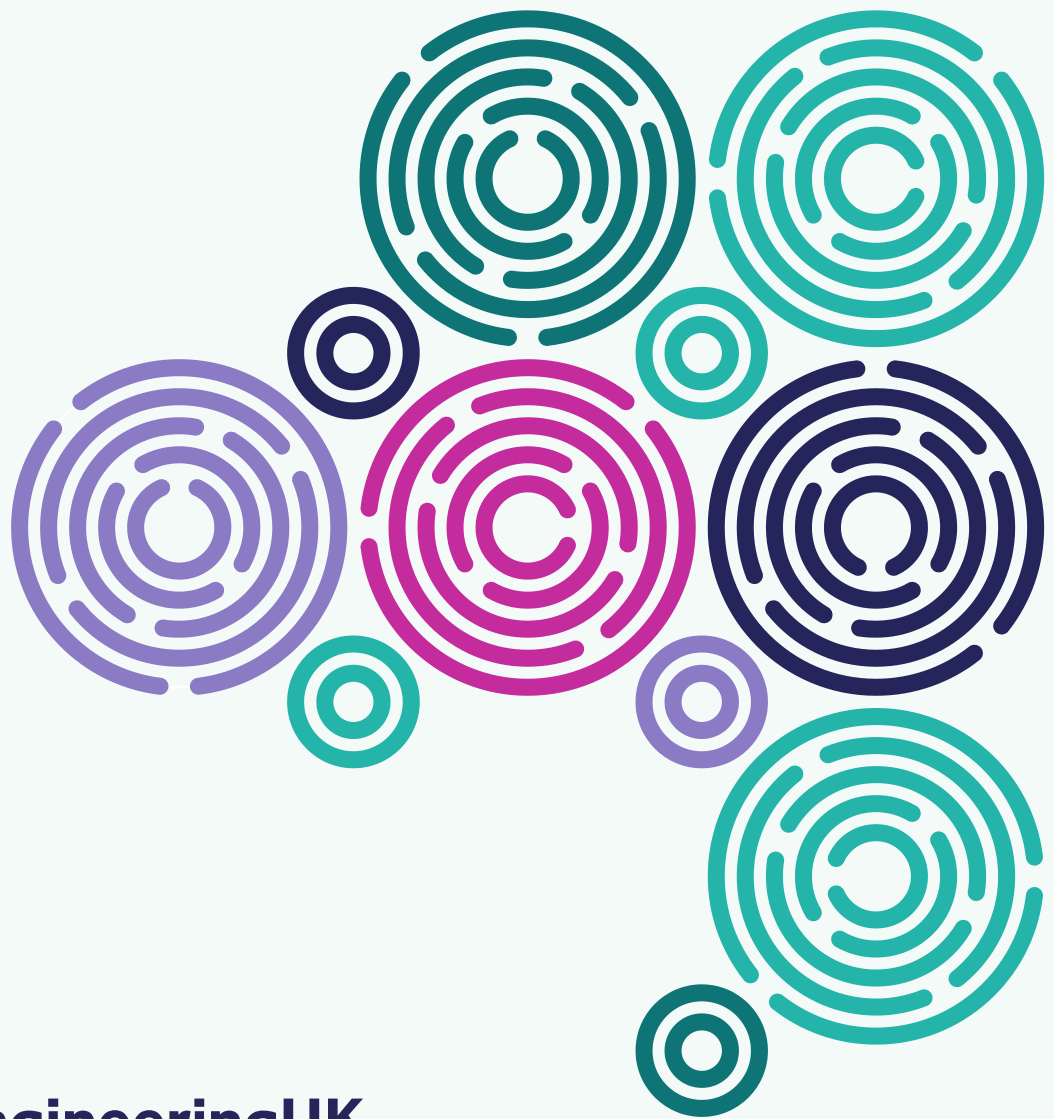


A LEVEL AND SCOTTISH HIGHER RESULTS

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A level results 2024

Introduction

Prior to publication of these results Ofqual confirmed that normal exam grading reintroduced in 2023 is continuing after the disruption caused by the pandemic, therefore these results are directly comparable to the previous year for the first time since 2019. It is still necessary to be cautious when comparing 2024 results with previous years, especially 2020 and 2021 which were based on teacher assessed grading. The data released on results day is followed by more detail later in the year, including demographics beyond gender.

The 2024 A level cohort is larger than in previous years. Overall entries for A levels have increased by 2.2% from 867,658 in 2023 to 886,514 in 2024. This has resulted in some subjects having sizeable percentage increases on last year. Fortunately for the engineering and technology sector this has been particularly beneficial for entries in STEM subjects. There have been notable increases in entries to Physics, Maths, Further Maths and Computing. For example, Maths had over 100,000 entries in 2024, the first A Level subject to reach this milestone.

A levels are completed across England, Northern Ireland and Wales. In Scotland the equivalent is Highers, which are covered later in this document.

