

Computing and Widening Participation in HE – Social Class and Age

The following figures are based on UCAS statistics for students who entered university in 2000. In these figures, courses in Computing and Mathematics are grouped together in the tables which indicate social class, age, and/or subject of study.

Social class

It is true to say that: "In 2000, mathematical and computer sciences subjects accepted above average numbers of students from working-class backgrounds onto full-time first degree and HND programmes".

Two sets of figures are available from UCAS. One uses the "old" social class categories for likely social background of entrants (1: Professional, 2: Intermediate, 3N: skilled non-manual, 3M: skilled manual, 4: Partially Skilled and 5: Unskilled). These are worked out from information which students provide on their UCAS forms about the occupation of the principal wage earner in their parental or own home (as far as I know, UCAS does not use postcode analysis to determine likely social class). Acceptances to degree courses in 2000, separated by these categories, are as follows:

Professional

12% of Mathematics and Informatics students came from this background.

The average for all subjects is 13%

17% of Physical Science students came from this background

16% of Biological Science students came from this background

Comparable subjects are: Social studies (13% - this includes law), combined arts (12%) and subjects allied to medicine (12%). The highest is medicine and dentistry, with 37% (yes, you read that correctly!).

The lowest is education (8%)

Intermediate occupations

34% of Mathematics and Informatics students came from this background. This is the lowest number for any subject.

The average for all subjects is 39%

41% of Physical Science students came from this background

41% of Biological Science students came from this background

Comparable subjects are: general and combined subjects (34%), and medicine and dentistry (35%, low because they have such a high rate for the professional group.

The highest groups are humanities (43%), agriculture and related subjects including veterinary science (44%) and languages (44%).

Skilled non-manual

13% of Mathematics and Informatics students came from this background.

The average for all subjects is 12%

12% of Physical Science students came from this background

11% of Biological Science students came from this background

Comparable subjects are: social studies, business and admin, mass communications and documentation (all 13%).

The highest are combined arts, general combined studies and education (all 14%).

The lowest is medicine and dentistry (8%)

Skilled manual

16% of Mathematics and Informatics students came from this background.

The average for all subjects is 14%

14% of Physical Science students came from this background

13% of Biological Science students came from this background

Comparable subjects are: mass communications and documentation (16%) and architecture, building and planning (17%).

The highest is education, with 18%

The lowest is medicine/dentistry (7%)

Partially skilled

8% of Mathematics and Informatics students came from this background.

The average for all subjects is 8%

7% of Physical Science students came from this background

7% of Biological Science students came from this background

Comparable subjects are: mass communications and documentation, social studies, creative arts, engineering and technology (all 8%). Subjects allied to medicine and general combined studies have 9%.

The highest is education (11%).

The lowest is medicine and dentistry (4%)

No subject has very many degree acceptances from the unskilled group - somewhere between 1 and 2% is the norm. We weigh in at 2%, along with physical and biological sciences, which medicine and dentistry have 1%.

UCAS also provides statistics using the "new" categories: these are 1: Higher Professional and managerial, 2: Lower professional and managerial, 3: Intermediate, 4: Small business/own account, 5: Lower supervisory and technical, 6: Semi-routine and 7: routine. Because of the format in which these figures are released, I haven't calculated the percentages for every subject, but instead I have compared computing/mathematics with a range of relatively comparable subjects. These work out as follows:

1: Higher professional and managerial

For mathematical and computer sciences, this group provides:

15.5% of all university acceptances

15.9% of all university applications

16.9% of all degree acceptances

8.1% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 18.5% of all university acceptances
- 17.7% of all university applications
- 19.2% of all degree acceptances
- 8.9% of all HND acceptances

Physical sciences - 23% of all acceptances
Biological sciences - 19.8% of all acceptances

Comparable subjects are: Business and administrative subjects (15.5% of all acceptances), subjects allied to medicine (14.9% of all acceptances).
The highest of the group examined is Medicine and Dentistry (40.5% of all acceptances, from 36.4% of all applications). Humanities and social sciences are next (23.6%).
The lowest is subjects allied to medicine (see above).

2: Lower professional and managerial

For mathematical and computer sciences, this group provides:

- 20.3% of all university acceptances
- 21.2% of all university applications
- 21.4% of all degree acceptances
- 14.3% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 25.2% of all university acceptances
- 24.7% of all university applications
- 25.7% of all degree acceptances
- 17.1% of all HND acceptances

Physical sciences - 27.2% of all acceptances
Biological sciences - 26.8% of all acceptances

Comparable subjects are: veterinary science, agriculture and related subjects (22.2% of all acceptances), business and administrative studies (23.7% of all acceptances).
The highest of the group examined is Humanities and social sciences (30.4%).
Computing and maths is the lowest.

