/19. Physics and Chemistry saw no change in the proportion of staff from non-EU, non-UK countries from 2017/18 to 2018/19.

Nationality	Discipline	Academic Year							
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
UK	(114) Physics	69%	66%	65%	64%	63%	62%	63%	
	(112) Biosciences	75%	73%	72%	71%	70%	70%	69%	
	(113) Chemistry	73%	71%	70%	68%	67%	67%	68%	
	(119) Electrical, electronic & computer engineering	67%	66%	63%	61%	60%	59%	58%	
	(121) IT, systems sciences & computer software engineering	72%	70%	69%	67%	66%	64%	62%	
	(122) Mathematics	64%	61%	60%	60%	59%	58%	57%	
EU	(114) Physics	19%	20%	21%	22%	22%	23%	22%	
	(112) Biosciences	16%	17%	18%	19%	19%	19%	19%	
	(113) Chemistry	15%	17%	18%	19%	20%	19%	18%	
	(119) Electrical, electronic & computer engineering	14%	14%	15%	16%	16%	16%	16%	
	(121) IT, systems sciences & computer software engineering	15%	16%	17%	18%	18%	20%	20%	
	(122) Mathematics	21%	22%	23%	23%	24%	24%	25%	
Non-EU, Non-UK	(114) Physics	12%	13%	14%	14%	14%	15%	15%	
	(112) Biosciences	10%	10%	10%	10%	11%	11%	12%	
	(113) Chemistry	12%	12%	13%	13%	13%	14%	14%	
	(119) Electrical, electronic & computer engineering	20%	20%	22%	23%	24%	25%	26%	
	(121) IT, systems sciences & computer software engineering	13%	14%	14%	15%	15%	16%	18%	
	(122) Mathematics	16%	17%	17%	17%	17%	18%	18%	

**Table 6:** HESA data by proportion of nationality for staff from 2012/13 to 2018/19.

**Table 7** shows the percentage change of Physics staff and staff in selected STEM subjects by nationality from 2012/13 to 2018/19. Over that period of time, Physics staff from the United Kingdom increased by 19%. Physics, in fact, saw the largest increase of staff from the UK for any selected STEM subject with the next largest increase being for Chemistry which saw an 8% increase in staff numbers.

Across all selected STEM subjects looked at, staff members from EU countries saw larger percentage increases than staff from the UK did. Physics saw the number of staff members from the EU increase by 53%. Chemistry saw the smallest increase in staff numbers from the EU (38%) and IT, systems sciences & computer software engineering saw the largest increase of 65%.

Staff members from non-EU, non-UK countries increased by 56% for Physics between 2012/13 and 2018/19, equating to 395 additional people. During the same time period, IT, systems sciences & computer software engineering again saw the largest increase in non-EU, non-UK staff members (63%). The subject which saw the smallest increase (34%) was Biosciences.

Nationality	Discipline	2012/13	Academic Year / Year on Year Change						Total Change
			2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
UK	(114) Physics	3,945	4%	5%	1%	1%	1%	4%	19%
	(112) Biosciences	13,245	5%	1%	-2%	1%	1%	-1%	5%
	(113) Chemistry	3,685	6%	-1%	0%	1%	2%	1%	8%
	(119) Electrical, electronic & computer engineering	3,330	3%	1%	0%	-2%	0%	1%	3%
	(121) IT, systems sciences & computer software engineering	5,915	1%	-2%	-2%	4%	2%	3%	5%
	(122) Mathematics	3,140	2%	0%	2%	0%	1%	0%	6%
EU	(114) Physics	1,090	15%	14%	5%	4%	5%	2%	53%
	(112) Biosciences	2,775	14%	9%	5%	3%	3%	0%	39%
	(113) Chemistry	765	22%	5%	8%	7%	-1%	-5%	38%
	(119) Electrical, electronic & computer engineering	690	7%	12%	8%	2%	2%	4%	41%
	(121) IT, systems sciences & computer software engineering	1,215	13%	5%	8%	6%	14%	6%	65%
	(122) Mathematics	1,010	16%	3%	3%	7%	5%	5%	45%
Non-EU, Non-UK	(114) Physics	710	15%	15%	4%	2%	8%	1%	56%
	(112) Biosciences	1,755	11%	4%	1%	2%	6%	6%	34%
	(113) Chemistry	595	8%	9%	2%	6%	5%	4%	39%
	(119) Electrical, electronic & computer engineering	985	7%	15%	7%	3%	8%	8%	57%
	(121) IT, systems sciences & computer software engineering	1,085	10%	3%	5%	7%	14%	13%	63%
	(122) Mathematics	770	13%	3%	5%	-2%	9%	3%	35%

**Table 7:** HESA data for the percentage change from the previous year in staff by nationality for 2012/13 to 2018/19.

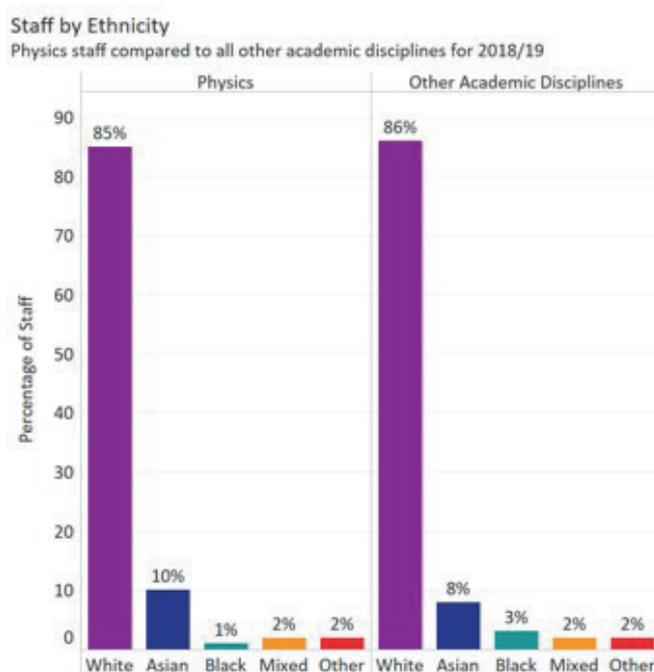
# Ethnicity

**Table 8** shows a detailed breakdown for selected STEM staff members by ethnicity. For all subjects, most members of staff are White. For Physics, the ethnicity with the second highest number of staff is Chinese. The ethnicity with the lowest number of staff members for Physics is Other Black background.

	2018/19										
	Asian or Asian British - Bangladeshi	Asian or Asian British - Indian	Asian or Asian British - Pakistani	Black or Black British - African	Black or Black British - Caribbean	Chinese	Mixed	Other	Other Asian background	Other Black background	White
(114) Physics	15	235	25	20	20	275	170	105	130	5	5,790
(112) Biosciences	45	665	145	210	55	505	400	355	350	25	16,000
(113) Chemistry	25	180	40	45	15	270	95	95	105	5	4,605
(119) Electrical, electronic & computer engineering	60	260	120	105	20	645	100	210	275	10	3,690
(121) IT, systems sciences & computer software engineering	50	325	150	175	40	575	205	345	300	15	7,065
(122) Mathematics	10	125	20	45	15	255	110	120	115	5	4,485

**Table 8:** Detailed ethnic breakdown of selected STEM subjects staff in 2018/19.

**Figure 5** shows the percentage of staff for each grouped ethnicity in 2018/19 for Physics compared to all other academic disciplines. It is evident from the figure that the staff for Physics as well as all other academic disciplines are predominantly White. The proportion of staff who are Black in Physics is slightly less than in other academic disciplines, however, Physics sees a slightly higher proportion of Asian staff.



**Figure 5:** HESA data for staff by ethnicity for 2018/19.

**Table 9** shows the total number of staff for each selected subject based on their ethnicity. The figures in the table are compared to the 2011 census<sup>1</sup>. From the 2011 census, approximately 3% of England and Wales' population, at the time, were Black. The census also identified 7% of the population as being Asian, and 80% as being White.

In 2018/19, between 1-2% of staff for selected STEM subjects were Black (for Physics, this figure was 1%). Comparing this proportion to the 2011 census, Black staff members are underrepresented in all selected STEM subjects. Amongst all selected STEM subjects, representation of black ethnicities in members of staff did not change from 2012/13 to 2018/19.

For Physics, in 2018/19, 10% of staff were Asian, up from 8% in 2012/13. For other selected STEM subjects this figure varied from 9% for Biosciences to 25% for Electrical, electronic & computer engineering. Representation of Asian ethnicities among staff members in selected STEM subjects increased by approximately 2% over the time period stated. The exception to this is Electrical, electronic & computer engineering where representation increased from 18% to 25%.

In 2012/13, 89% of Physics staff in higher education were White, this figure decreasing to 85% in 2018/19. Though White ethnicities are still overrepresented in Physics staff members, in 2018/19 they were overrepresented to a lesser extent than in 2012/13.

Discipline	Ethnicity (group)	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	Asian	415	470	540	535	560	635	680
	Black	30	35	30	30	35	45	40
	Mixed	80	90	115	135	130	150	170
	Other	55	85	90	85	100	100	105
	White	4,735	5,040	5,345	5,475	5,575	5,665	5,790
(112) Biosciences	Asian	1,310	1,365	1,435	1,485	1,560	1,635	1,710
	Black	190	225	215	205	225	260	290
	Mixed	245	265	270	300	330	370	400
	Other	205	255	275	265	300	325	355
	White	14,900	15,755	16,165	16,035	16,115	16,165	16,000
(113) Chemistry	Asian	425	470	495	515	540	605	620
	Black	50	45	55	50	60	60	60
	Mixed	50	50	60	65	70	85	95
	Other	50	50	55	55	70	80	95
	White	4,165	4,515	4,505	4,520	4,580	4,605	4,605
(119) Electrical, electronic & computer engineering	Asian	850	905	1,035	1,115	1,170	1,245	1,360
	Black	75	80	100	115	100	120	135
	Mixed	60	65	75	75	80	90	100
	Other	160	175	180	185	200	215	210
	White	3,525	3,625	3,725	3,790	3,675	3,670	3,690
(121) IT, systems sciences & computer software engineering	Asian	985	1,010	1,000	1,045	1,120	1,275	1,405
	Black	155	170	180	195	185	200	230
	Mixed	110	115	125	130	170	185	205
	Other	140	195	220	215	230	285	345
	White	6,475	6,595	6,515	6,440	6,690	6,930	7,065
(122) Mathematics	Asian	375	440	450	475	465	505	520
	Black	35	40	50	50	50	50	65
	Mixed	60	65	80	95	100	115	110
	Other	80	110	110	105	105	110	120
	White	4,015	4,155	4,155	4,275	4,330	4,425	4,485

**Table 9:** HESA data on staff ethnicity for 2012/13 to 2018/19.

<sup>1</sup> [www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/articles/2011censusanalysisethnicityandreligionofthenonukbornpopulationinenglandand-wales/2015-06-18](http://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/articles/2011censusanalysisethnicityandreligionofthenonukbornpopulationinenglandand-wales/2015-06-18)

**Table 10** shows the percentage change year on year in staff for each ethnicity for each selected STEM subject. The percentage the staff numbers differs by varies depending on year, subject and ethnicity, but there are some similarities across subject and year.

For Physics, the number of White members of staff see an increase each year. However, for all other ethnicities, Physics staff see at least one year where the number of staff decreased. Black staff members for Physics saw two years in which the number of staff members decreased, and both decreases were greater than 10%. No other ethnicity saw a decrease in Physics staff that was greater than 6%. In fact, no other ethnicity, for any other selected STEM subject saw a greater decrease in the number of staff members than Black Physics staff members did in 2014/15 from the previous academic year. The total number of staff for all ethnic groups, with the exception of White staff members, is low. The large fluctuations in the year-on-year percentage changes in staff numbers can be attributed to this.

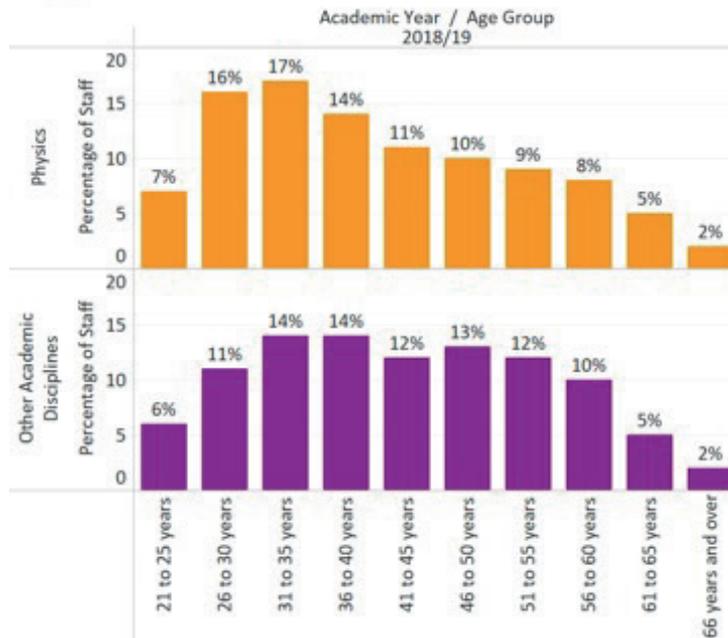
Discipline	Ethnicity	Academic Year / Year on Year Change							Total Change
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
(114) Physics	Asian	415	13%	15%	-1%	5%	13%	7%	64%
	Black	30	17%	-14%	0%	17%	29%	-11%	33%
	Mixed	80	13%	28%	17%	-4%	15%	13%	113%
	Other	55	55%	6%	-6%	18%	0%	5%	91%
	White	4,735	6%	6%	2%	2%	2%	2%	22%
(112) Biosciences	Asian	1,310	4%	5%	3%	5%	5%	5%	31%
	Black	190	18%	-4%	-5%	10%	16%	12%	53%
	Mixed	245	8%	2%	11%	10%	12%	8%	63%
	Other	205	24%	8%	-4%	13%	8%	9%	73%
	White	14,900	6%	3%	-1%	0%	0%	-1%	7%
(113) Chemistry	Asian	425	11%	5%	4%	5%	12%	2%	46%
	Black	50	-10%	22%	-9%	20%	0%	0%	20%
	Mixed	50	0%	20%	8%	8%	21%	12%	90%
	Other	50	0%	10%	0%	27%	14%	19%	90%
	White	4,165	8%	0%	0%	1%	1%	0%	11%
(119) Electrical, electronic & computer engineering	Asian	850	6%	14%	8%	5%	6%	9%	60%
	Black	75	7%	25%	15%	-13%	20%	13%	80%
	Mixed	60	8%	15%	0%	7%	13%	11%	67%
	Other	160	9%	3%	3%	8%	8%	-2%	31%
	White	3,525	3%	3%	2%	-3%	0%	1%	5%
(121) IT, systems sciences & computer software engineering	Asian	985	3%	-1%	5%	7%	14%	10%	43%
	Black	155	10%	6%	8%	-5%	8%	15%	48%
	Mixed	110	5%	9%	4%	31%	9%	11%	86%
	Other	140	39%	13%	-2%	7%	24%	21%	146%
	White	6,475	2%	-1%	-1%	4%	4%	2%	9%
(122) Mathematics	Asian	375	17%	2%	6%	-2%	9%	3%	39%
	Black	35	14%	25%	0%	0%	0%	30%	86%
	Mixed	60	8%	23%	19%	5%	15%	-4%	83%
	Other	80	38%	0%	-5%	0%	5%	9%	50%
	White	4,015	3%	0%	3%	1%	2%	1%	12%

**Table 10:** HESA data for the percentage change from the previous year in staff by ethnicity for 2012/13 to 2018/19.

## Age Group

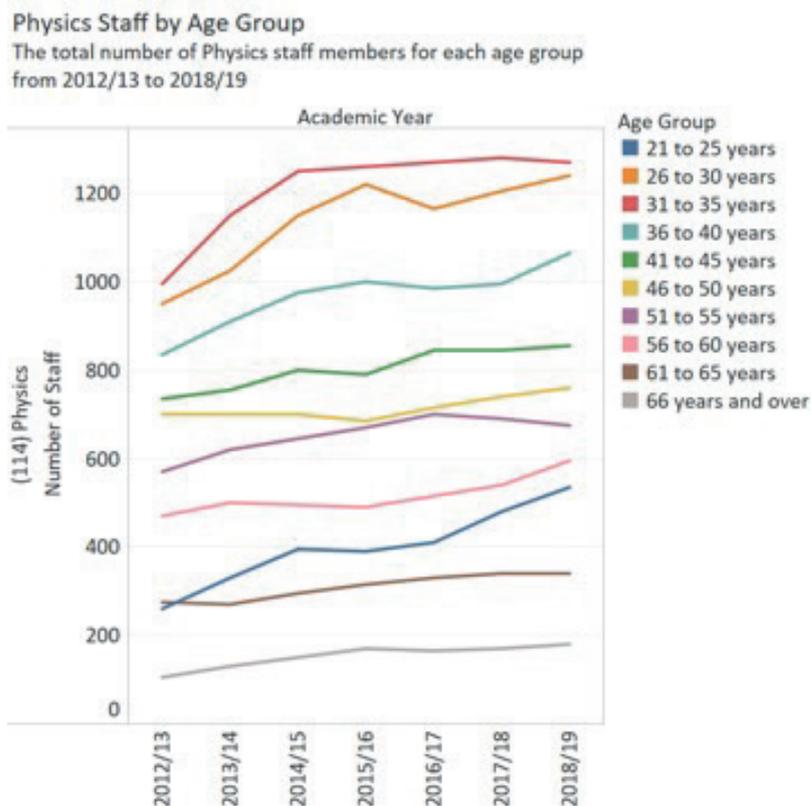
The age of Physics staff is skewed to those in the age groups 26 to 30 years and 31 to 35 years. This skewing to younger age ranges is not observed in the rest of the academic staff as a whole. The percentage of staff is more consistent up to 51 to 55 years old for all other academic disciplines. Figure 6 shows that, for Physics staff, the age range with the highest proportion of staff is 31 to 35 years old (17%). The age range with the lowest proportion of Physics staff is 66 years and over which makes up only 2% of the staff population, this is also observed in all other academic disciplines.