Subject entries

STEM subject entries

Subjects	2019	2020	2021	2022	2023	2024
Biology	8.6	8.3	8.5	8.5	8.6	8.4
Chemistry	7.3	7.1	7.3	6.9	7.1	7.1
Computing	1.4	1.6	1.7	1.8	2.1	2.3
Design and Technology	1.4	1.3	1.2	1.3	1.2	1.2
Digital Technology*	0.2	-	-	-	0.2	0.1
Economics	3.8	4	4.1	4.3	4.5	4.6
Mathematics	11.4	12	11.8	11.3	11.2	12.1
Mathematics (Further)	1.8	1.9	1.9	1.8	1.7	2
Other sciences (2)	0.3	0.3	0.3	0.3	0.3	0.3
Physics	4.8	4.8	4.9	4.7	4.4	4.9

*Digital technology was not included in the data published by JCQ in previous years

- With 12.1% of all A level entries, Maths is once again the most popular subject in 2024, an increase from 11.2% in 2023.
- STEM subjects make up 5 of the top 10 most popular subjects at A levels by entries – Maths (1st), Biology (3rd) Chemistry (4th), Physics (9th) and Economics (10th).
- Physics has increased from 4.4% of all entries in 2023 to 4.9% of entries in 2024, lifting it up to 9th most popular subjects from 10th in 2023.

STEM subjects entries changes 2023 to 2024

Subjects	2023	2024	% change
Biology	74,650	74,367	-0.4
Chemistry	61,284	62,583	2.1
Computing	18,306	20,370	11.3
Design and Technology	10,639	10,548	-0.9
Digital Technology*	1,338	1,038	-22.4
Economics	39,141	40,451	3.3
Mathematics	96,853	107,427	10.9
Mathematics (Further)	15,080	18,082	19.9
Other sciences (2)	2,409	2,585	7.3
Physics	38,379	43,114	12.3

*Digital technology was not included in the data published by JCQ in previous years

- There have been large increases in the number of entries to most STEM subjects.
- There are notable increases in Mathematics (Further) (+19.9%), Physics (+12.3%), Computing (+11.3%) and Mathematics (+10.9%).
- Digital Technology has seen a large decrease of -22.4% between 2023 and 2024, though as a subject with a low number of entries any change is large.
- Design and Technology has seen a very slight drop in entries, but against the backdrop of overall A level entries increasing by 2.2%, this drop is noteworthy.

Subject results

A* to A in STEM subjects

	Examinations	Centre Assessed Grades	Teacher Assessed Grades	Examinations	Examinations	Examinations
STEM Subjects	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
Biology	24.1	37.5	45.1	34.9	27	27.7
Chemistry	29.1	42.9	48.6	39.4	32.2	32.7
Computing	17.9	36.6	44.5	35.4	22.2	24
Design and Technology	16.3	32.8	42.2	30.8	17.9	19.3
Digital Technology*	15.2	-	-	-	23.3	17.3
Economics	28.9	41.2	46.7	38.3	29.3	30.2
Mathematics	41	50.3	55.2	48.2	41.9	42
Mathematics (Further)	53.5	71.7	75.5	67.8	58.5	58.4
Physics	27.9	41.9	46.8	39.5	31.7	31.9
Other sciences	22.5	35.7	41.3	33.5	26.6	24

*Digital technology was not included in the data published by JCQ in previous years

- There have been slight increases in the proportion of students attaining an A or A* in 7 of the 10 STEM subjects between 2023 to 2024.
- Digital Technology (-6%p) and Other Sciences (-2.6%p) have seen drops in the proportion of A* to A grades awarded between 2023 and 2024.

A* to C in STEM subjects

	Examinations	Centre Assessed Grades	Teacher Assessed Grades	Examinations	Examinations	Examinations
STEM Subjects	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
Biology	67.3	84.4	86.7	76	68.6	69.8
Chemistry	72.2	86.6	86.4	76.3	71.6	73.5
Computing	63.3	84.7	87.2	76.5	65.8	67.1
Design and Technology	68.2	86.4	88.1	81.1	68.9	71.4
Digital Technology*	66.6	-	-	-	73.3	69.2
Economics	80.7	90.7	90.4	86	80.2	81.3
Mathematics	75.6	88.1	89.1	80.5	76.5	76.7
Mathematics (Further)	86.6	96	95.4	92.2	88.5	89.8
Physics	70.5	84.4	85.2	77.6	69.3	69.7
Other sciences (2)	69.7	87.9	86.2	77	72	69.4

*Digital technology was not included in the data published by JCQ in previous years

- There have been slight increases in the proportion of students attaining an A* to C in 8 of 10 STEM subjects between 2023 to 2024.
- Digital Technology has seen the largest decrease -4.1%p down on 2023 (73.3% to 69.2%), followed by Other Sciences -2.6%p.