3: Intermediate Occupations

For mathematical and computer sciences, this group provides:

- 12.2% of all university acceptances
- 12.5% of all university applications
- 12.6% of all degree acceptances
- 10.0% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 12.7% of all university acceptances
- 12.7% of all university applications
- 12.9% of all degree acceptances
- 10.2% of all HND acceptances

Physical sciences - 13.7% of all acceptances
Biological sciences - 13.1% of all acceptances

Comparable subjects are: Business and administrative subjects (12.0% of all acceptances), law (12.7% of all acceptances).

The highest is subjects allied to medicine (15% of all acceptances).

The lowest of the group examined is veterinary science, agriculture and related subjects (10.2% of all acceptances).

4: Small employers and own account workers

For mathematical and computer sciences, this group provides:

- 6.1% of all university acceptances
- 6.7% of all university applications
- 6.1% of all degree acceptances
- 6.2% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 6% of all university acceptances
- 6.1% of all university applications
- 6% of all degree acceptances
- 6.9% of all HND acceptances

Physical sciences - 5.5% of all acceptances

Biological sciences - 5.9% of all acceptances

Comparable subjects are: Business and administrative subjects (6.9% of all acceptances), law (5.9% of all acceptances).

The highest is veterinary science, agriculture and related subjects (13.2% of all acceptances).

The lowest of the group examined is medicine (4.2% of all acceptances).

5: Lower supervisory and technical occupations

For mathematical and computer sciences, this group provides:

- 3.9% of all university acceptances
- 4.4% of all university applications
- 3.9% of all degree acceptances
- 3.7% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 3.9% of all university acceptances
- 3.9% of all university applications
- 3.8% of all degree acceptances
- 4.5% of all HND acceptances

Physical sciences - 4.5% of all acceptances

Biological sciences - 4.2% of all acceptances

Comparable subjects are: Business and administrative subjects (3.9% of all acceptances), technologies (3.7% of all acceptances).

The highest is engineering (4.5% of all acceptances, with a preponderance in the HND group).

The lowest of the group examined is medicine (1.8% of all acceptances).

6: Semi-routine occupations

For mathematical and computer sciences, this group provides:

- 11.4% of all university acceptances
- 12.5% of all university applications
- 11.3% of all degree acceptances
- 12.4% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 10.4% of all university acceptances
- 10.8% of all university applications
- 10.3% of all degree acceptances
- 12.4% of all HND acceptances

Physical sciences - 9.5% of all acceptances

Biological sciences - 10.4% of all acceptances

Comparable subjects are: Business and administrative subjects (10.7% of all acceptances)

The highest of the group examined is subjects allied to medicine (12.4%) - computing is second highest.

The lowest of the group examined is medicine (5.7% of all acceptances).

7: Routine Occupations

For mathematical and computer sciences, this group provides:

- 5.8% of all university acceptances
- 6.5% of all university applications
- 5.4% of all degree acceptances
- 7.5% of all HND acceptances

Across all subjects, the average representation of this group is as follows:

- 4.8% of all university acceptances
- 5.0% of all university applications
- 4.6% of all degree acceptances
- 6.9% of all HND acceptances

Physical sciences - 4.1% of all acceptances

Biological sciences - 4.9% of all acceptances

Comparable subjects are: Business and administrative subjects (5.6% of all acceptances).

The highest is computing and maths.

The lowest of the group examined is medicine (2% of all acceptances).

Note that a high proportion of students are entered as "Unknown" socio-economic class under this system: nearly a quarter of all computing/maths applicants, and 18.5% of all applicants.

Age

Computing students appear to be, on average, slightly older than those in other disciplines. Figures for all acceptances onto degree/HND courses in Mathematical and Computer Sciences in 2000 are as follows:

20 or under:	77.9%
21-24:	12.6%
25-39:	8.2%
40 and over:	1.4%

For comparable subjects, figures are as follows:

Biological sciences:

20 or under:	85.4%
21-24:	7.2%
25-39:	6.1%
40 and over:	1.3%

Physical sciences:

20 or under:	89.1%
21-24:	5.4%
25-39:	4.6%
40 and over:	0.9%

Engineering:

20 or under:	81.7%
21-24:	11.6%
25-39:	6.5%
40 and over:	0.8%

Business and administrative studies

20 or under:	81.9%
21-24:	11.8%
25-39:	5.4%
40 and over:	0.9%