**Staff by Age Group**  
Percentage of staff for each age group in Physics departments and all other disciplines in 2018/19



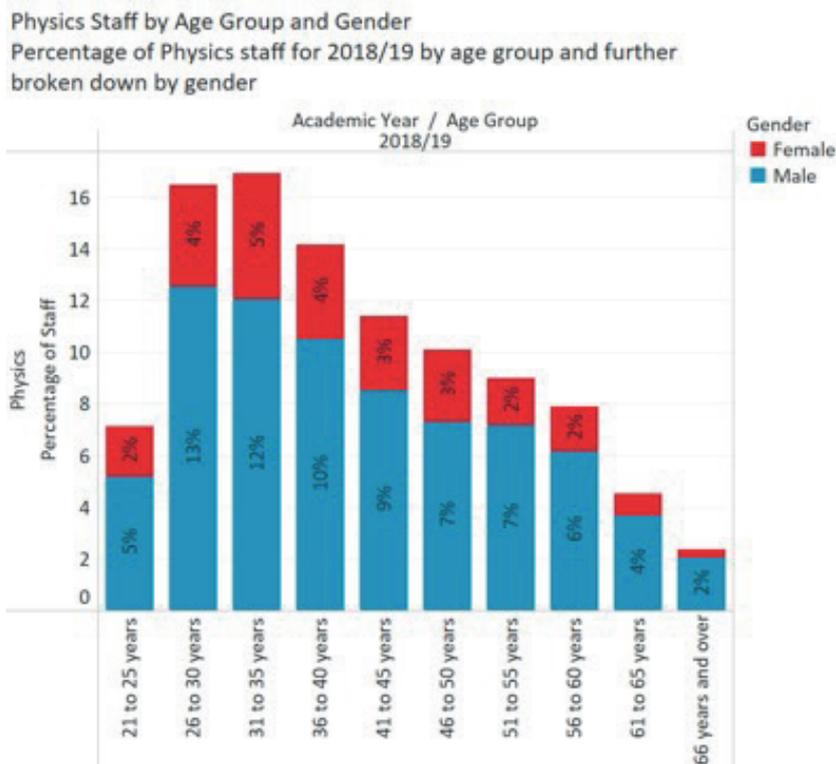
**Figure 6:** HESA staff data by age group for Physics staff and all other disciplines

**Figure 7** shows the total number of Physics staff by age group for each year since 2012/13. The total number of staff in each age group has increased in the time period from 2012/13 to 2018/19. The largest change seen in the those aged 31 to 35 years old, however, this large increase happened between 2012/13 to 2014/15 and since then the rate of increase in staff numbers has been lower.



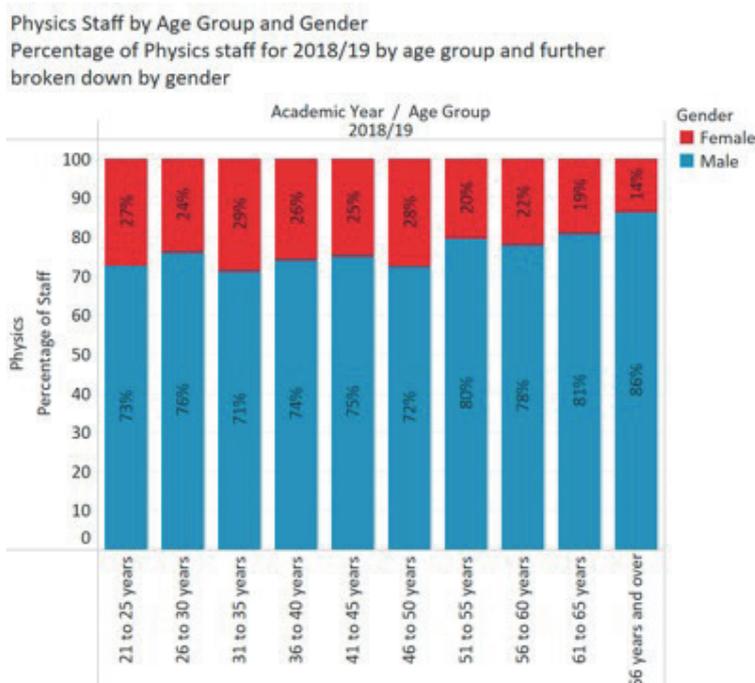
**Figure 7:** HESA staff data for Physics staff for all age groups over time

**Figure 8** shows the breakdown for Physics staff members in 2018/19 by gender for each age group. The age group with the most female staff members, which represents 5% of Physics staff, is 31 to 35 years old (12% of Physics staff aged 31 to 35 years old are male). The age group with the most male staff members for Physics, representing 13% of Physics staff, is 26 to 30 years old.



**Figure 8:** HESA data for Physics staff members in 2018/19 by age group and gender.

Across age groups, female members of staff comprise between 20% and 29% of staff. The exception to this is the age groups 61 to 65 years old and 66 years and over, the proportion of these age groups which are female are 19% and 14%, respectively.



**Figure 9:** HESA data for all Physics staff members in 2018/19 for proportion of each age group by gender.

# Salary

Different salary bands for Physics staff in 2018/19 are shown in **Figure 10**. The salary band with the highest percentage of staff in is £35,001 to £40,000 with 22% of staff being in this salary band. This salary band has more than double the number of staff than the highest 7 salary bands combined. A total of 10% of Physics staff earn more than £70,001.

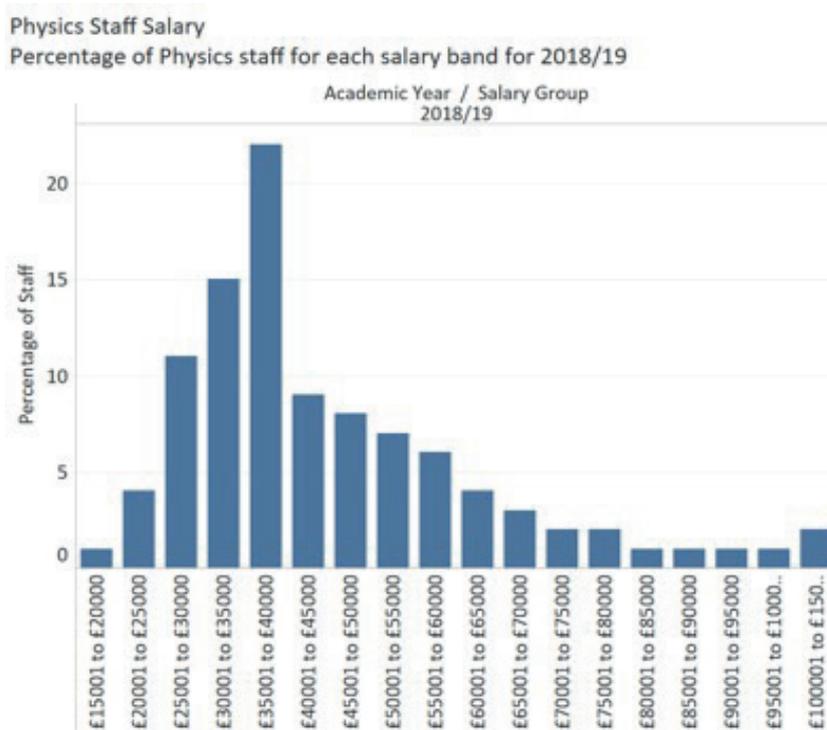


Figure 10: HESA data for Physics staff salaries in 2018/19

Female Physics staff are more likely to be in lower salary bands than male staff. In the £20,001 to £25,000 salary band, 57% of staff are female, a trend which decreases as salary band increases. In the highest salary band, only 14% of staff are female.

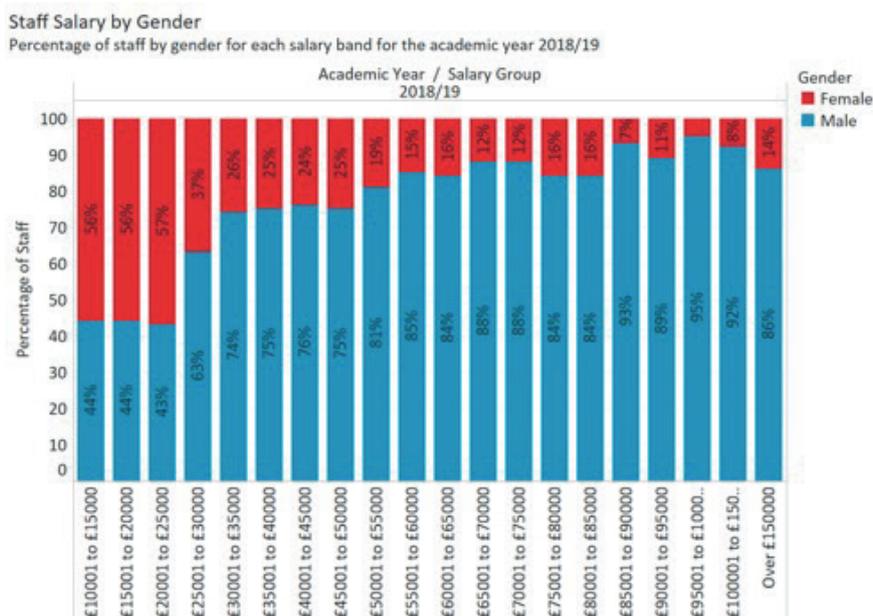


Figure 11: HESA data for Physics staff salaries by gender for 2018/19

**Figure 12** shows the breakdown of the total number of staff in each salary band by ethnicity for Physics staff in the academic year 2018/19. The higher salary bands see the fewest non-White staff members.



**Figure 12:** HESA data for Physics staff showing salary bands by ethnicity for 2018/19.

## Academic and Non-Academic Staff

Presented in this section is an analysis comparing members of staff with academic contracts with those members of staff who have non-academic contracts. Staff with academic contracts are defined to be those who are involved in researching or teaching, whereas those members of staff on a non-academic contract are those with more administrative, leadership or technical roles.

For Physics, there were 340 more non-academic staff in 2018/19 than there were in 2012/13. Over the same time period, the number of academic staff increased by 1,275. In 2012/13, Physics and Mathematics had a similar number of academic staff, the number of academic staff for Physics in 2018/19 was greater than in Mathematics.

Discipline	Academic Employment Marker	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	Academic	4,275	4,690	5,070	5,185	5,175	5,385	5,550
	Non-Academic	1,620	1,695	1,780	1,805	1,920	1,900	1,960
(112) Biosciences	Academic	12,240	13,225	13,740	13,645	13,965	14,405	14,480
	Non-Academic	5,925	6,210	6,125	6,055	5,940	5,775	5,775
(121) IT, systems sciences & computer software engineering	Academic	6,410	6,610	6,655	6,695	6,875	7,500	7,930
	Non-Academic	1,970	2,055	1,950	1,945	2,205	2,090	2,135
(113) Chemistry	Academic	3,755	4,075	4,160	4,225	4,310	4,370	4,395
	Non-Academic	1,405	1,520	1,535	1,515	1,495	1,500	1,520
(119) Electrical, electronic & computer engineering	Academic	3,840	4,060	4,330	4,440	4,380	4,560	4,670
	Non-Academic	1,220	1,225	1,225	1,240	1,280	1,200	1,275
(122) Mathematics	Academic	4,270	4,585	4,545	4,655	4,690	4,880	4,980
	Non-Academic	750	795	840	865	885	845	865

**Table 11:** HESA data for staff by academic and non-academic contracts from 2012/13 to 2018/19.

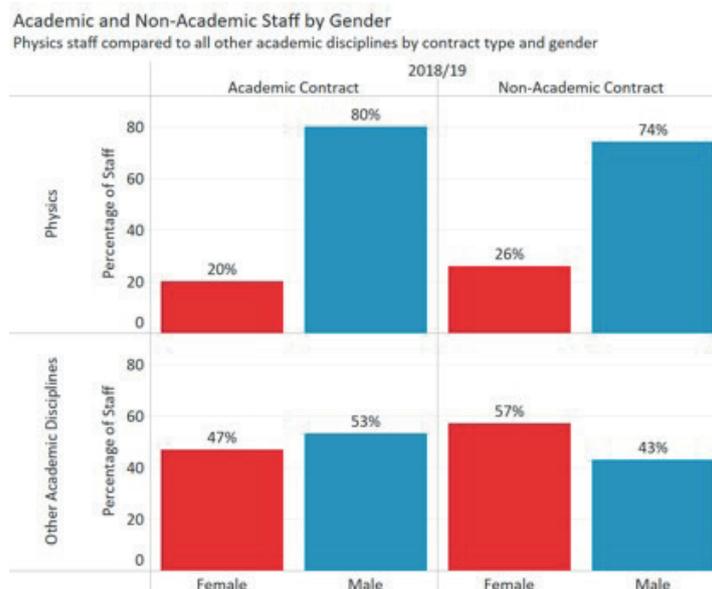
Across all subjects considered, the number of academic staff has increased over the years analysed. The same is true for non-academic staff with the exception of Biosciences which has seen a decrease of 3% over the same time period. Physics saw the largest increase in both academic (30%) and non-academic (21%) staff over the given time period when compared to all other selected STEM subjects.

Discipline	Academic Employment Marker	Academic Year / Year on Year Change							Total Change
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
(114) Physics	Academic	4,275	10%	8%	2%	0%	4%	3%	30%
	Non-Academic	1,620	5%	5%	1%	6%	-1%	3%	21%
(112) Biosciences	Academic	12,240	8%	4%	-1%	2%	3%	1%	18%
	Non-Academic	5,925	5%	-1%	-1%	-2%	-3%	0%	-3%
(121) IT, systems sciences & computer software engineering	Academic	6,410	3%	1%	1%	3%	9%	6%	24%
	Non-Academic	1,970	4%	-5%	0%	13%	-5%	2%	8%
(113) Chemistry	Academic	3,755	9%	2%	2%	2%	1%	1%	17%
	Non-Academic	1,405	8%	1%	-1%	-1%	0%	1%	8%
(119) Electrical, electronic & computer engineering	Academic	3,840	6%	7%	3%	-1%	4%	2%	22%
	Non-Academic	1,220	0%	0%	1%	3%	-6%	6%	5%
(122) Mathematics	Academic	4,270	7%	-1%	2%	1%	4%	2%	17%
	Non-Academic	750	6%	6%	3%	2%	-5%	2%	15%

**Table 12:** HESA data for the percentage change from the previous year in staff by academic and non-academic contracts for 2012/13 to 2018/19.