STEM subjects vs. non-STEM subjects – A* to A

	2019 (%)	2023 (%)	2024 (%)	2019 to 2024 (%p)	2023 to 2024 (%p)
STEM	31.4	33.5	34.3	2.9	0.8
Non-STEM	21.3	22.8	23	1.7	0.2
All Subjects	25.4	27.2	27.8	2.4	0.6

- Over one third of all STEM subjects entered in 2024 resulted in an A* to A grade being awarded, much higher than for non-STEM subjects.
- There has been a higher increase in the proportion of A* to A grades in STEM subjects between 2023 and 2024 (0.8%p) than across non-STEM subjects and all subjects.

STEM subjects vs. non-STEM subjects – A* to C

	2019 (%)	2023 (%)	2024 (%)	2019 to 2024 (%p)	2023 to 2024 (%p)
STEM	72.9	73.3	74.4	1.5	1.1
Non-STEM	78	77.9	77.9	-0.1	0
All Subjects	75.9	76	76.4	0.5	0.4

- Almost three quarters of all STEM subjects entered in 2024 resulted in an A* to C grade being awarded, lower than for non-STEM subjects.
- The 1.1%p increase in the proportion of A* to C grades in STEM subjects is higher than non-STEM subjects (0%p) and all subjects (+0.4%), albeit from a lower base.

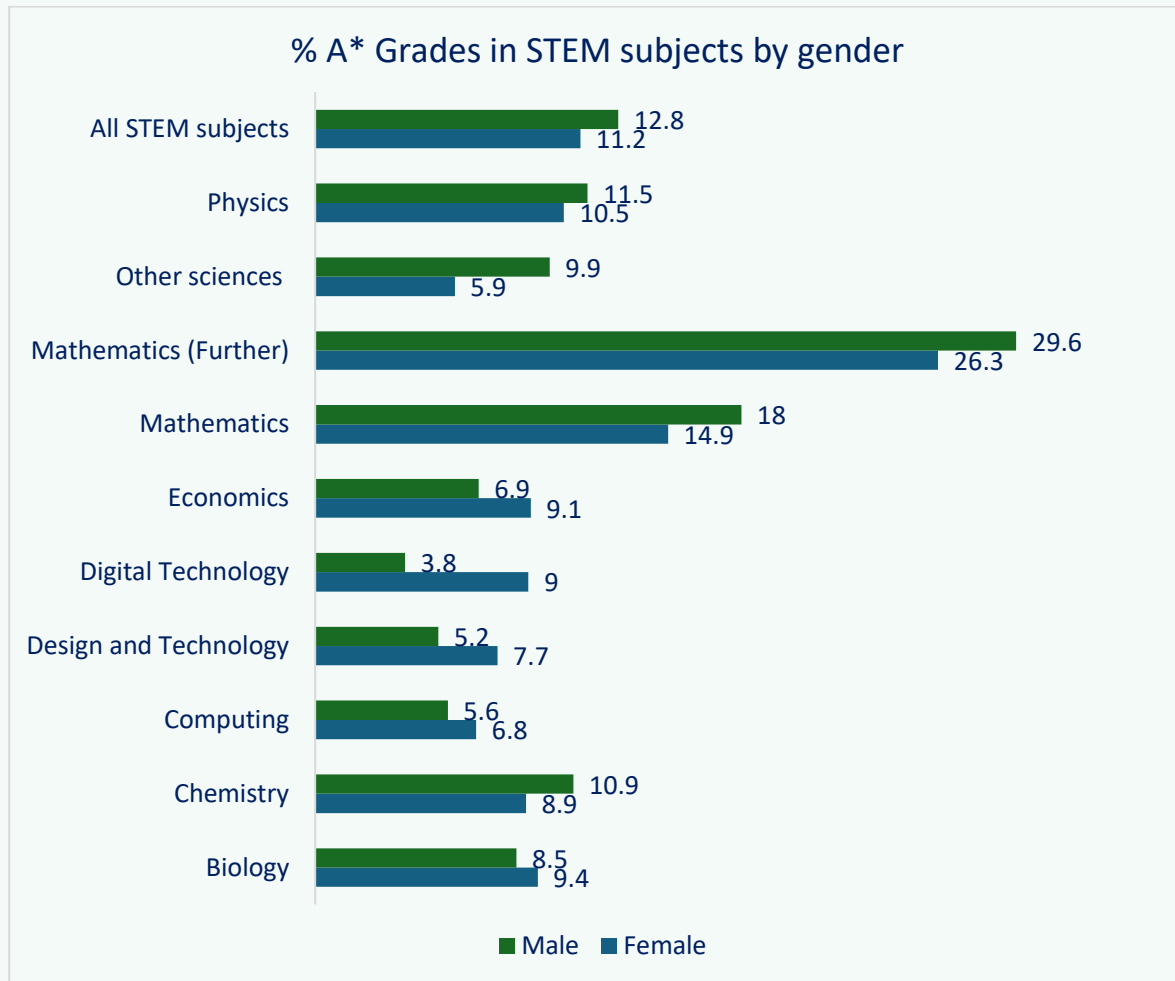
Gender

Entries by gender

Subjects	Total number of entries	Female entries	% female	Male entries	% males
Biology	74367	47196	63.5	27171	36.5
Chemistry	62583	35188	56.2	27395	43.8
Computing	20370	3556	17.5	16814	82.5
Design and Technology	10548	3352	31.8	7196	68.2
Digital Technology	1038	277	26.7	761	73.3
Economics	40451	12309	30.4	28142	69.6
Mathematics	107427	39943	37.2	67484	62.8
Mathematics (Further)	18082	4904	27.1	13178	72.9
Physics	43114	10026	23.3	33088	76.7
Other sciences (2)	2585	938	36.3	1647	63.7
All STEM subjects	380565	157689	41.4	222876	58.6

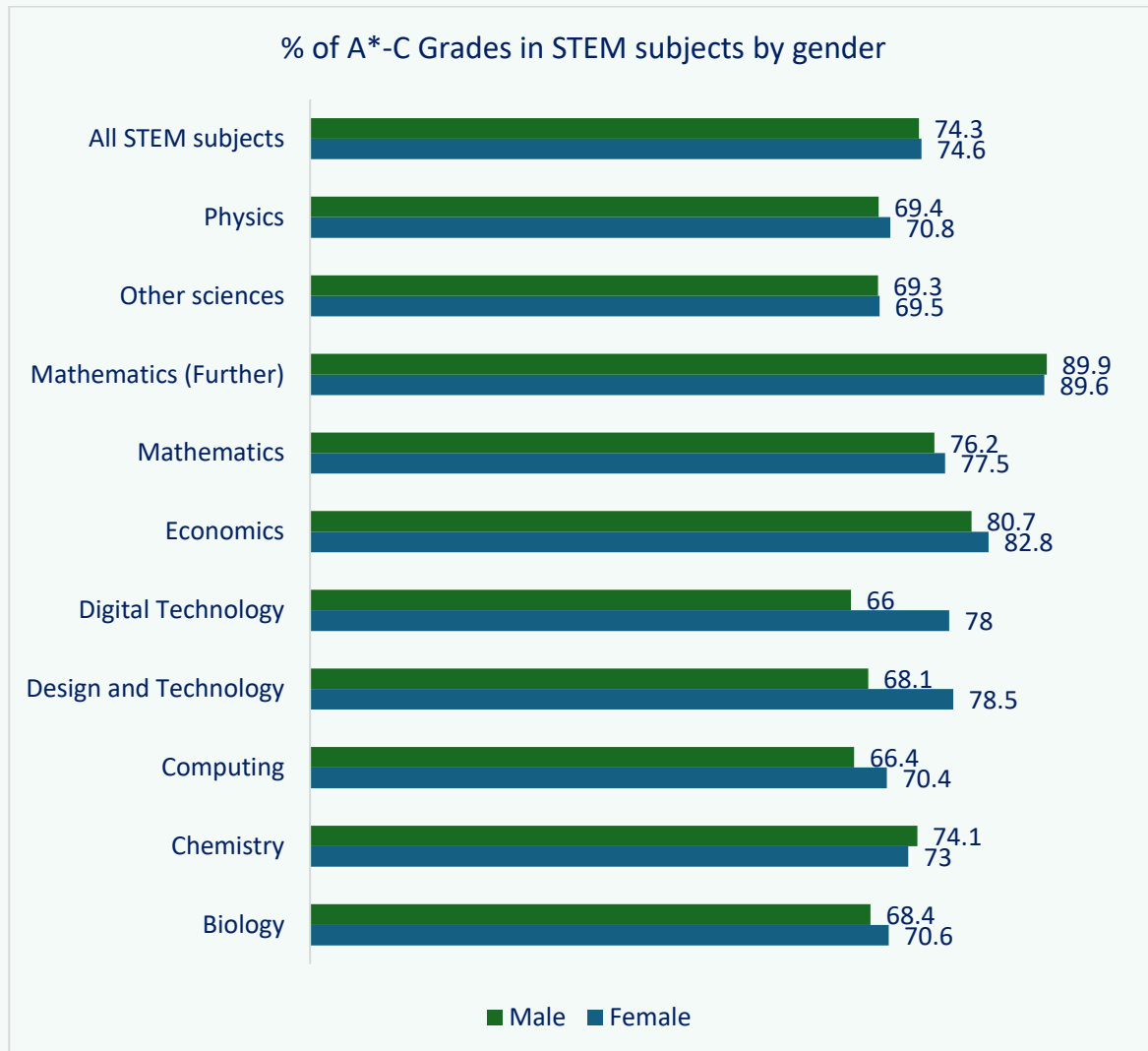
- For the majority of STEM subjects the number of entries by male students is higher than female students.
- The only STEM subjects where entries for female students are higher than male students are in Biology (47,196 vs. 27,171) and Chemistry (35,188 vs. 27,395)
- The gender gap between male and female students is particularly large in Computing (82.5% vs. 17.5%) and Physics (76.7% vs. 23.3%) where over three quarters of all entries are by male students.
- There are also sizable differences in Mathematics (Further) (72.9% vs. 27.1%) and Digital Technology (73.3% vs. 26.7%).