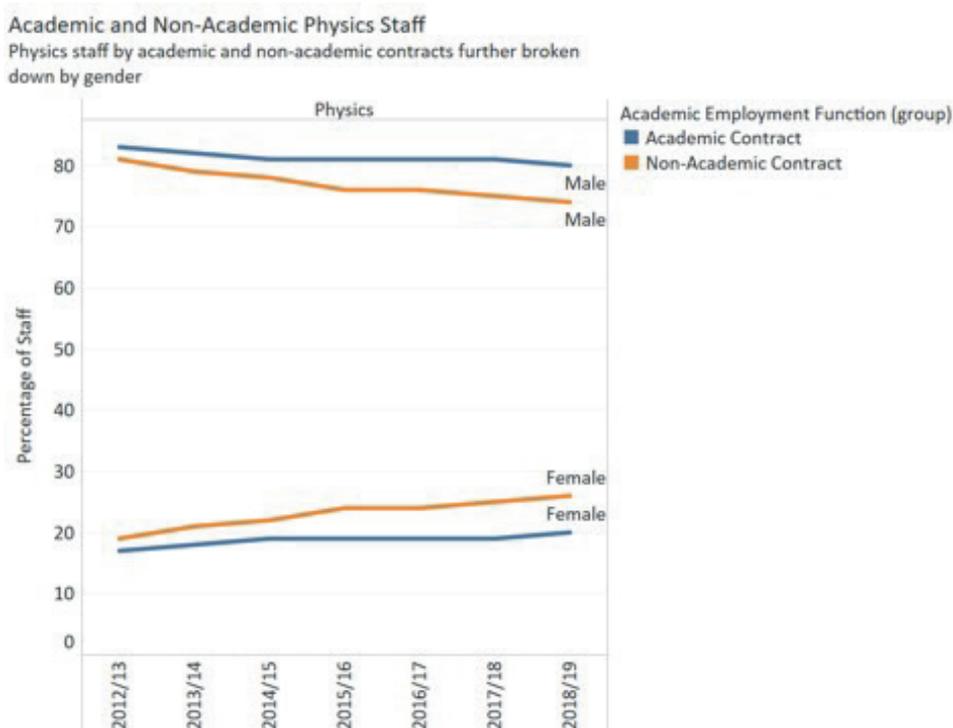
# Gender

**Figure 13** shows that for both academic and non-academic contracts, Physics staff are predominantly male with 80% of academic contracts being male and 74% of non-academic staff being male. In contrast to all other academic disciplines where 53% of academic staff are male and non-academic staff being 43% male on average. If this is compared to Figure 1 (page 6) where 55% of staff in all other academic disciplines were female, females are underrepresented in academic staff.



**Figure 13:** HESA data for staff for 2018/19 by gender and academic and non-academic contracts.

Since 2012/13, the proportion of both academic and non-academic staff in Physics departments that are female has increased. The proportion of females in non-academic staff has increased more than the proportion of females in academic positions.



**Figure 14:** HESA data for Physics staff by gender and academic or non-academic contracts over time.

From 2012/13 to 2018/19, the number of female academic staff for Physics increased by 345, while during the same time period, the number of male academic staff for Physics increased by 930. For non-academic Physics staff, an increase of 205 and 105 was seen for female and male staff, respectively.

Discipline	Academic Employment Marker	Gender	Academic Year						
			2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	Academic	Female	745	830	950	960	960	1,025	1,090
		Male	3,525	3,860	4,120	4,225	4,210	4,360	4,455
	Non-Academic	Female	580	620	670	700	735	750	785
		Male	1,040	1,075	1,110	1,105	1,185	1,145	1,180
(112) Biosciences	Academic	Female	5,345	5,810	6,095	6,095	6,385	6,670	6,680
		Male	6,895	7,420	7,645	7,550	7,580	7,735	7,795
	Non-Academic	Female	3,730	3,935	3,905	3,885	3,775	3,680	3,680
		Male	2,195	2,270	2,220	2,170	2,165	2,095	2,090
(121) IT, systems sciences & computer software engineering	Academic	Female	1,380	1,465	1,480	1,460	1,530	1,675	1,790
		Male	5,030	5,145	5,180	5,235	5,345	5,820	6,140
	Non-Academic	Female	1,045	1,090	1,065	1,065	1,190	1,095	1,110
		Male	925	965	885	880	1,020	995	1,020
(113) Chemistry	Academic	Female	1,015	1,125	1,125	1,175	1,245	1,250	1,280
		Male	2,740	2,950	3,035	3,050	3,065	3,120	3,115
	Non-Academic	Female	695	770	785	765	775	800	810
		Male	705	755	745	745	720	700	710
(119) Electrical, electronic & computer engineering	Academic	Female	530	580	620	670	640	695	745
		Male	3,310	3,480	3,710	3,770	3,740	3,870	3,925
	Non-Academic	Female	540	540	560	570	575	535	595
		Male	680	680	670	665	705	665	680
(122) Mathematics	Academic	Female	995	1,050	1,045	1,065	1,095	1,110	1,110
		Male	3,275	3,535	3,500	3,590	3,590	3,775	3,865
	Non-Academic	Female	520	545	570	590	595	600	615
		Male	230	255	270	270	295	245	245

**Table 13:** HESA data for academic and non-academic selected STEM subjects staff by gender for

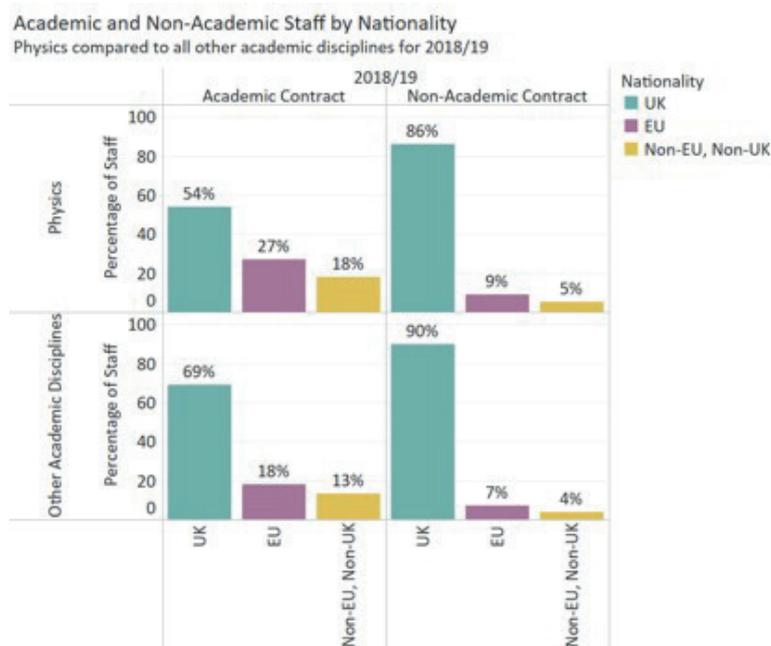
From the table below, the number of female academic Physics staff saw the greatest increase (46%) when compared to all other selected STEM subjects, including the increase in non-academic staff members as well as male staff members. From 2012/13 to 2018/19 the number of male academic staff for Physics increased by 26%, the greatest increase for male academic staff for any subject given in the table. The number of non-academic staff for Physics increased by 35% and 13% for female and male staff, respectively. These values represent the largest increase in non-academic staff of all the subjects considered in **Table 14**.

Discipline	Academic Employment Marker	Gender	Academic Year / Year on Year Change							Total Change
			2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
(114) Physics	Academic	Female	745	11%	14%	1%	0%	7%	6%	46%
		Male	3,525	10%	7%	3%	0%	4%	2%	26%
	Non-Academic	Female	580	7%	8%	4%	5%	2%	5%	35%
		Male	1,040	3%	3%	0%	7%	-3%	3%	13%
(112) Biosciences	Academic	Female	5,345	9%	5%	0%	5%	4%	0%	25%
		Male	6,895	8%	3%	-1%	0%	2%	1%	13%
	Non-Academic	Female	3,730	5%	-1%	-1%	-3%	-3%	0%	-1%
		Male	2,195	3%	-2%	-2%	0%	-3%	0%	-5%
(121) IT, systems sciences & computer software engineering	Academic	Female	1,380	6%	1%	-1%	5%	9%	7%	30%
		Male	5,030	2%	1%	1%	2%	9%	5%	22%
	Non-Academic	Female	1,045	4%	-2%	0%	12%	-8%	1%	6%
		Male	925	4%	-8%	-1%	16%	-2%	3%	10%
(113) Chemistry	Academic	Female	1,015	11%	0%	4%	6%	0%	2%	26%
		Male	2,740	8%	3%	0%	0%	2%	0%	14%
	Non-Academic	Female	695	11%	2%	-3%	1%	3%	1%	17%
		Male	705	7%	-1%	0%	-3%	-3%	1%	1%
(119) Electrical, electronic & computer engineering	Academic	Female	530	9%	7%	8%	-4%	9%	7%	41%
		Male	3,310	5%	7%	2%	-1%	3%	1%	19%
	Non-Academic	Female	540	0%	4%	2%	1%	-7%	11%	10%
		Male	680	0%	-1%	-1%	6%	-6%	2%	0%
(122) Mathematics	Academic	Female	995	6%	0%	2%	3%	1%	0%	12%
		Male	3,275	8%	-1%	3%	0%	5%	2%	18%
	Non-Academic	Female	520	5%	5%	4%	1%	1%	3%	18%
		Male	230	11%	6%	0%	9%	-17%	0%	7%

**Table 14:** HESA data for the percentage change from the previous year by staff in academic and non-academic contracts by gender for 2012/13 to 2018/19.

## Nationality

**Figure 15** shows, for academic and non-academic staff, the percentage of staff from the UK, EU and Non-EU, Non-UK countries for Physics compared to all other academic disciplines. For non-academic contracts, 86% of Physics staff, and 90% for all other academic disciplines, identified as being from the UK. These percentages drop for academic staff to 54% and 69% for Physics and all other academic disciplines, respectively. For those staff members from outside of the UK, for both academic and non-academic contracts, and for Physics and all other disciplines, there were more staff from the EU than from elsewhere in the world. A higher proportion of academic staff were from the EU and non-EU, non-UK countries than for non-academic contracts.



**Figure 15:** HESA data for academic and non-academic contracts for 2018/19.

Below, **Table 15** compares the total staff numbers for both academic and non-academic contracts across different subjects for 2012/13 and 2018/19. For the subjects in Table 15, the number of academic staff for each nationality grouping increased from 2012/13 to 2018/19. However, the same cannot be said to be true for non-academic contracts as there were a few examples where the total number decreased. The two examples of this are members of staff from the UK for Biosciences and members of staff who are from non-EU, non-UK countries for Chemistry.

Nationality	Discipline	Academic Employment Function	Academic Year						
			2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
UK	(114) Physics	Academic Contract	2,530	2,635	2,775	2,815	2,790	2,875	2,990
		Non-Academic Contract	990	1,040	1,110	1,140	1,195	1,165	1,195
	(112) Biosciences	Academic Contract	8,160	8,610	8,790	8,635	8,880	9,065	9,020
		Non-Academic Contract	3,550	3,745	3,700	3,680	3,555	3,495	3,480
	(113) Chemistry	Academic Contract	2,445	2,560	2,515	2,520	2,555	2,615	2,665
		Non-Academic Contract	830	910	910	910	875	880	900
	(119) Electrical, electronic & computer engineering	Academic Contract	2,230	2,335	2,375	2,365	2,300	2,345	2,315
		Non-Academic Contract	695	690	695	690	710	680	730
	(121) IT, systems sciences & computer software engineering	Academic Contract	4,155	4,130	4,115	4,010	4,035	4,255	4,420
		Non-Academic Contract	1,030	1,105	1,040	1,010	1,150	1,070	1,060
	(122) Mathematics	Academic Contract	2,490	2,505	2,460	2,505	2,505	2,575	2,570
		Non-Academic Contract	285	325	350	355	365	320	340
EU	(114) Physics	Academic Contract	995	1,155	1,320	1,370	1,405	1,470	1,500
		Non-Academic Contract	60	65	70	90	110	115	120
	(112) Biosciences	Academic Contract	2,360	2,700	2,980	3,090	3,175	3,315	3,290
		Non-Academic Contract	310	345	365	445	445	435	455
	(113) Chemistry	Academic Contract	705	840	880	950	1,005	990	925
		Non-Academic Contract	45	60	65	75	85	80	90
	(119) Electrical, electronic & computer engineering	Academic Contract	635	685	775	830	835	860	885
		Non-Academic Contract	30	35	40	45	60	55	60
	(121) IT, systems sciences & computer software engineering	Academic Contract	1,115	1,255	1,330	1,435	1,505	1,725	1,800
		Non-Academic Contract	55	75	80	75	95	100	120
	(122) Mathematics	Academic Contract	955	1,115	1,145	1,180	1,255	1,310	1,390
		Non-Academic Contract	30	30	30	35	40	40	35
Non-EU, Non-UK	(114) Physics	Academic Contract	655	760	870	915	925	1,000	1,015
		Non-Academic Contract	40	45	50	50	60	60	70
	(112) Biosciences	Academic Contract	1,480	1,650	1,740	1,765	1,810	1,950	2,070
		Non-Academic Contract	220	235	220	215	220	215	220
	(113) Chemistry	Academic Contract	540	590	635	665	705	750	785
		Non-Academic Contract	45	40	50	45	45	35	35
	(119) Electrical, electronic & computer engineering	Academic Contract	930	995	1,150	1,225	1,230	1,345	1,465
		Non-Academic Contract	40	40	40	50	85	65	65
	(121) IT, systems sciences & computer software engineering	Academic Contract	1,015	1,110	1,140	1,205	1,270	1,455	1,655
		Non-Academic Contract	45	50	65	60	80	70	70
	(122) Mathematics	Academic Contract	740	845	860	905	880	970	1,000
		Non-Academic Contract	15	10	20	20	35	20	20

**Table 15:** HESA data for academic and non-academic staff by nationality for 2012/13 and 2018/19.

**Table 16** shows how the proportion of staff of different nationalities change over time for academic and non-academic staff for each subject. For academic staff members from the UK, the proportion of Physics staff decreased from 48% in 2012/13 to 43% in 2018/19. Non-academic staff in Physics from the UK represented 19% of Physics staff in 2012/13, in 2018/19 this proportion had decreased to 17%. These proportions are similar to those for Chemistry.

For members of staff from the EU, for Physics, the proportion of academic staff increased by 3 percentage points from 19% to 22%. Non-academic staff increased from 1% to 2%.

The proportion of non-academic staff from non-EU, non-UK countries for Physics has remained at 1% over the period of time considered. Whereas the proportion of academic staff from non-EU, non-UK countries for Physics increased by 3 percentage points from 12% to 15%.

Nationality	Discipline	Academic Employment Function	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
UK	(114) Physics	Academic Contract	48%	46%	45%	44%	43%	43%	43%
		Non-Academic Contract	19%	18%	18%	18%	18%	17%	17%
	(112) Biosciences	Academic Contract	51%	50%	49%	48%	49%	49%	49%
		Non-Academic Contract	22%	22%	21%	21%	20%	19%	19%
	(113) Chemistry	Academic Contract	53%	51%	50%	49%	48%	49%	49%
		Non-Academic Contract	18%	18%	18%	18%	17%	16%	17%
	(119) Electrical, electronic & computer engineering	Academic Contract	49%	49%	47%	45%	44%	44%	42%
		Non-Academic Contract	15%	14%	14%	13%	14%	13%	13%
	(121) IT, systems sciences & computer software engineering	Academic Contract	56%	53%	53%	51%	50%	49%	48%
		Non-Academic Contract	14%	14%	13%	13%	14%	12%	12%
	(122) Mathematics	Academic Contract	55%	52%	51%	50%	49%	49%	48%
		Non-Academic Contract	6%	7%	7%	7%	7%	6%	6%
EU	(114) Physics	Academic Contract	19%	20%	21%	21%	22%	22%	22%
		Non-Academic Contract	1%	1%	1%	1%	2%	2%	2%
	(112) Biosciences	Academic Contract	15%	16%	17%	17%	18%	18%	18%
		Non-Academic Contract	2%	2%	2%	2%	2%	2%	2%
	(113) Chemistry	Academic Contract	15%	17%	17%	18%	19%	19%	17%
		Non-Academic Contract	1%	1%	1%	1%	2%	1%	2%
	(119) Electrical, electronic & computer engineering	Academic Contract	14%	14%	15%	16%	16%	16%	16%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(121) IT, systems sciences & computer software engineering	Academic Contract	15%	16%	17%	18%	19%	20%	20%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(122) Mathematics	Academic Contract	21%	23%	24%	24%	25%	25%	26%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
Non-EU, Non-UK	(114) Physics	Academic Contract	12%	13%	14%	14%	14%	15%	15%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(112) Biosciences	Academic Contract	9%	10%	10%	10%	10%	11%	11%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(113) Chemistry	Academic Contract	12%	12%	13%	13%	13%	14%	15%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(119) Electrical, electronic & computer engineering	Academic Contract	20%	21%	23%	24%	24%	25%	27%
		Non-Academic Contract	1%	1%	1%	1%	2%	1%	1%
	(121) IT, systems sciences & computer software engineering	Academic Contract	14%	14%	15%	15%	16%	17%	18%
		Non-Academic Contract	1%	1%	1%	1%	1%	1%	1%
	(122) Mathematics	Academic Contract	16%	17%	18%	18%	17%	19%	19%
		Non-Academic Contract	0%	0%	0%	0%	1%	0%	0%

**Table 16:** HESA data by Academic and Non-Academic staff by proportion of nationality for staff from 2012/13 to 2018/19.

For Physics, the number of academic staff from the UK increased by 18% during the time period 2012/13 to 2018/19. During this same time period, Physics academic staff members from the EU and from non-EU, non-UK countries increased by 51% and 55% respectively. If these figures are compared to non-academic staff members, it can be seen that the non-academic staff from the UK increased by 21%, and EU and non-EU, non-UK staff increased by 100% and 75%, respectively. These figures suggest that Physics staff in Higher Education institutions from outside of the UK are increasing at a faster rate than those members of staff from the UK for both academic and non-academic contracts.