A* to A grades in STEM subjects by gender



- Female students outperform male students in 5 of the 10 STEM subjects for the proportion attaining A* to A grades.
- Female students outperform male students most in Digital Technology (+5.2%p), Design and Technology (+2.5%p) and Economics (+2.2%p).
- Male students outperform female students most in Other sciences (+4%p), Mathematics (Further) (+3.3%p) and Mathematics (+3.1%p).

A* to C grades in STEM subjects by gender



- Female students outperform male students in 8 of the 10 STEM subjects for the proportion attaining A* to C grades.
- Female students outperform male students most in in Digital Technology (+12%p), Design and Technology (+10.4%p) and Computing (+4%p).
- Male students do marginally better than female students in Chemistry (+1.1%p) and Mathematics (Further) (+0.3%p).

Scottish Higher results 2024

Introduction

2024 marks the return of full coursework assessment following the covid pandemic, therefore caution must be taken when comparing this year with 2023. The statement from the Scottish government on results day highlighted 2019 as being the most directly comparable.

Subject entries

STEM subject entries

Subjects	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
Mathematics	10	10.3	10	9.6	9.8	9.4
Chemistry	5.4	5.4	5.1	5.1	5	5
Physics	4.5	4.5	4.4	4.3	4.2	4.1
Human Biology	3.4	3.7	3.9	3.7	3.7	3.8
Biology	4.1	4	3.8	3.9	3.7	3.6
Administration and IT	2	2.1	2.2	2.3	2.3	2.3
Computing Science	1.7	1.7	1.7	1.9	1.9	1.9
Applications of Mathematics	0	0	0	0.5	0.8	1.5
Design and Manufacture	1.2	1.1	1.2	1.2	1.1	1
Engineering Science	0.6	0.6	0.6	0.6	0.6	0.7
Health and Food Technology	0.6	0.6	0.7	0.7	0.7	0.7
Economics	0.3	0.3	0.3	0.4	0.5	0.5
Environmental Science	0.2	0.2	0.3	0.3	0.3	0.3
Fashion and Textile Technology	0.1	0.1	0.1	0.2	0.2	0.2
Matamataig (Mathematics)*	0	0	0	0	0	0

*Matamataig (Mathematics) is mathematics taught in the Scottish language

- Although Mathematics is still the most entered STEM subject, it has seen a slight drop in its entry percentage share between 2023 and 2024 (-0.4%), although Applications of Mathematics has seen a larger increase (+0.7%). Application of Mathematics can be studied alongside or instead of Mathematics.
- Physics has also seen a slight decrease in its entry percentage dropping from 4.5% of all entries in 2019 to 4.1% of entries in 2024.
- 4 of the top 10 most entered subjects are STEM subjects: Maths (2nd), Chemistry (5th), Physics (8th) and Human Biology (10th).

STEM subjects entries changes 2023 to 2024

Subject	2023	2024	% Change
Administration and IT	4325	4595	6.2
Applications of Mathematics	1615	2995	85.4
Biology	7070	7130	0.8
Chemistry	9685	9900	2.2
Computing Science	3560	3745	5.2
Design and Manufacture	2035	2005	-1.5
Economics	890	925	3.9
Engineering Science	1245	1395	12
Environmental Science	585	575	-1.7
Fashion and Textile Technology	350	295	-15.7
Health and Food Technology	1390	1385	-0.4
Human Biology	7035	7450	5.9
Matamataig (Mathematics)*	40	35	-12.5
Mathematics	18705	18480	-1.2
Physics	7995	8065	0.9

*Matamataig (Mathematics) is mathematics taught in the Scottish language

- Mathematics still remains the most entered STEM subject in Scottish Highers.
- Applications of Mathematics, which is an alternative to standard mathematics, has seen the largest increase from 2023, with an 85.4% increase in entries.
- There has also been a notable increase in Engineering Science, which has seen a 12% increase in entries since 2023 ([albeit from a low base](#)). This subject has also had a 25.7% increase since 2020 (1110 to 1395).

Subject results

Grade A in STEM subjects

	Examinations	Teacher Assessed Grading	Teacher Assessed Grading	Examinations	Examinations	Examinations
Subject	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
Administration and IT	28.6	40.3	48.7	34.8	32.6	31
Applications of Mathematics	-	-	-	23.6	24.8	19.5
Biology	27.7	35.7	37.2	30.4	34.4	27.9
Chemistry	29.7	40.7	43.4	34.9	32.6	29.7
Computing Science	23.2	39.2	49.2	36	36.4	38.3
Design and Manufacture	11.8	27.2	30.1	17.5	12.3	11
Engineering Science	26.6	40.8	40.1	27.4	23.7	21.9
Environmental Science	19.2	30.6	35	20.2	13.7	7
Fashion and Textile Technology	9.3	35.3	51	19.4	11.4	16.9
Health and Food Technology	10.5	31.5	46.7	16.5	12.2	19.9
Mathematics	32.9	40.6	47.1	45.9	38.9	40.4
Physics	28.7	41.5	42.5	37	34.1	28.9
Economics	40.2	51.3	63.1	50	37.6	44.3
Matamataig (Mathematics)*	42.9	42.9	50	33.3	37.5	42.9
Human Biology	24.7	32.2	32.7	28.3	29.6	23.3

*Matamataig (Mathematics) is mathematics taught in the Scottish language

- The proportion of students attaining A in STEM subjects has dipped in 11 of the 17 STEM subjects between 2023 and 2024.
- However, only 4 subjects have seen a dip since 2019, the year most comparable to 2024.
- The largest dips have occurred in Environmental Sciences (-6.7%), Biology (-6.5%) and Human Biology (-6.3%).

Grade A-C in STEM subjects

	Examinations	Teacher Assessed Grading	Teacher Assessed Grading	Examinations	Examinations	Examinations
Subject	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
Administration and IT	78.4	91.9	90.9	80.1	79.9	75.8
Applications of Mathematics	-	-	-	69	73.7	60.4
Biology	72.7	84.9	78.1	75.3	75.4	70.6
Chemistry	75.6	88.3	81.4	78.3	77.8	74.3
Computing Science	63.9	89.3	86.2	71.2	69.8	72.8
Design and Manufacture	54.2	88	81.3	67.5	54.8	51.6
Engineering Science	65.3	89.2	83.1	69.2	63.9	62.4
Environmental Science	69.2	88.9	80.6	68.8	59.8	53.9
Fashion and Textile Technology	74.4	94.1	94.1	72.2	71.4	83.1
Health and Food Technology	60.1	91.9	89.5	67.9	62.2	66.1
Mathematics	72.4	83.3	80.1	75.3	73.2	72.7
Physics	75	86.7	80.8	77.9	77.2	75.7
Economics	79.5	92	92.6	81.4	74.2	75.7
Matamataig (Mathematics)*	85.7	100	83.3	77.8	75	71.4
Human Biology	69.4	84.2	76.6	72.2	71	64.5

*Matamataig (Mathematics) is mathematics taught in the Scottish language

- There has been a dip in the proportion of students attaining an A-C in 11 of the 17 STEM subjects between 2023 to 2024.
- The largest dips have been in Environmental Science (-15.3%) and Matamataig (Mathematics) (-14.3%) however, entries for this subject are quite low, so high variation is expected year on year.

STEM subjects vs. non-STEM subjects – A grade

	Examinations	Teacher Assessed Grading	Teacher Assessed Grading	Examinations	Examinations	Examinations
Category	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
STEM subjects	28.3	38.6	42.8	35.8	33	30.8
Non-STEM subjects	28.3	40.7	50.2	34.3	32.7	30
All subjects	28.3	40	47.6	34.8	32.8	30.3

- The proportion of entries to STEM subjects attaining an A grade is in line with the picture in non-STEM subjects and across all subjects.
- The proportion of entries to STEM subjects attaining an A grade has slightly dipped since 2023, although higher than 2019.

STEM subjects vs. non-STEM subjects – A to C grade

	Examinations	Teacher Assessed Grading	Teacher Assessed Grading	Examinations	Examinations	Examinations
Category	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
STEM subjects	72	86.2	81.3	75.2	73.5	70.8
Non-STEM subjects	75.3	89.9	88.6	79.7	77.9	75.7
All subjects	74.7	89.3	87.3	78.9	77.1	74.9

- The proportion of entries to STEM subjects attaining an A – C grade is below that in all non-STEM subjects and across all subjects.
- The proportion of entries to STEM subjects attaining an A grade has slightly dipped since 2023.