For other subjects, the number of academic staff from the UK increased during the time from 2012/13 to 2018/19. Biosciences grew by the greatest proportion (11%) and Mathematics grew by the least (3%). This is in contrast to the number of non-academic staff where Biosciences was the only subject to see a decrease in staff numbers (-2%) and Mathematics saw the largest increase of 19%.

Members of staff from the EU for subjects comparable to Physics saw an increase of between 31% to 61% for academic contracts. For non-academic contracts, three subjects saw the number of staff from the EU at least double. IT, systems sciences & computer software engineering which saw the largest increase in academic staff also saw the largest increase in non-academic staff (118%). Mathematics saw the smallest increase in the number of non-academic staff from the EU (17%).

The number of academic staff for all subjects from non-EU, non-UK countries increased by a greater proportion than academic staff from the EU or the UK. The only exception to this is Mathematics where the number of academic staff from non-EU, non-UK countries increased by 35% and by 46% for EU countries. The number of non-EU, non-UK academic staff increased by 35% to 65% depending on subject. For non-academic contracts, Bioscience saw no change in staff numbers and Chemistry saw a decrease of 22%. For the remaining subjects, the number of staff on non-academic contracts from non-EU, non-UK countries increased.

Nationality	Discipline	Academic Employment Function	Academic Year / Year on Year Change								Total Change
			2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19		
UK	(114) Physics	Academic Contract	2,530	4%	5%	1%	-1%	3%	4%	18%	
		Non-Academic Contract	990	5%	7%	3%	5%	-3%	3%	21%	
	(112) Biosciences	Academic Contract	8,160	6%	2%	-2%	3%	2%	0%	11%	
		Non-Academic Contract	3,550	5%	-1%	-1%	-3%	-2%	0%	-2%	
	(113) Chemistry	Academic Contract	2,445	5%	-2%	0%	1%	2%	2%	9%	
		Non-Academic Contract	830	10%	0%	0%	-4%	1%	2%	8%	
	(119) Electrical, electronic & computer engineering	Academic Contract	2,230	5%	2%	0%	-3%	2%	-1%	4%	
		Non-Academic Contract	695	-1%	1%	-1%	3%	-4%	7%	5%	
	(121) IT, systems sciences & computer software engineering	Academic Contract	4,155	-1%	0%	-3%	1%	5%	4%	6%	
		Non-Academic Contract	1,030	7%	-6%	-3%	14%	-7%	-1%	3%	
	(122) Mathematics	Academic Contract	2,490	1%	-2%	2%	0%	3%	0%	3%	
		Non-Academic Contract	285	14%	8%	1%	3%	-12%	6%	19%	
EU	(114) Physics	Academic Contract	995	16%	14%	4%	3%	5%	2%	51%	
		Non-Academic Contract	60	8%	8%	29%	22%	5%	4%	100%	
	(112) Biosciences	Academic Contract	2,360	14%	10%	4%	3%	4%	-1%	39%	
		Non-Academic Contract	310	11%	6%	22%	0%	-2%	5%	47%	
	(113) Chemistry	Academic Contract	705	19%	5%	8%	6%	-1%	-7%	31%	
		Non-Academic Contract	45	33%	8%	15%	13%	-6%	13%	100%	
	(119) Electrical, electronic & computer engineering	Academic Contract	635	8%	13%	7%	1%	3%	3%	39%	
		Non-Academic Contract	30	17%	14%	13%	33%	-8%	9%	100%	
	(121) IT, systems sciences & computer software engineering	Academic Contract	1,115	13%	6%	8%	5%	15%	4%	61%	
		Non-Academic Contract	55	36%	7%	-6%	27%	5%	20%	118%	
	(122) Mathematics	Academic Contract	955	17%	3%	3%	6%	4%	6%	46%	
		Non-Academic Contract	30	0%	0%	17%	14%	0%	-13%	17%	
Non-EU, Non-UK	(114) Physics	Academic Contract	655	16%	14%	5%	1%	8%	2%	55%	
		Non-Academic Contract	40	13%	11%	0%	20%	0%	17%	75%	
	(112) Biosciences	Academic Contract	1,480	11%	5%	1%	3%	8%	6%	40%	
		Non-Academic Contract	220	7%	-6%	-2%	2%	-2%	2%	0%	
	(113) Chemistry	Academic Contract	540	9%	8%	5%	6%	6%	5%	45%	
		Non-Academic Contract	45	-11%	25%	-10%	0%	-22%	0%	-22%	
	(119) Electrical, electronic & computer engineering	Academic Contract	930	7%	16%	7%	0%	9%	9%	58%	
		Non-Academic Contract	40	0%	0%	25%	70%	-24%	0%	63%	
	(121) IT, systems sciences & computer software engineering	Academic Contract	1,015	9%	3%	6%	5%	15%	14%	63%	
		Non-Academic Contract	45	11%	30%	-8%	33%	-13%	0%	56%	
	(122) Mathematics	Academic Contract	740	14%	2%	5%	-3%	10%	3%	35%	
		Non-Academic Contract	15	-33%	100%	0%	75%	-43%	0%	33%	

**Table 17:** HESA data for the percentage change from the previous year by staff in academic and non-academic contracts by nationality for 2012/13 to 2018/19.

## Ethnicity

Below is a detailed breakdown of ethnicities for academic and non-academic staff members for selected STEM subjects. There were two or fewer Black or Black British – Caribbean academic Physics staff in 2018/19 and was the ethnicity with fewest Physics academic staff. For non-academic contracts, both Asian or Asian British – Bangladeshi and Other Black background had two or fewer members of staff for Physics.

		2018/19										
		Asian or Asian British - Bangladeshi	Asian or Asian British - Indian	Asian or Asian British - Pakistani	Black or Black British - African	Black or Black British - Caribbean	Chinese	Mixed	Other	Other Asian background	Other Black background	White
Academic Contract	(114) Physics	10	195	20	15	0	240	135	85	110	5	4,145
	(112) Biosciences	35	525	95	155	25	410	305	295	285	20	11,155
	(113) Chemistry	15	155	30	35	5	250	70	85	90	0	3,285
	(119) Electrical, electronic & computer engineering	45	215	105	90	5	610	85	190	255	5	2,685
	(121) IT, systems sciences & computer software engineering	40	270	125	150	20	550	170	320	280	10	5,325
	(122) Mathematics	5	110	15	40	5	240	95	115	105	5	3,750
Non-Academic Contract	(114) Physics	0	30	5	5	10	20	20	15	15	0	1,170
	(112) Biosciences	10	105	45	45	20	70	70	45	50	5	3,485
	(113) Chemistry	5	15	10	5	5	10	20	5	10	0	890
	(119) Electrical, electronic & computer engineering	10	35	15	10	10	30	10	15	15	0	650
	(121) IT, systems sciences & computer software engineering	5	30	20	15	10	20	25	20	5	0	1,010
	(122) Mathematics	0	10	5	0	0	5	5	0	5		340

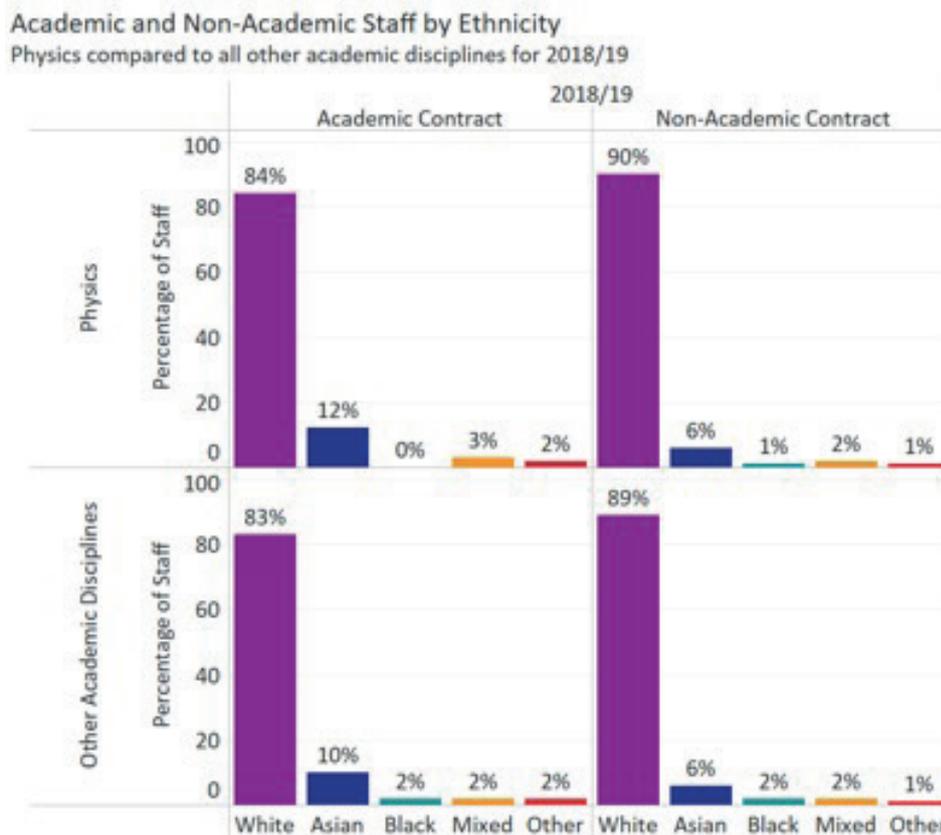
**Table 18:** Detailed ethnic breakdown of academic and non-academic staff for selected STEM subjects in 2018/19.

The percentage of ethnic groups for Physics staff is similar to the percentage of ethnic groups of all other academic disciplines for both academic and non-academic contracts.

Physics academic staff who are Black make <1% of the staff population despite the 2011 census for England and Wales identifying that 3% of the population are Black. Non-academic Physics staff are also underrepresented with only 1% of the staff members being Black. Underrepresentation is also seen across all other disciplines where Black staff only make up only 2% of the total.

Academic staff for both Physics, and all other academic disciplines, over represent those people whose ethnicity is recorded as Asian in the HESA data set. The 2011 census found that 7% of the population of England and Wales are Asian whereas 12% of Physics academic staff are Asian and 10% of all other academic discipline academic staff are. For non-academic contracts, Asian people are slightly underrepresented with 6% of staff for both Physics and all other academic disciplines being Asian.

Approximately 80% of the population of England and Wales is White. Across academia, those who are ethnically White are overrepresented with the percentage non-academic staff for Physics and all other academic disciplines who are White being 90% and 89% respectively. For academic staff, these percentages are 84% for Physics and 83% for all other academic disciplines.



**Figure 16:** HESA data for academic and non-academic staff for Physics and all other academic disciplines by ethnicity for 2018/19

The number of Asian academic staff in Physics is comparable to the number of Asian academic staff for Chemistry in 2018/19. In 2012/13 the number of Asian academic staff for Physics was slightly less than in Chemistry but in 2018/19 this had changed so that the number of Asian academic staff in Physics was slightly higher. In 2012/13, the number of non-academic staff for Physics and Chemistry were similar, however, over the period of time looked at Physics saw a larger increase in non-academic Asian staff than Chemistry did.

Out of all the subjects in Table 19, Physics had the fewest Black academic staff. Most subjects had few non-academic Black members of staff. Biosciences had the greatest number of Black non-academic staff but overall, the number of non-academic staff members for Biosciences vastly outnumbers the non-academic staff for all other subjects.

The majority of staff, academic and non-academic, are White for all subjects stated. For Physics, the number of White academic staff increased by more than 750 staff members and white non-academic staff increased by more than 250.

Discipline	Ethnicity	Academic Employment Function	Academic Year						
			2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	Asian	Academic Contract	335	380	440	445	460	535	570
		Non-Academic Contract	55	60	65	65	70	65	75
	Black	Academic Contract	10	20	15	15	15	20	20
		Non-Academic Contract	10	10	5	10	10	15	15
	Mixed	Academic Contract	60	70	90	105	100	120	135
		Non-Academic Contract	15	10	20	20	20	25	20
	Other	Academic Contract	45	70	75	75	80	85	85
		Non-Academic Contract	5	5	5	5	15	10	15
	White	Academic Contract	3,340	3,570	3,825	3,925	3,940	4,060	4,135
		Non-Academic Contract	945	995	1,055	1,085	1,170	1,140	1,170
(112) Biosciences	Asian	Academic Contract	980	1,005	1,085	1,155	1,240	1,300	1,350
		Non-Academic Contract	250	270	270	255	255	270	280
	Black	Academic Contract	115	140	140	125	145	170	200
		Non-Academic Contract	55	65	60	65	55	65	70
	Mixed	Academic Contract	185	195	200	205	230	275	300
		Non-Academic Contract	35	45	45	60	65	65	70
	Other	Academic Contract	160	210	225	225	250	265	295
		Non-Academic Contract	25	35	35	30	35	40	45
	White	Academic Contract	9,775	10,415	10,880	10,810	10,995	11,230	11,140
		Non-Academic Contract	3,490	3,670	3,650	3,700	3,600	3,495	3,475
(113) Chemistry	Asian	Academic Contract	360	410	425	445	460	525	540
		Non-Academic Contract	50	45	50	50	50	55	55
	Black	Academic Contract	30	30	35	30	35	40	40
		Non-Academic Contract	10	10	15	15	15	10	10
	Mixed	Academic Contract	35	40	45	50	55	60	70
		Non-Academic Contract	10	5	10	15	10	15	20
	Other	Academic Contract	45	45	50	50	65	70	85
		Non-Academic Contract	5	5	5	5	5	5	5
	White	Academic Contract	2,935	3,170	3,145	3,170	3,270	3,300	3,280
		Non-Academic Contract	795	890	900	900	875	870	885
(119) Electrical, electronic & computer engineering	Asian	Academic Contract	780	820	950	1,015	1,050	1,140	1,230
		Non-Academic Contract	45	60	60	70	95	85	105
	Black	Academic Contract	60	65	75	80	70	85	100
		Non-Academic Contract	10	5	10	15	20	20	20
	Mixed	Academic Contract	45	50	60	60	65	75	85
		Non-Academic Contract	10	10	10	10	10	10	10
	Other	Academic Contract	145	160	170	170	180	195	190
		Non-Academic Contract	5	10	10	10	15	15	15
	White	Academic Contract	2,480	2,590	2,695	2,765	2,640	2,715	2,685
		Non-Academic Contract	645	635	645	635	665	615	650
(121) IT, systems sciences & computer software engineering	Asian	Academic Contract	865	885	880	940	995	1,145	1,260
		Non-Academic Contract	60	70	70	60	80	85	80
	Black	Academic Contract	105	120	135	135	125	155	180
		Non-Academic Contract	25	20	20	35	35	25	25
	Mixed	Academic Contract	95	85	95	100	125	150	170
		Non-Academic Contract	10	15	15	15	20	20	25
	Other	Academic Contract	130	175	200	190	210	260	315
		Non-Academic Contract	5	10	10	10	10	10	20
	White	Academic Contract	4,750	4,815	4,840	4,780	4,820	5,170	5,320
		Non-Academic Contract	970	1,045	995	965	1,100	1,035	1,010
(122) Mathematics	Asian	Academic Contract	340	400	400	430	415	460	475
		Non-Academic Contract	10	10	20	15	30	20	20
	Black	Academic Contract	30	30	35	40	45	35	50
		Non-Academic Contract		0	0	0	0	5	5
	Mixed	Academic Contract	50	55	70	85	85	95	95
		Non-Academic Contract	5	5	5	5	10	5	5
	Other	Academic Contract	75	105	105	95	100	105	115
		Non-Academic Contract	5	5	5	5	0	5	0
	White	Academic Contract	3,345	3,445	3,435	3,520	3,570	3,705	3,740
		Non-Academic Contract	295	320	345	350	365	320	340

**Table 19:** HESA data for staff by academic and non-academic contracts and ethnicity for 2012/13 and 2018/19.

Between 2012/13 and 2018/19, the number of black academic Physics staff members has increased by 100%. During the same time period, the number of Black non-academic staff in Physics also increased by 50%. The number of Asian academic Physics staff increased by 70% and non-academic Physics staff increased by 36%. Physics staff with a mixed ethnicity background increased by 125% for those on academic contracts and 33% for those on non-academic contracts. White Physics staff saw a 24% increase in the number of staff for both academic and non-academic contracts. From these figures, the population of Physics academic staff has grown faster than the population of Physics non-academic staff for all ethnicities with the exception of those whose ethnicity is recorded as White.

Biosciences had the greatest increase in Black academic staff with an increase of 74%. IT, systems science & computer software engineering had a 71% increase in black academic staff and Electrical, electronic & computer engineering and Mathematics both had an increase of 67%. Chemistry the smallest increase of 33% with no change for Black non-academic staff. Electrical, electronic & computer engineering non-academic Black staff numbers doubled between 2012/13 to 2018/19.