Gender

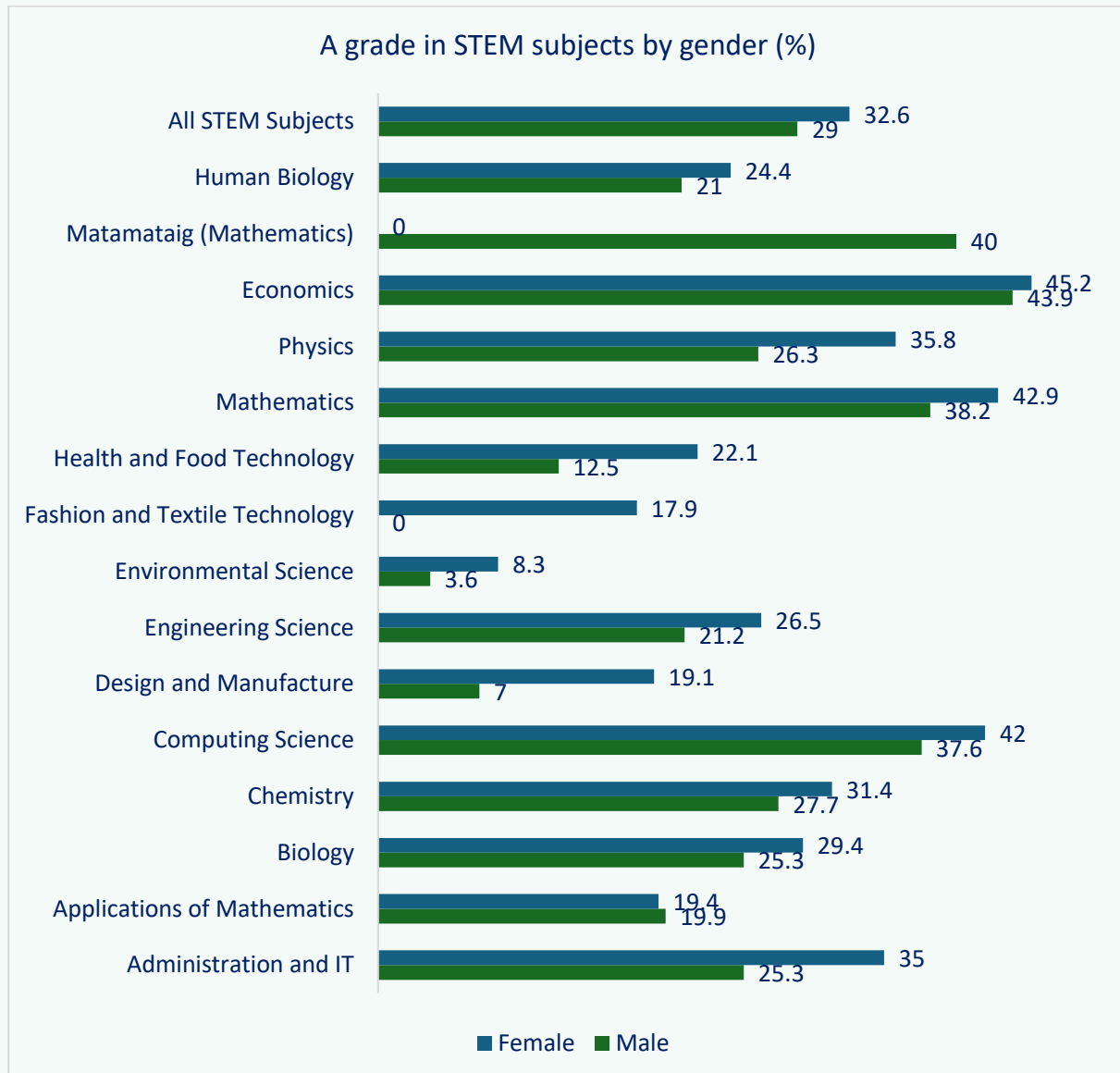
Entries by gender

Subjects	Total number of entries	Female	% female	Male	% males
Administration and IT	4595	2730	59.4	1860	40.5
Applications of Mathematics	2995	1240	41.4	1755	58.6
Biology	7130	4500	63.1	2625	36.8
Chemistry	9900	5285	53.4	4615	46.6
Computing Science	3745	785	21	2955	78.9
Design and Manufacture	2005	655	32.7	1350	67.3
Engineering Science	1395	170	12.2	1225	87.8
Environmental Science	575	300	52.2	280	48.7
Fashion and Textile Technology	295	280	94.9	15	5.1
Health and Food Technology	1385	1065	76.9	320	23.1
Mathematics	18480	8510	46	9960	53.9
Physics	8065	2180	27	5885	73
Economics	925	310	33.5	615	66.5
Matamataig (Mathematics)	35	10	28.6	25	71.4
Human Biology	7450	5070	68.1	2380	31.9

*Matamataig (Mathematics) is mathematics taught in the Scottish language

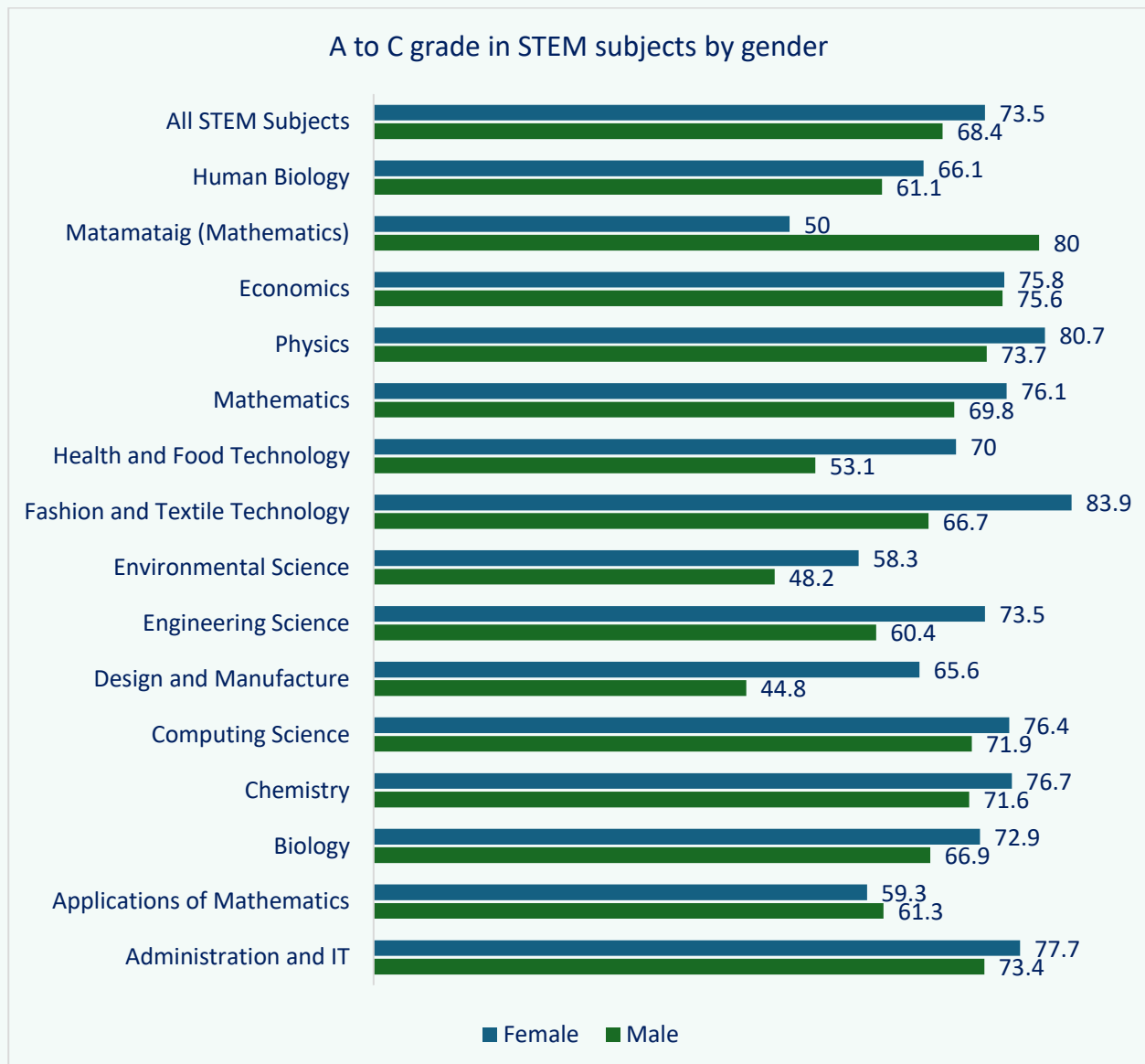
- More female than male students were entered for exams in 7 of the 15 STEM subjects.
- Where entries for female students were higher than male students the largest gaps were in Fashion and Textile Technology (94.9% vs. 5.1%), Health and Food Technology (76.9% vs. 23.1%) and Human Biology (68.1% vs. 31.9%).
- Where entries for male students were higher than female students the largest gaps were in Engineering Science (87.8% vs. 12.2%), Computing Science (78.9% vs. 21%) and Physics (73% vs. 27%).

A grade in STEM subjects by gender



- Female students outperform male students in 13 of the 15 STEM subjects.
- The largest gap between female and male students are in Fashion and Textile Technology (+17.9%), Design and Manufacture (+12.1%) and Administration and IT (+9.7%).
- Male students only outperform female students in Applications of Mathematics (+0.5%) and Matamataig (Mathematics), however the number of students entered for this subject is very small, which explains why the gap is so large.

A to C grade in STEM subjects by gender



- Female students outperform male students in 13 out of 15 STEM subjects for the proportion attaining an A to C grade.
- The largest gap between female and male students are in Design and Manufacture (+20.8%), Fashion and Textile Technology (+17.2%) and Health and Food Technology (+16.9%).
- Male students only outperform female students in Applications of Mathematics (+2%) and Matamataig (Mathematics), however the number of students entered into this subject is very small.