Chemistry saw the largest increase of 50% for Asian academic staff but the smallest increase for Asian non-academic staff (10%). All other selected STEM subjects had a similar increase in Asian academic staff with Biosciences having the smallest increase of 38%. For non-academic contracts, there was a wider spread of percentage increases for Asian staff. However, during the given time period, Mathematics doubled the number of non-academic Asian staff and non-academic Asian staff numbers for Electrical, electronic & computer engineering increased by 133%.

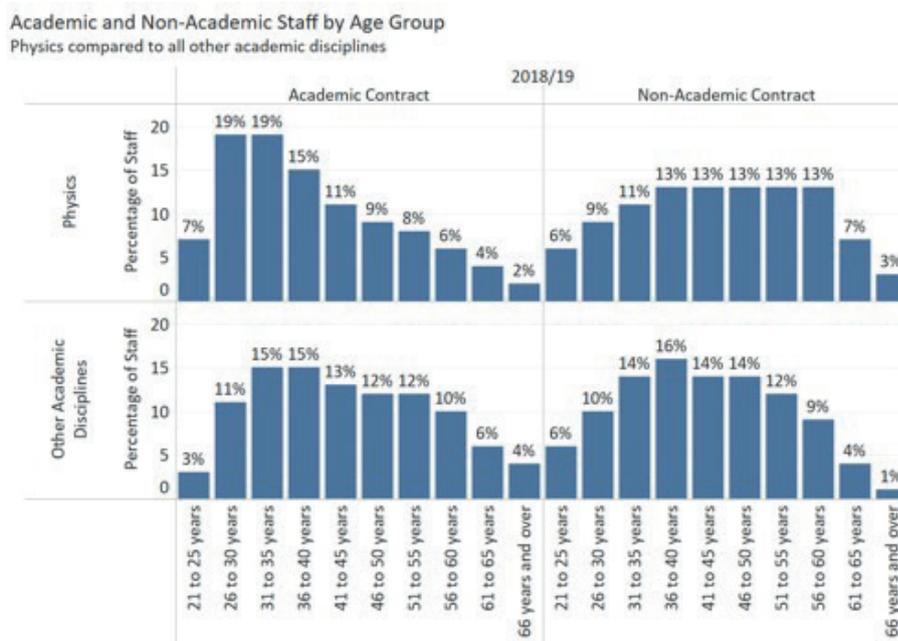
The number of White academic staff members increased between 8-14% with Biosciences seeing the greatest increase. However, Bioscience was the only selected STEM subject to see a decrease in non-academic White staff numbers (1% decrease). All other subjects saw an increase with Mathematics seeing the largest increase of 15%.

Discipline	Ethnicity	Academic Employment Function	2012/13	Academic Year / Year on Year Change							Total Change
				2013/14	2014/15	2015/16	2016/17	2017/18	2018/19		
(114) Physics	Asian	Academic Contract	335	13%	16%	1%	3%	16%	7%	70%	
		Non-Academic Contract	55	9%	8%	0%	8%	-7%	15%	36%	
	Black	Academic Contract	10	100%	-25%	0%	0%	33%	0%	100%	
		Non-Academic Contract	10	0%	-50%	100%	0%	50%	0%	50%	
	Mixed	Academic Contract	60	17%	29%	17%	-5%	20%	13%	125%	
		Non-Academic Contract	15	-33%	100%	0%	0%	25%	-20%	33%	
	Other	Academic Contract	45	56%	7%	0%	7%	6%	0%	89%	
		Non-Academic Contract	5	0%	0%	0%	200%	-33%	50%	200%	
	White	Academic Contract	3,340	7%	7%	3%	0%	3%	2%	24%	
		Non-Academic Contract	945	5%	6%	3%	8%	-3%	3%	24%	
(112) Biosciences	Asian	Academic Contract	980	3%	8%	6%	7%	5%	4%	38%	
		Non-Academic Contract	250	8%	0%	-6%	0%	6%	4%	12%	
	Black	Academic Contract	115	22%	0%	-11%	16%	17%	18%	74%	
		Non-Academic Contract	55	18%	-8%	8%	-15%	18%	8%	27%	
	Mixed	Academic Contract	185	5%	3%	3%	12%	20%	9%	62%	
		Non-Academic Contract	35	29%	0%	33%	8%	0%	8%	100%	
	Other	Academic Contract	160	31%	7%	0%	11%	6%	11%	84%	
		Non-Academic Contract	25	40%	0%	-14%	17%	14%	13%	80%	
	White	Academic Contract	9,775	7%	4%	-1%	2%	2%	-1%	14%	
		Non-Academic Contract	3,490	5%	-1%	1%	-3%	-3%	-1%	0%	
(113) Chemistry	Asian	Academic Contract	360	14%	4%	5%	3%	14%	3%	50%	
		Non-Academic Contract	50	-10%	11%	0%	0%	10%	0%	10%	
	Black	Academic Contract	30	0%	17%	-14%	17%	14%	0%	33%	
		Non-Academic Contract	10	0%	50%	0%	0%	-33%	0%	0%	
	Mixed	Academic Contract	35	14%	13%	11%	10%	9%	17%	100%	
		Non-Academic Contract	10	-50%	100%	50%	-33%	50%	33%	100%	
	Other	Academic Contract	45	0%	11%	0%	30%	8%	21%	89%	
		Non-Academic Contract	5	0%	0%	0%	0%	0%	0%	0%	
	White	Academic Contract	2,935	8%	-1%	1%	3%	1%	-1%	12%	
		Non-Academic Contract	795	12%	1%	0%	-3%	-1%	2%	11%	
(119) Electrical, electronic & computer engineering	Asian	Academic Contract	780	5%	16%	7%	3%	9%	8%	58%	
		Non-Academic Contract	45	33%	0%	17%	36%	-11%	24%	133%	
	Black	Academic Contract	60	8%	15%	7%	-13%	21%	18%	67%	
		Non-Academic Contract	10	-50%	100%	50%	33%	0%	0%	100%	
	Mixed	Academic Contract	45	11%	20%	0%	8%	15%	13%	89%	
		Non-Academic Contract	10	0%	0%	0%	0%	0%	0%	0%	
	Other	Academic Contract	145	10%	6%	0%	6%	8%	-3%	31%	
		Non-Academic Contract	5	100%	0%	0%	50%	0%	0%	200%	
	White	Academic Contract	2,480	4%	4%	3%	-5%	3%	-1%	8%	
		Non-Academic Contract	645	-2%	2%	-2%	5%	-8%	6%	1%	
(121) IT, systems sciences & computer software engineering	Asian	Academic Contract	865	2%	-1%	7%	6%	15%	10%	46%	
		Non-Academic Contract	60	17%	0%	-14%	33%	6%	-6%	33%	
	Black	Academic Contract	105	14%	13%	0%	-7%	24%	16%	71%	
		Non-Academic Contract	25	-20%	0%	75%	0%	-29%	0%	0%	
	Mixed	Academic Contract	95	-11%	12%	5%	25%	20%	13%	79%	
		Non-Academic Contract	10	50%	0%	0%	33%	0%	25%	150%	
	Other	Academic Contract	130	35%	14%	-5%	11%	24%	21%	142%	
		Non-Academic Contract	5	100%	0%	0%	0%	0%	100%	300%	
	White	Academic Contract	4,750	1%	1%	-1%	1%	7%	3%	12%	
		Non-Academic Contract	970	8%	-5%	-3%	14%	-6%	-2%	4%	
(122) Mathematics	Asian	Academic Contract	340	18%	0%	8%	-3%	11%	3%	40%	
		Non-Academic Contract	10	0%	100%	-25%	100%	-33%	0%	100%	
	Black	Academic Contract	30	0%	17%	14%	13%	-22%	43%	67%	
		Non-Academic Contract	-	-	-	-	-	-	0%	-	
	Mixed	Academic Contract	50	10%	27%	21%	0%	12%	0%	90%	
		Non-Academic Contract	5	0%	0%	0%	100%	-50%	0%	0%	
	Other	Academic Contract	75	40%	0%	-10%	5%	5%	10%	53%	
		Non-Academic Contract	5	0%	0%	0%	-100%	-	-100%	-100%	
	White	Academic Contract	3,345	3%	0%	2%	1%	4%	1%	12%	
		Non-Academic Contract	295	8%	8%	1%	4%	-12%	6%	15%	

**Table 20:** HESA data for the percentage change from the previous year in staff by academic and non-academic contracts by ethnicity for 2012/13 to 2018/19.

## Age Group

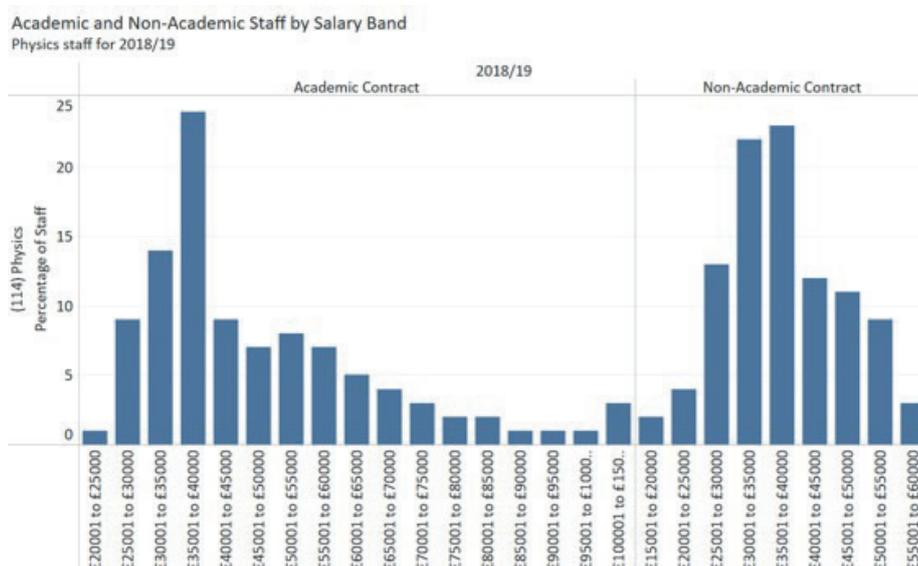
**Figure 17** shows that Physics academic staff tend to skew more towards younger age groups with 38% of staff being in two of the three youngest age groups, 26 to 30 years old (19%) and 31 to 35 years old (19%). This compares to just 26% of academic staff for other disciplines being in the same age groups. For all age groups in the range from 36 to 40 years old to 56 to 60 years old, non-academic Physics staff in each age group make up 13% of the staff population. This is a more even distribution of non-academic staff, than we see across all other disciplines which decreases from 36 to 40 years old and above.



**Figure 17:** HESA data for Physics staff compared to all other disciplines for academic and non-academic contracts by age group.

## Salary

**Figure 18** compares the salary bands for academic and non-academic Physics staff in 2018/19. For both academic and non-academic contracts, the peak in the salary distributions happen at £35,001 to £40,000, (24% for academic contacts and 23% for non-academic contacts). A higher proportion of academic staff members are in the higher salary bands.



**Figure 18:** HESA data for academic and non-academic staff by salary band for 2018/19.

The below figure shows that, for academic contracts, female members of staff tend to be in the lower salary bands. Female members of staff are more evenly spread across salary bands for non-academic staff, however, as shown above, non-academic staff members tend to earn less than academic staff.

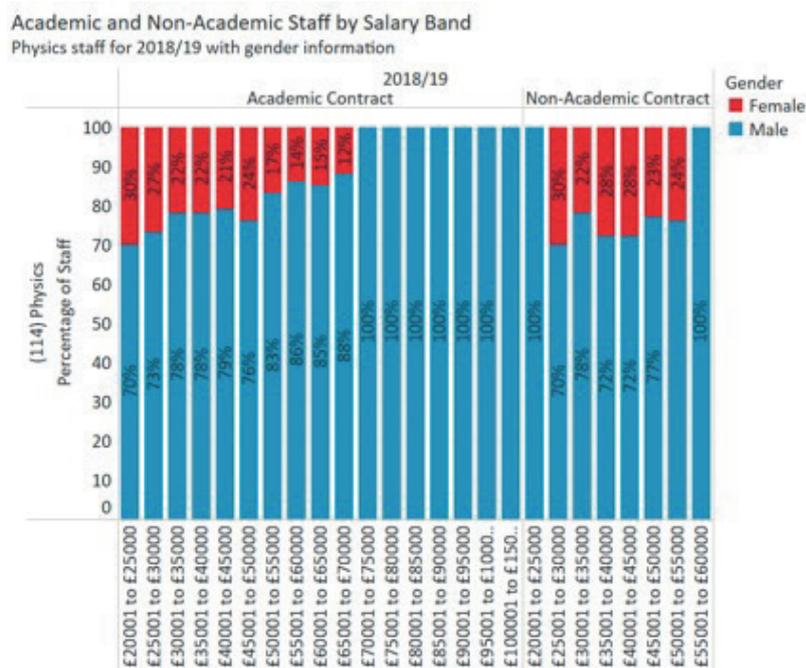


Figure 19: HESA data for Physics staff by academic and non-academic contracts by salary band and gender in 2018/19

Figure 20 shows the salary band distribution for academic and non-academic Physics staff by ethnicity. For academic contracts, there are fewer non-White staff members in the higher salary bands. The greatest number of Asian Physics academic staff are in the £35,001 to £40,000 salary band. There is a large decrease in the number of Asian Physics academic staff in the next salary band and the number remains low in all consecutive salary bands.

For non-academic contracts, the number of staff is lower than for academic contracts. Most staff for non-academic Physics contracts identify as White. Though there is a less of a spread of salaries for non-academic Physics staff, there are few non-white staff members in the higher salary bands.

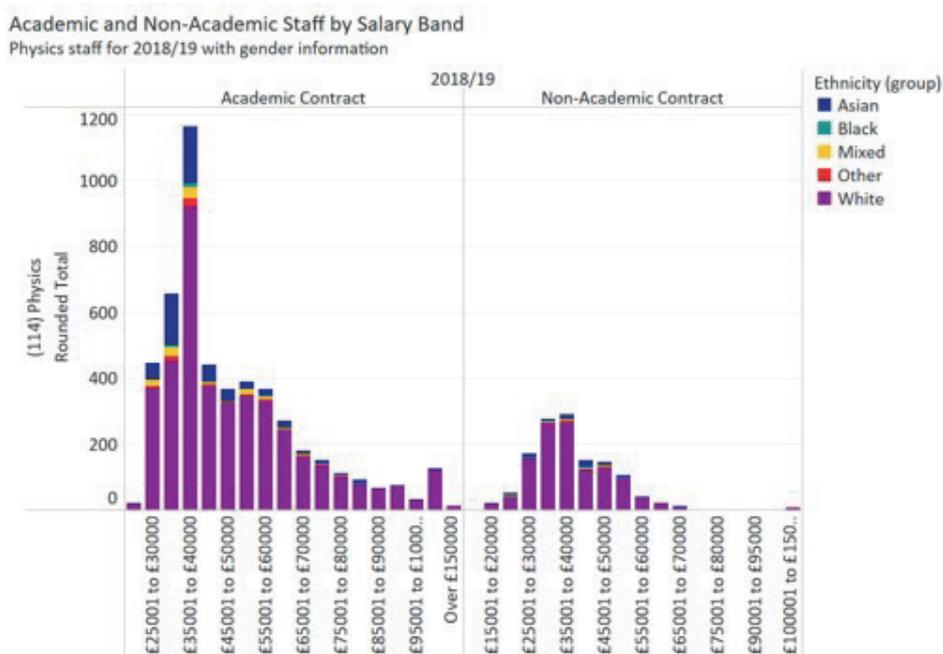


Figure 20: HESA data for Physics staff by academic and non-academic contracts for salary bands by ethnicity in 2018/19.

## Academic Staff

Academic staff are defined to be those on academic contracts. In this section a more detailed analysis of those staff is presented.

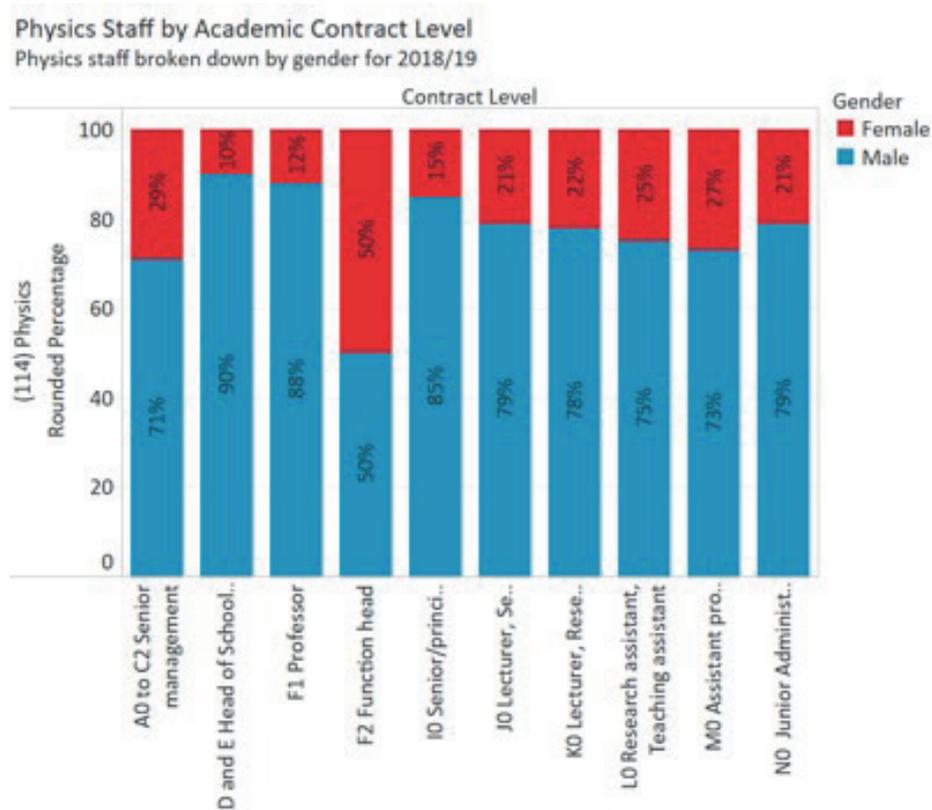
### Gender

**Table 21** shows the contract level breakdown for academic staff in selected STEM subjects. For Physics, K0 Lecturer, Research fellow, Researcher (senior research assistant), Teaching fellow is the contract level with most female staff members in it.

		A0 to C2 Senior management	D and E Head of Schools/Senior Function head	F1 Professor	F2 Function head	I0 Senior/principal lecturer, Reader, Principal Research fellow	J0 Lecturer, Senior Lecturer, Senior Research Fellow	K0 Lecturer, Research fellow, Researcher (senior research assistant), Teaching fellow	L0 Research assistant, Teaching assistant	M0 Assistant professional staff, Administrative staff	N0 Junior Administrative Staff, Clerical Staff, Technician/Craftsmen, Operative	O0 Routine task provider
(114) Physics	Female	5	5	105	0	115	175	445	190	35	10	
	Male	10	60	765	0	660	650	1,610	555	100	35	
(112) Biosciences	Female	20	100	345	0	620	1,340	2,760	1,090	375	35	0
	Male	35	220	1,175	0	1,135	1,490	2,635	860	220	25	0
(113) Chemistry	Female	5	15	70		110	180	570	215	110	10	
	Male	10	50	530	0	390	495	1,125	370	125	15	
(119) Electrical, electronic & computer engineering	Female	0	15	45	0	75	155	265	170	20	0	
	Male	15	70	475	5	580	840	1,290	590	70	0	
(121) IT, systems sciences & computer software engineering	Female	5	35	115		230	425	630	295	45	5	0
	Male	20	125	640		880	1,545	1,770	990	145	25	
(122) Mathematics	Female	0	10	100	0	175	230	380	200	20	0	
	Male	10	65	765	0	750	725	995	510	40	0	

**Table 21:** HESA data for selected STEM subjects academic staff in 2018/19.

**Figure 21** shows the proportion of male and female Physics staff for each academic contract levels in 2018/19. Female members of staff make up between 10% and 29% for each contract level. The exception to this is F2 Function Head where female and male staff are evenly split, however this can be attributed to the low numbers of staff (<2) in this category. The contract level which has most female members of staff is A0 to C2 Senior management (29%).



**Figure 21:** HESA data for academic Physics staff in 2018/19.

## Ethnicity

**Table 22** shows the detailed ethnicity breakdown of academic staff across selected STEM subjects. Across the selected subjects, there are a number of contract levels without any representation for a number of ethnicities. There are also a number of contract levels where there are very few members of staff for a number of ethnicities.

		M0 to C2 Senior management	D and E Head of School/Senior Function head	F1 Professor	F2 Function head	J0 Senior/principal lecturer, Reader, Principal Research fellow	J0 Lecturer, Senior Lecturer, Senior Research Fellow	K0 Lecturer, Research fellow, Researcher (senior research assistant), Teaching fellow	L0 Research assistant, Teaching assistant	M0 Assistant professional staff, Administrative staff	N0 Junior Administrative Staff, Clerical Staff, Technician/Craftsmen, Operative	O0 Routine task provider	P0 Simple task provider
(114) Physics	Asian or Asian British - Bangladeshi			15		0	5	25	5	5	0		
	Asian or Asian British - Indian		10	100		90	115	515	150	15	0		
	Asian or Asian British - Pakistani		0	0		10	15	95	20	0	0		
	Black or Black British - African	0	0	10		5	10	30	10	5	5		
	Black or Black British - Caribbean		0			0	5	10	10	5			
	Chinese	0		80		145	140	655	255	15	10		
	Mixed		0	50	0	65	135	270	140	20	10		
	Other	0		60		80	75	215	65	10	10		
	Other Asian background	0	0	50		70	70	315	150	15	5		
	Other Black background					5	0	10	0				
White	75	375	4,800	5	4,120	4,410	8,845	3,705	330	240		5	
(112) Biosciences	Asian or Asian British - Bangladeshi		5	5		15	75	70	25	15	0		
	Asian or Asian British - Indian	5	35	115	5	225	500	1,460	565	85	25	0	
	Asian or Asian British - Pakistani		5	30		75	135	210	85	15	0		
	Black or Black British - African	10	0	15		25	185	325	120	60	20	5	
	Black or Black British - Caribbean		0	5		45	40	40	40	5			
	Chinese	5	20	70		125	440	1,460	420	75	25	0	0
	Mixed		25	100	0	155	275	680	285	70	10	0	
	Other	5	15	110	0	135	370	685	245	60	10	0	
	Other Asian background	5	15	75		100	255	895	300	70	10		
	Other Black background		0			5	15	65	20	5	0		
White	350	1,755	8,620	45	10,245	16,005	26,780	9,325	1,850	425	30	35	
(113) Chemistry	Asian or Asian British - Bangladeshi			10		5	0	65	20	5	0		
	Asian or Asian British - Indian		0	30		50	135	460	150	25	5		
	Asian or Asian British - Pakistani			15		10	20	65	50	10	5		
	Black or Black British - African			5		15	25	75	50	15	5		
	Black or Black British - Caribbean		0			5	0	15	10	5			
	Chinese			75		85	180	730	370	25	5		
	Mixed			5		30	60	165	90	10	5		
	Other		0	20	0	45	65	190	65	15	10		
	Other Asian background	0	10	25		60	65	260	125	15	5		
	Other Black background					0		15	5	0			
White	105	380	3,385	10	2,890	3,645	8,335	3,065	415	125	5	0	
(119) Electrical, electronic & computer engineering	Asian or Asian British - Bangladeshi	0	10	5		10	50	90	55	0			
	Asian or Asian British - Indian		15	100	0	120	205	460	260	15	5		
	Asian or Asian British - Pakistani					20	105	215	155	15	0		
	Black or Black British - African	0	0	15		20	75	175	155	5	5		
	Black or Black British - Caribbean					10	15	5	10	0			
	Chinese	5	35	400		365	715	1,425	695	25			
	Mixed		0	25	0	40	90	160	110	5			
	Other		30	100		150	255	450	215	10	5		
	Other Asian background	5	20	130	0	135	290	565	260	10	5		
	Other Black background		0			0	5	30	10				
White	115	440	2,390	20	3,260	4,680	5,095	2,425	155	30	0		
(121) IT, systems sciences & computer software engineering	Asian or Asian British - Bangladeshi		5	5		5	45	90	50	5	0		
	Asian or Asian British - Indian	5	35	100	0	140	335	490	235	45	10		
	Asian or Asian British - Pakistani		10	40		50	200	245	125	20	20	0	
	Black or Black British - African	0		5	0	45	150	315	185	35	25		
	Black or Black British - Caribbean		5			20	40	30	25	5	5		
	Chinese	5	45	390		445	855	945	440	50	15		
	Mixed		5	60	0	100	235	255	145	10	10		
	Other	0	30	90		200	335	545	245	30	10		
	Other Asian background	0	30	95	0	110	380	570	280	35	15	0	
	Other Black background		0		5	10	5	20	20	0	0		
White	165	925	3,560	20	5,875	9,495	9,835	3,940	545	250	5	0	
(122) Mathematics	Asian or Asian British - Bangladeshi	0		5		10	10	15	15	0			
	Asian or Asian British - Indian	5	5	75	0	120	140	195	110	15			
	Asian or Asian British - Pakistani					15	25	30	30	5	0		
	Black or Black British - African	0	0	20		10	40	80	60	20	0		
	Black or Black British - Caribbean		0				5	10	10	5	0		
	Chinese	0	5	195		150	250	485	365	10	10		
	Mixed		5	30	5	55	120	185	120	15	0		
	Other		5	95		100	160	230	100	10	0		
	Other Asian background		5	20		80	130	260	140	15	0		
	Other Black background					5	5	5	0				
White	45	440	4,600	35	4,710	4,825	7,350	2,645	155	55		5	

**Table 22:** Detailed breakdown of selected STEM subjects academic staff by ethnicity for 2018/19.

Below shows the total number of Physics staff for each academic contract level by grouped ethnicity. The ethnicity with the most representation is White across all contract levels. The ethnicity with the second highest number of staff across academic contract levels is Asian.

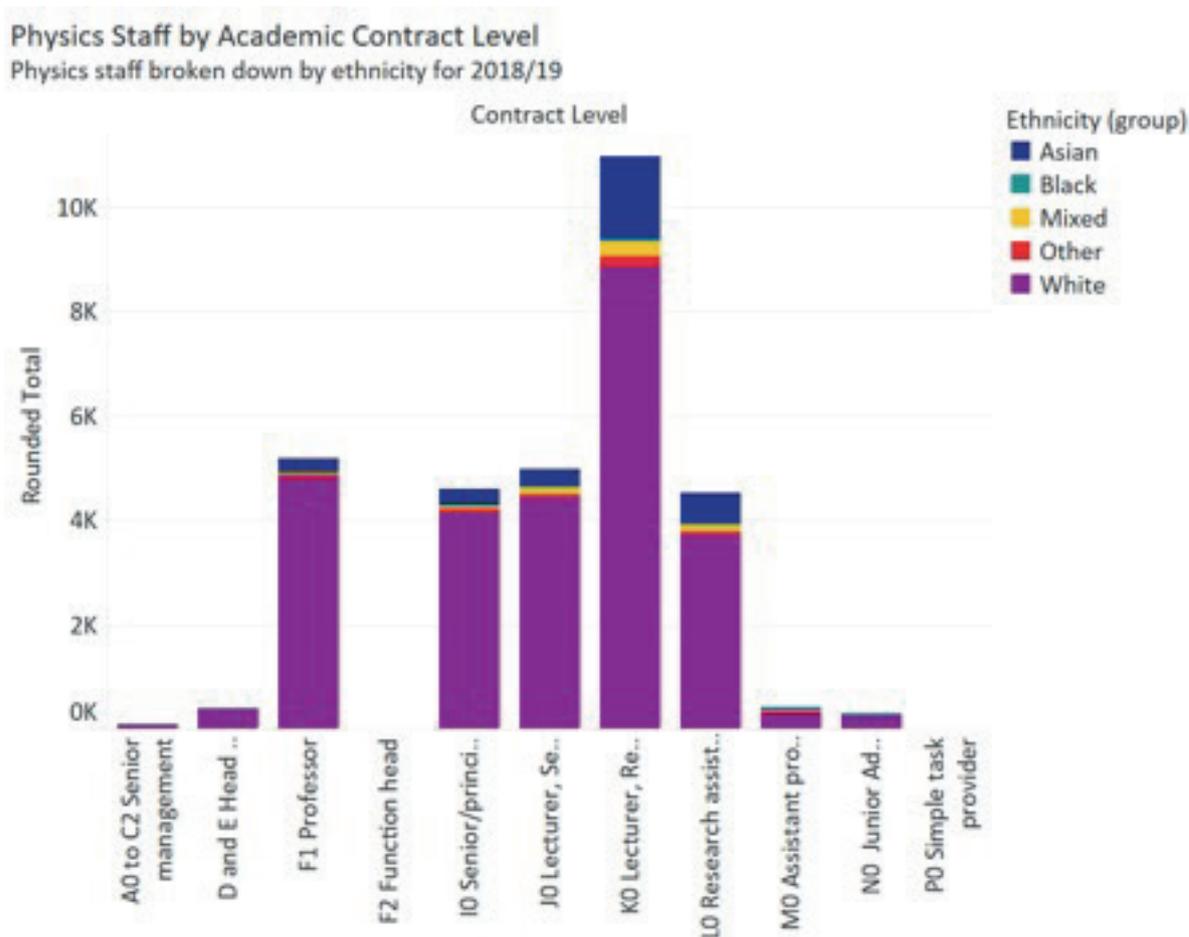


Figure 22: HESA data for academic Physics staff for the academic year 2018/19.

## Professors

Presented in this section is an analysis of professors in higher education institutions. Professors are defined to be academic staff who have been given the title of professor.

Table 23 shows the total number of professors for each subject considered. Physics and Mathematics had a comparable number of professors from 2012/13 to 2018/19, however, in 2012/13, Physics had slightly fewer professors than in Mathematics did and by 2018/19, Physics had slightly more professors.

Discipline	Academic Year						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	710	765	800	810	835	850	875
(112) Biosciences	1,255	1,400	1,400	1,415	1,455	1,495	1,520
(113) Chemistry	495	535	520	550	585	590	600
(119) Electrical, electronic & computer engineering	465	485	485	485	485	505	515
(121) IT, systems sciences & computer software engineering	590	640	625	640	695	725	755
(122) Mathematics	730	795	770	795	815	840	865

Table 23: HESA data for professors from 2012/13 to 2018/19.

The total number of Physics professors has increased by 19% from 2012/13 to 2018/19, a greater increase in the number of professors than any other selected STEM subject with the exception of IT, systems sciences & computer software engineering (22%). For Physics, the largest increase in the number of professors was 8% from 2012/13 to 2013/14.

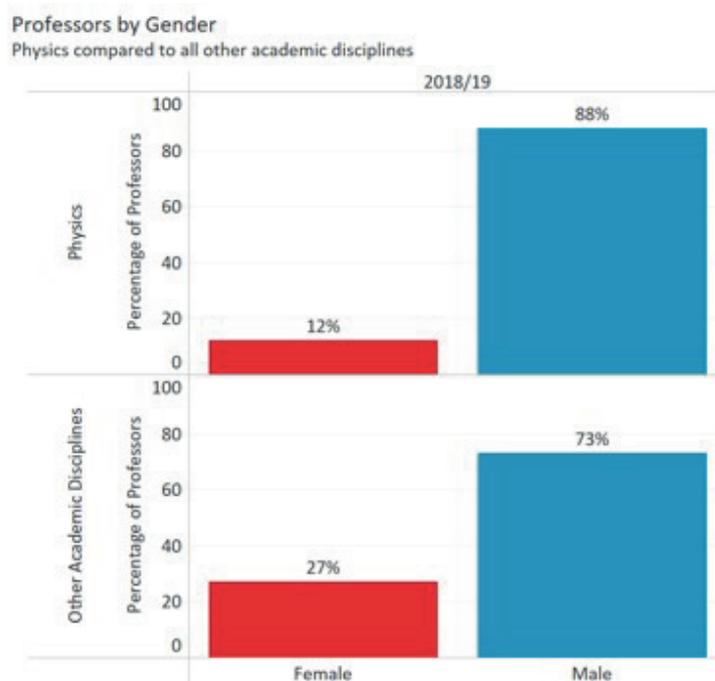
Discipline	Academic Year / Year on Year Change							Total Change
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
(114) Physics	710	8%	5%	1%	3%	2%	3%	19%
(112) Biosciences	1,255	12%	0%	1%	3%	3%	2%	17%
(113) Chemistry	495	8%	-3%	6%	6%	1%	2%	18%
(119) Electrical, electronic & computer engineering	465	4%	0%	0%	0%	4%	2%	10%
(121) IT, systems sciences & computer software engineering	590	8%	-2%	2%	9%	4%	4%	22%
(122) Mathematics	730	9%	-3%	3%	3%	3%	3%	16%

**Table 24:** HESA data for the percentage change from the previous year in professors for 2012/13 to 2018/19.

## Gender

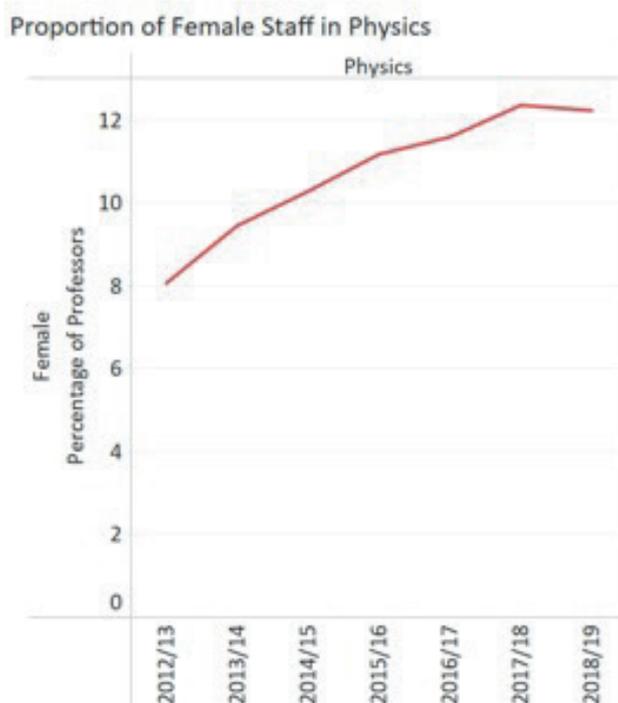
**Figure 23** shows that 12% of Physics professors, in 2018/19, are female. This is significantly lower than for all Physics staff; 25% of all Physics staff are female (Figure 1) and 20% of Physics academic staff are female (Figure 13).

This trend is also seen in all other academic disciplines, but to a lesser extent. Females make up 27% of professors all other academic disciplines compared to 55% of all staff in all other academic disciplines (Figure 1) and 47% of academic staff in all other academic disciplines (Figure 13).



**Figure 23:** HESA data for professors in 2018/19 for physics and all other academic disciplines.

**Figure 24** shows that since 2012/13, the proportion of Physics professors who are female has increased from 8% to 12%. This is comparable to the increase of female staff seen in **Figure 2** and **Figure 14**.



**Figure 24:** HESA data showing the change in percentage of female Physics professors from 2012/13 to 2018/19.

The table below breaks down the number of professors by gender by subject. The number of female professors is far lower than the number of male professors for each subject. Physics does have a similar number of female professors as Mathematics and more female professors than Chemistry. Biosciences has more female professors than Physics, Chemistry and Mathematics combined, however, Biosciences does have a greater number of professors overall.

Gender	Discipline	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Female	(114) Physics	55	70	80	90	95	105	105
	(112) Biosciences	215	250	255	270	300	325	345
	(113) Chemistry	40	45	45	55	60	65	70
	(119) Electrical, electronic & computer engineering	30	30	35	35	40	40	45
	(121) IT, systems sciences & computer software engineering	75	85	80	85	100	105	115
	(122) Mathematics	55	70	65	75	85	95	100
Male	(114) Physics	650	695	720	720	735	745	770
	(112) Biosciences	1,035	1,150	1,145	1,140	1,155	1,170	1,175
	(113) Chemistry	450	485	475	495	525	525	530
	(119) Electrical, electronic & computer engineering	435	455	450	450	445	465	475
	(121) IT, systems sciences & computer software engineering	520	560	545	560	595	620	640
	(122) Mathematics	675	730	700	715	730	740	765

**Table 25:** The total number of professors by subject from 2012/13 to 2018/19 by gender

**Table 26** shows the year-on-year change in the number of professors for each subject by gender. From 2012/13 to 2018/19, the number of female professors in Physics increased by 91%. During the same time period, the number of male Physics professors increased by 18%. In fact, Physics saw the largest percentage increase in the number of female professors when compared to other selected STEM subjects (other subjects saw an increase in the range of 50-82%).

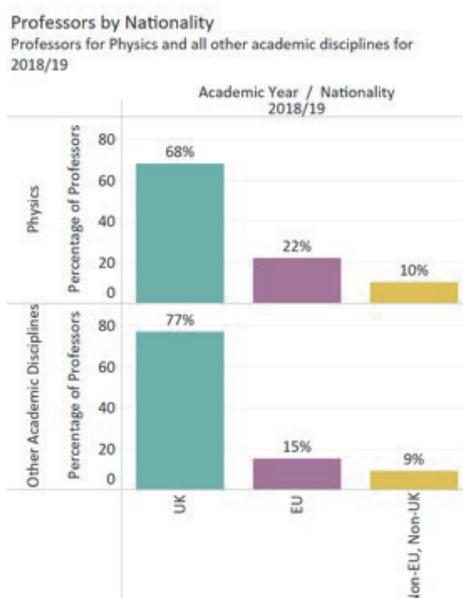
Biosciences saw a greater increase in the number of male professors than Physics. IT, systems sciences & computer software engineering also saw an increase of 23% in male professors, a larger increase than Physics saw (18%). Other than this, Physics saw the largest increase in male professors when compared to other selected STEM subjects with the exception of Chemistry which also observed an increase of 18%. The increase in male professors from 2012/13 to 2018/19 ranges from 9% to 23%.

Gender	Discipline	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Female	(114) Physics	55	70	80	90	95	105	105
	(112) Biosciences	215	250	255	270	300	325	345
	(113) Chemistry	40	45	45	55	60	65	70
	(119) Electrical, electronic & computer engineering	30	30	35	35	40	40	45
	(121) IT, systems sciences & computer software engineering	75	85	80	85	100	105	115
	(122) Mathematics	55	70	65	75	85	95	100
Male	(114) Physics	650	695	720	720	735	745	770
	(112) Biosciences	1,035	1,150	1,145	1,140	1,155	1,170	1,175
	(113) Chemistry	450	485	475	495	525	525	530
	(119) Electrical, electronic & computer engineering	435	455	450	450	445	465	475
	(121) IT, systems sciences & computer software engineering	520	560	545	560	595	620	640
	(122) Mathematics	675	730	700	715	730	740	765

**Table 26:** HESA data for the percentage change from the previous year in professors by gender for 2012/13 to 2018/19.

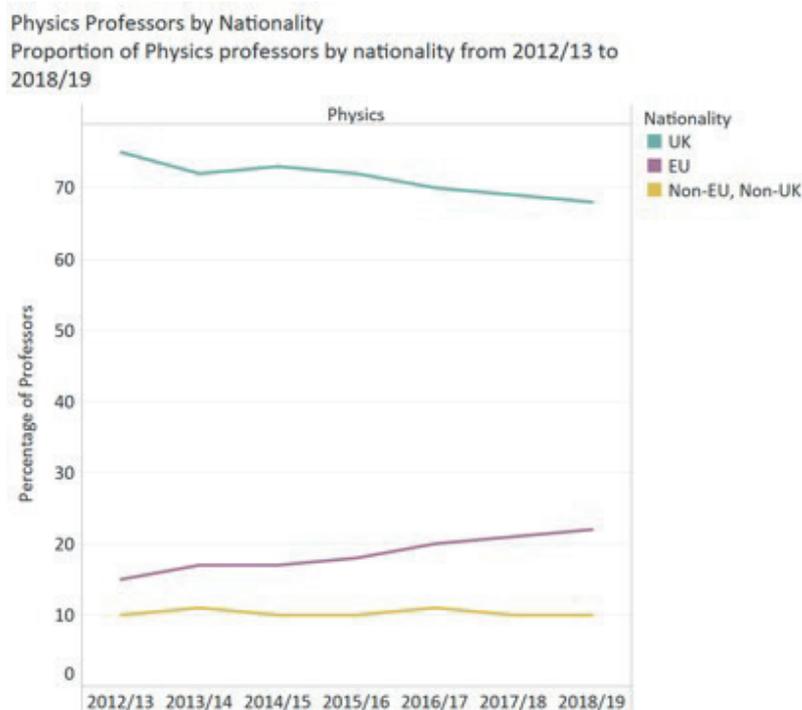
## Nationality

The nationality of most of the professors in Physics (68%) is recorded as being from the UK, but this percentage is lower than in all other academic disciplines (77%) in 2018/19. Physics has a higher percentage of professors from the EU than all other academic disciplines on average with 22% compared to 15%, respectively. The proportion of Physics professors from non-EU, non-UK countries is similar to professors in all other academic disciplines at 10% and 9%, respectively.



**Figure 25:** HESA data for professors for Physics and all other academic disciplines by nationality for 2018/19.

**Figure 26** shows how the proportion of Physics professors by nationality has changed from 2012/13 to 2018/19. The proportion of professors from EU countries have increased by 7% but across the same time period the proportion of Physics professors from non-EU, non-UK countries has remained at 10%.



**Figure 26:** HESA data for Physics professors by nationality from 2012/13 to 2018/19.

As seen in previous sections, Biosciences has the greatest number of staff members. Biosciences also has the greatest number of professors, the majority of whom are from the UK. Despite the fact that Biosciences has so many more professors in total, the number of professors from the EU is similar to that for Physics, and also for Mathematics. For professors from non-EU, non-UK countries, Mathematics has the greatest number, closely followed by Biosciences and then Physics.

Nationality	Discipline	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
UK	(114) Physics	525	550	575	575	580	580	595
	(112) Biosciences	1,045	1,130	1,130	1,145	1,170	1,205	1,205
	(113) Chemistry	410	435	420	445	470	470	480
	(119) Electrical, electronic & computer engineering	370	375	370	370	370	380	385
	(121) IT, systems sciences & computer software engineering	420	445	435	430	465	480	490
	(122) Mathematics	500	520	500	515	525	540	545
EU	(114) Physics	110	130	135	150	165	180	190
	(112) Biosciences	125	165	170	160	180	185	205
	(113) Chemistry	45	55	60	70	75	80	80
	(119) Electrical, electronic & computer engineering	40	55	55	65	65	70	75
	(121) IT, systems sciences & computer software engineering	90	105	110	125	140	150	155
	(122) Mathematics	135	155	150	160	175	180	185
Non-EU, Non-UK	(114) Physics	70	80	80	80	90	90	85
	(112) Biosciences	70	85	90	100	95	100	105
	(113) Chemistry	30	40	35	35	35	40	40
	(119) Electrical, electronic & computer engineering	50	55	55	50	50	55	60
	(121) IT, systems sciences & computer software engineering	75	85	75	80	90	85	105
	(122) Mathematics	90	110	110	115	110	115	125

**Table 27:** HESA data for professors by nationality from 2012/13 to 2018/19.

The proportion of professors from the three nationality groups in the table below have varied over time. The proportion of professors who are from the UK has decreased over the time period looked at for all selected subjects, with the proportion of Physics professors decreasing from 74% to 68%.

The proportion of Physics professors from the EU was 16% in 2012/13, and for Mathematics this proportion was 19%, the highest proportion out of all subjects considered. By 2018/19, the proportion for both subjects was 22%. The highest proportion out of all subjects.

The proportion of Physics professors from non-EU, non-UK countries has oscillated between 10-11%. Biosciences and Chemistry also saw small changes in the proportion of professors. Mathematics saw the largest increase in proportion of non-EU, non-UK staff of 3%.

Nationality	Discipline	Academic Year						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
UK	(114) Physics	74%	72%	73%	71%	69%	68%	68%
	(112) Biosciences	84%	82%	81%	81%	81%	81%	80%
	(113) Chemistry	85%	82%	82%	81%	81%	80%	80%
	(119) Electrical, electronic & computer engineering	80%	77%	77%	76%	76%	75%	74%
	(121) IT, systems sciences & computer software engineering	72%	70%	70%	68%	67%	67%	65%
	(122) Mathematics	69%	66%	66%	65%	65%	65%	64%
EU	(114) Physics	16%	17%	17%	19%	20%	21%	22%
	(112) Biosciences	10%	12%	12%	11%	12%	12%	14%
	(113) Chemistry	9%	10%	12%	13%	13%	14%	13%
	(119) Electrical, electronic & computer engineering	9%	11%	11%	13%	13%	14%	14%
	(121) IT, systems sciences & computer software engineering	15%	17%	18%	20%	20%	21%	21%
	(122) Mathematics	19%	20%	20%	20%	22%	22%	22%
Non-EU, Non-UK	(114) Physics	10%	11%	10%	10%	11%	11%	10%
	(112) Biosciences	6%	6%	6%	7%	7%	7%	7%
	(113) Chemistry	6%	8%	7%	6%	6%	7%	7%
	(119) Electrical, electronic & computer engineering	11%	11%	11%	10%	10%	11%	12%
	(121) IT, systems sciences & computer software engineering	13%	13%	12%	13%	13%	12%	14%
	(122) Mathematics	12%	14%	14%	15%	14%	14%	15%

**Table 28:** HESA data for professors by proportion of nationality from 2012/13 to 2018/19.

Across all selected STEM subjects, and for all nationalities, the total number of professors has increased from 2012/13 to 2018/19. Over this time period, Physics professors from the UK, EU and non-EU, non-UK countries increased by 13%, 73% and 21%, respectively.

Across all selected STEM subjects the increase in professors from the UK was less than from both the EU and non-EU, non-UK nationalities. The smallest increase in professors from the UK was for Electrical, electronic & computer engineering (4%) and the largest increase was for Chemistry and IT, systems sciences & computer software engineering, both of which saw a 17% increase.

Examining professors from EU countries for each selected STEM subject, Mathematics saw the smallest increase of 37% whereas Electrical, electronic & computer engineering saw the largest increase of 88%. Finally, Biosciences saw the largest increase in professors from non-EU, non-UK countries of 50% and Electrical, electronic & computer engineering saw the smallest of 20% (similar to Physics' 21% increase).

Nationality	Discipline	Academic Year / Year on Year Change							Total Change
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
UK	(114) Physics	525	5%	5%	0%	1%	0%	3%	13%
	(112) Biosciences	1,045	8%	0%	1%	2%	3%	0%	15%
	(113) Chemistry	410	6%	-3%	6%	6%	0%	2%	17%
	(119) Electrical, electronic & computer engineering	370	1%	-1%	0%	0%	3%	1%	4%
	(121) IT, systems sciences & computer software engineering	420	6%	-2%	-1%	8%	3%	2%	17%
	(122) Mathematics	500	4%	-4%	3%	2%	3%	1%	9%
EU	(114) Physics	110	18%	4%	11%	10%	9%	6%	73%
	(112) Biosciences	125	32%	3%	-6%	13%	3%	11%	64%
	(113) Chemistry	45	22%	9%	17%	7%	7%	0%	78%
	(119) Electrical, electronic & computer engineering	40	38%	0%	18%	0%	8%	7%	88%
	(121) IT, systems sciences & computer software engineering	90	17%	5%	14%	12%	7%	3%	72%
	(122) Mathematics	135	15%	-3%	7%	9%	3%	3%	37%
Non-EU, Non-UK	(114) Physics	70	14%	0%	0%	13%	0%	-6%	21%
	(112) Biosciences	70	21%	6%	11%	-5%	5%	5%	50%
	(113) Chemistry	30	33%	-13%	0%	0%	14%	0%	33%
	(119) Electrical, electronic & computer engineering	50	10%	0%	-9%	0%	10%	9%	20%
	(121) IT, systems sciences & computer software engineering	75	13%	-12%	7%	13%	-6%	24%	40%
	(122) Mathematics	90	22%	0%	5%	-4%	5%	9%	39%

**Table 29:** HESA data for the percentage change from the previous year for professors by nationality for 2012/13 to 2018/19.

## Ethnicity

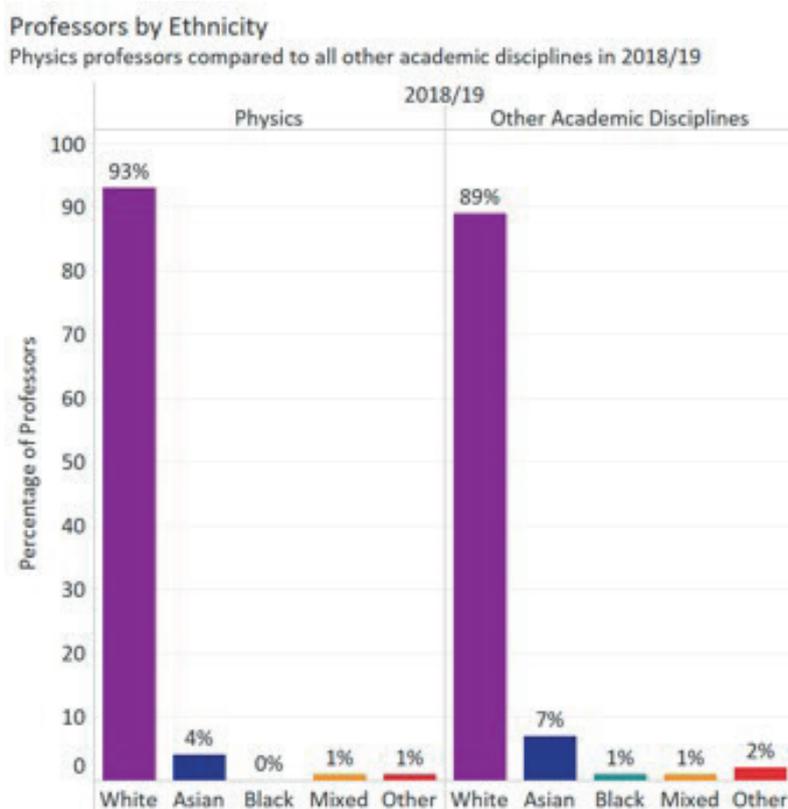
**Table 30** shows the detailed breakdown of the ethnicity of professors in selected STEM subjects for 2018/19. There are ethnicities that are blank, representing that there are no professors of that ethnicity for that subject. There are no Asian or Asian British – Pakistani, Black or Black British – Caribbean and Other Black background Physics professors. Asian or Asian British – Bangladeshi and Black or Black British - African have two or fewer Physics professors.

	2018/19										
	Asian or Asian British - Bangladeshi	Asian or Asian British - Indian	Asian or Asian British - Pakistani	Black or Black British - African	Black or Black British - Caribbean	Chinese	Mixed	Other	Other Asian background	Other Black background	White
(114) Physics	0	15		0		15	10	10	5		745
(112) Biosciences	0	20	5	0	0	15	20	15	10		1310
(113) Chemistry	0	10	5	0		10	0	5	5		520
(119) Electrical, electronic & computer engineering	0	15		5		60	5	15	20		355
(121) IT, systems sciences & computer software engineering	0	15	10	0		75	10	20	15	0	545
(122) Mathematics	0	10		5		35	5	15	5		710

**Table 30:** Detailed ethnic breakdown for professors in selected STEM subjects in 2018/19.

As stated in other sections, according to the 2011 census, Black ethnicities represent 3% of the population of England and Wales. Figure 26 shows that for Physics and all other academic disciplines Black ethnicities are underrepresented in those members of staff with professorships.

According to the census, 7% of the UK population are Asian. For professors for all academic disciplines, excluding Physics, Asian ethnicities are perfectly representational of the population. However, for Physics, despite Asian ethnicities being overrepresented in all academic staff (Figure 16), they are underrepresented among professors (4%).



**Figure 27:** HESA data for professors by ethnicity for Physics compared to all other academic disciplines in 2018/19.

Despite the total number of Physics professors increasing between 2012/13 to 2018/19, Table 31 shows that there has been no change in the number of Black professors and that it has remained at 2 or less. In fact, the number of Black professors in Physics has remained less than 1% through the time period considered. This is also observed in other subjects with the exception of Mathematics and Biosciences where the rounded number of Black professors has increased from 0 to 5.

The number of Asian professors in Physics increased by 5 from 30 to 35 (17% increase), however, between 2016/17 and 2017/18, this figure rose to 40. When compared to other selected STEM subjects, Physics saw the smallest increase in Asian professors. Chemistry saw a 100% increase in the number of Asian professors during the same time period.

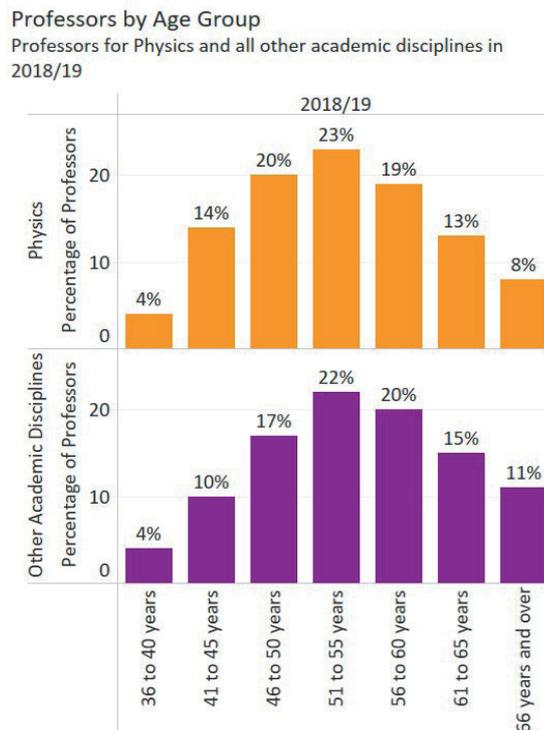
Physics saw the largest increase (23%) in White professors than any other subject. Other subjects saw the number of White professors increase between 16-18%. The only subject which saw a smaller increase was Electrical, electronic & computer engineering which increased by 9%.

Discipline	Ethnicity	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
(114) Physics	Asian	30	35	35	35	40	40	35
	Black	0	0	0	0	0	0	0
	Mixed	5	5	5	10	10	10	10
	Other	0	10	10	10	10	10	10
	White	605	650	680	685	715	725	745
(112) Biosciences	Asian	40	40	40	40	40	45	50
	Black	0	5	5	5	5	5	5
	Mixed	10	15	10	10	15	20	20
	Other	10	15	15	15	20	15	15
	White	1,110	1,210	1,215	1,235	1,255	1,290	1,310
(113) Chemistry	Asian	15	20	20	20	25	25	30
	Black	0	0	0	0	0	0	0
	Mixed	-	-	-	-	0	0	0
	Other	0	0	0	0	5	5	5
	White	440	470	455	480	505	515	520
(119) Electrical, electronic & computer engineering	Asian	80	90	90	90	90	95	100
	Black	0	0	0	0	0	0	5
	Mixed	5	5	5	5	5	5	5
	Other	10	10	15	15	15	15	15
	White	325	340	335	335	340	355	355
(121) IT, systems sciences & computer software engineering	Asian	75	80	80	85	90	100	115
	Black	0	-	0	0	0	0	0
	Mixed	5	5	5	10	10	10	10
	Other	10	10	10	10	15	20	20
	White	460	500	490	500	530	540	545
(122) Mathematics	Asian	30	40	40	45	45	50	50
	Black	0	0	0	5	5	5	5
	Mixed	5	5	5	5	5	5	5
	Other	10	15	15	15	15	15	15
	White	610	650	630	655	665	680	710

**Table 31:** HESA data by ethnicity of professors from 2012/13 to 2018/19.

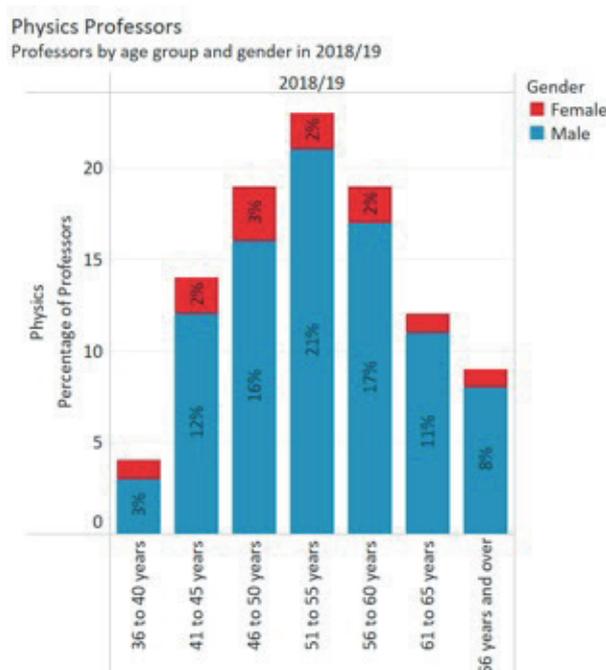
# Age Group

For Physics and all other academic disciplines, the age group which represents the most professors is 51 to 55 years old. Overall, the profile of the ages of Physics professors is similar to that of all academic disciplines, however, Physics professors are slightly skewed to younger age groups than professors for all other academic disciplines.



**Figure 28:** HESA data for professors by age group in 2018/19 for Physics and all other academic disciplines

**Figure 29** shows the proportion of Physics professors by age group further broken down by gender. Female Physics professors represent no more than 3% of the total number of Physics professors for any age group. The age group that has most female Physics professors in is 46 to 50 years old (3%).



**Figure 29:** HESA data for Physics professors by age group and gender for 2018/19.

# Salary

In 2018/19, 19% of Physics professors earned more than £100,000 and more than half of Physics professors earned £80,000 or less. Excluding those who earned £100,000 or more, the salary band with the highest proportion of Physics professors in is £65,001 to £70,000 (16%).

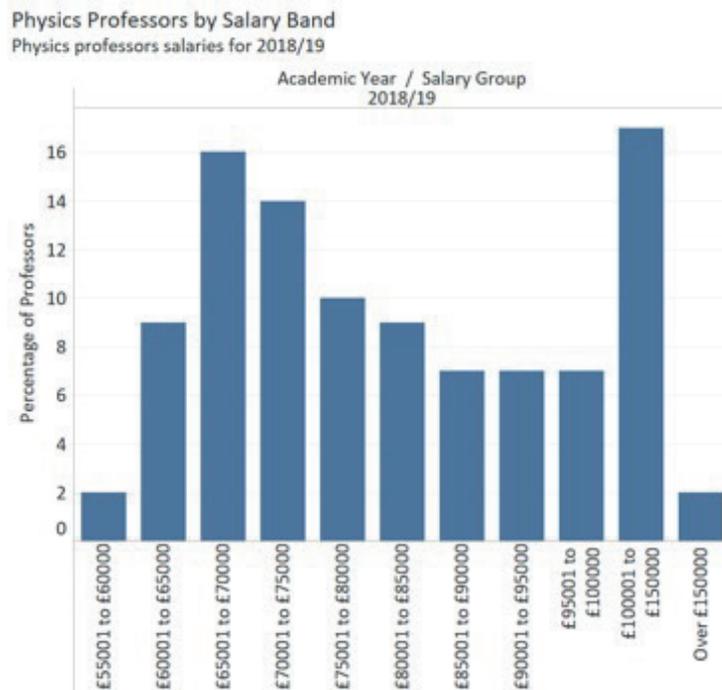


Figure 30: HESA data for Physics professors by salary in 2018/19.

As shown in **Figure 31**, as the salary band increases the proportion of females that make up that salary band decreases. This trend was also shown in Physics academic staff as a whole (**Figure 19**).

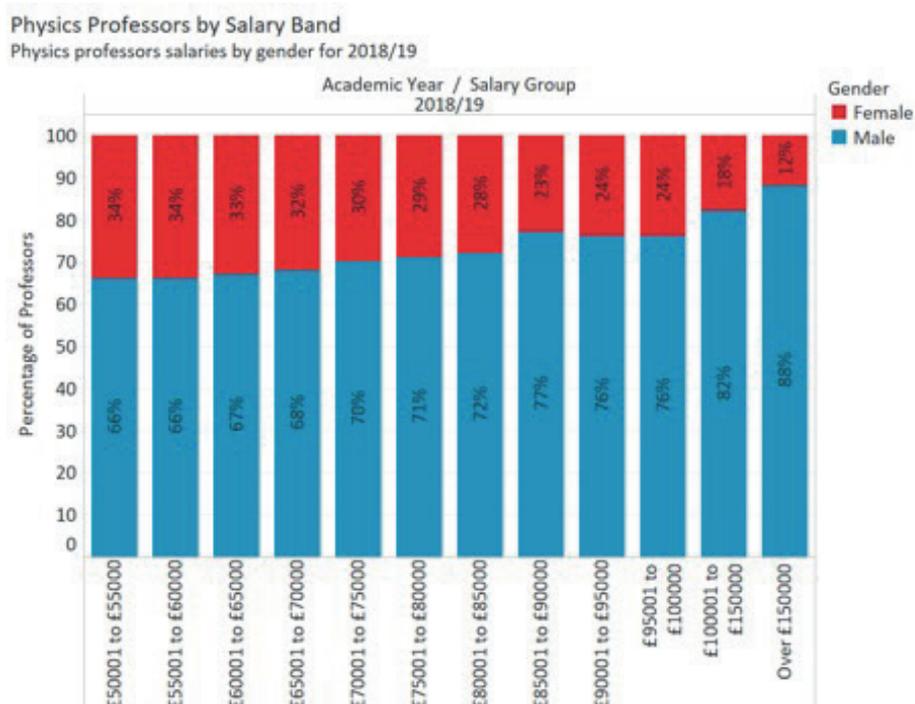
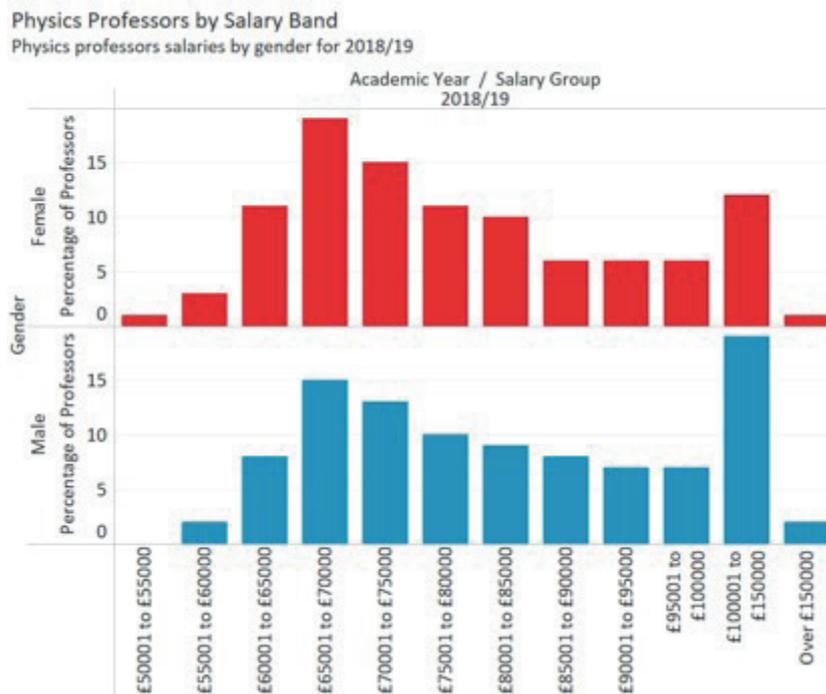


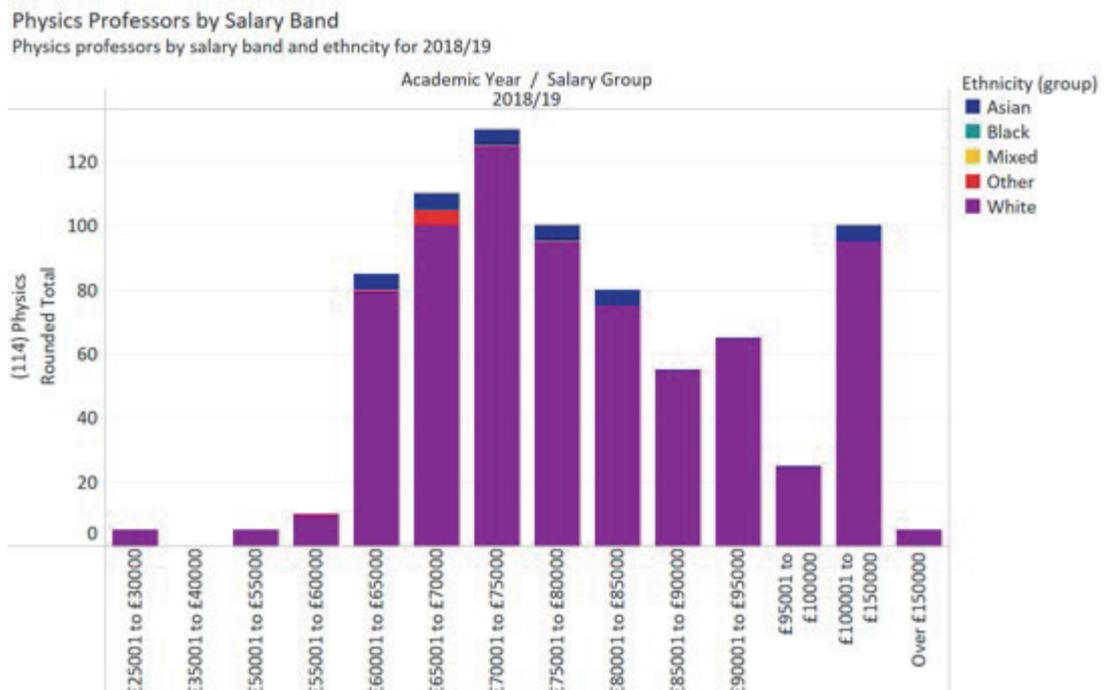
Figure 31: HESA data for Physics professors by salary band and gender in 2018/19.

**Figure 32** shows the distribution of female and male Physics professors in each salary band by percentage. A higher percentage of male Physics professors are in the higher salary bands compared to female Physics professors.



**Figure 32:** HESA data for Physics professors by salary band and gender for 2018/19.

**Figure 33** shows the salary bands for Physics professors broken down by ethnicity. Most of the Physics professors who are Asian, have a salary that is in one of the salary bands from £60,001 to £65,000 salary band to £80,001 to £85,000. There are also a similar number of Asian Physics professors in the £100,001 to £150,000 salary band.



**Figure 33:** HESA data for Physics professors by salary band and ethnicity for 2018/19.

