

# **Applications to competitive courses**

The Russell Group

# What is the Russell Group?

- Not the be-all and end-all
- But: older, richer, more prestigious, usually larger, offer full range of courses
- World-famous – London universities, Oxbridge
- High in world rankings
- Because ‘Research Intensive’
- *May* be harder for them to focus on good teaching
- *May* enable networking amongst alumni
- *Think:* are you ready to be smaller fish in big pond?

Birmingham  
Bristol  
Cambridge  
Cardiff University  
Durham University  
Edinburgh  
Exeter  
Glasgow  
Imperial College London  
King's College London  
Leeds  
Liverpool  
London School of Economics  
Manchester  
Newcastle University  
Nottingham  
Oxford  
Queen Mary London  
Queen's University Belfast  
Sheffield  
Southampton  
University College London  
Warwick  
York

# How competitive for entry?

Recent figures from UCAS

- LSE: 26,000 applications for 1700 places (2021) – 15 per place
- King's: 65,000 applicants for 6000 places – 11 per place
- Manchester: 88, 330 applicants for 11, 070 places (2023) – 8 per place
- Imperial: 8 per place.
- Oxford – 7 per place on average, 20 or more for some courses
- City: 25,000 applicants for 3600 places – 7 per place
- Cambridge – 6 per place on average, 13 or more for some courses
- Exeter: 35,000 applicants for 7500 places – 5 per place
- **But! Good state school applicants are very desirable to top institutions**

# Guess the 2024 %

- ...of Oxford students who went to a state school?

66.2%

- of Cambridge students who went to a state school?

71%

# Tallis outcomes

- So: **Tallis gets students into the Russell Group all the time** – in 2024-2025 almost half of our applicants went to Russell Group universities including to all the places on the previous slide (with the exception of Queen's, Belfast).
- And: a **higher** proportion of Tallis applicants held an RG place, but **chose not to take it up**.
- NB Sutton Trust says: sector average for RG places is 25% (comprehensives), 60% (commercial schools)
- Getting into a highly competitive university certainly can be done – but it requires **correctly focused preparation**

# Early Application Deadline: 15 Oct 2026

## Oxford or Cambridge, Medicine etc

- Applications are through the Universities and Colleges Admissions Service.
- Earlier application deadline
- Extra steps after this may include: submission of written work, admissions tests (sat at the end of October) for some courses, interview

# Detailed analysis: Oxford

2023 figures from Ms McGowan

Economics and management 20

Computer science 20

Law 10

Maths 10

Medicine 10

Politics, Philosophy and Economics 10

Biomedical sciences 10

Philosophy, Psychology and Linguistics 9

Psychology 8

Physics 8

Biochemistry 7

Engineering Science 7

Biology 6

Human Sciences 5

English Language and Literature 4

Archaeology and Anthropology 4

Geography 4

History 4

Materials science 4

Chemistry 3

Earth sciences 3

Theology 3

Modern languages 2

Music 2

# Detailed analysis: Cambridge

2023 figures from Ms McGowan

Computer Science 13

Architecture 10

Psychological and Behavioural Sciences 9

Chemical Engineering 8

Economics 10

Engineering 8

Human, Social and Political Sciences 8

Law 8

Medicine 8

Mathematics 7

Natural sciences 5

Education 5

Philosophy 5

Veterinary Medicine 5

English 4

Geography 4

Theology 3

Archaeology & Anthropology 3

History of Art 3

Music 3

History 3

Asian and Middle Eastern Studies 3

Anglo-Saxon, Norse & Celtic 2

Modern Languages 2

# Detailed analysis: Leeds

## 2025 figures

Subject Area	Number of Applications	Number of Offers Made	Percentage of Offers Made
Medicine and dentistry	7,495	1,595	21.3%
Subjects allied to medicine	5,665	2,370	41.8%
Biological and sport sciences	2,525	2,060	81.6%
Psychology	2,475	1,965	79.4%
Agriculture, food and related studies	205	165	80.5%
Physical sciences	1,925	1,560	81.0%
Mathematical sciences	2,095	1,820	86.9%
Engineering and technology	6,375	4,915	77.1%
Computing	2,310	1,620	70.1%
Architecture, building and planning	165	100	60.6%
Social sciences	8,115	6,060	74.7%
Law	3,570	2,540	71.1%
Business and management	9,245	5,450	59.0%
Language and area studies	2,810	2,560	91.1%

# The Russell Group more generally

- We believe the pattern of applications to most of the leading UK universities is broadly the same
- N.B. Courses perceived as giving entry to the professions tend to receive a higher number of applicants
- A different course within the same university – and within the same department, even – may have lower entry requirements and fewer applications

# Consider the odds

What would your chances be? Have you thought of more unusual courses?

- State school students apply in disproportionate numbers for the most competitive courses: Law, PPE, Computer Science, Engineering, Mathematics → **this is true of Tallis applicants**
- This may be because such courses seem more vocationally focused than e.g. Anglo-Saxon and Old Norse, or Theology, or Music
- However, some courses have relatively few applicants per place
- Assertion: the commercial schools know this and game the system accordingly → hence one reason for their 60% figure...
- ...and this also explains the worse degree performance of the commercially educated at university (on average) than state school students...(other factors also involved...)

# Our approach

**we want students and parents to know the odds**

- We offer frank advice: students **must** stand a fair chance of obtaining the required grades
- We do not play the system: students **should** apply on the basis of interest – without showing commitment to a course, you don't stand a chance
- However, we advise students to think carefully about whether they **really** do want to study Law, say, or Economics and Management
- If they do, we ask them to be clear about the realities of such an application
- NB very able comprehensive school students **are in demand**: the performance evidence suggests that they **do very well indeed** at university

# Getting a Russell Group offer

- Work consistently and steadily over a long period – use the summer to revise, consolidate – so that stress-free and strong exam scores can be anticipated
- Develop a range of supercurricular academic interests (=over-and-above the exam curriculum)
- Write a strong personal statement reflecting a compelling interest in the subject
- **N.B. our track record shows that Tallis does not underpredict student Most Likely Outcomes**

# Additional Admissions Testing

Used by some universities for some courses

- Tests for thinking skills that relate strongly to a domain of knowledge:
  - TMUA: additional maths tests used by Oxbridge, Imperial, Warwick, Durham, LSE for Maths, Computer Science, Economics etc before offer is made
  - ESAT: Engineering and Science courses at Cambridge, Imperial, UCL
  - *UCAT: used by almost all medical schools in the UK*
- Tests for general thinking skills:
  - TARA (the Test of Academic Reasoning for Admissions), used by some courses at Oxford and UCL
  - *LNAT: Law courses at Oxbridge, UCL, King's, LSE, Durham, Glasgow, Nottingham, Bristol, SOAS*
- Sat each October, booking window closes **much** earlier
- It is the **student's responsibility** to check that they have been correctly entered.
- In particular, the *italicised tests* above can only be entered privately.

# Additional Admissions Testing

Used by Oxbridge, Medical Schools, Warwick, Imperial etc

- These tests are ridiculously difficult: they are designed to
  - put the most able 17-year-old students in the ~~country~~ world under **extreme time pressure**
  - compel the most able 17-year-old students in the ~~country~~ world to **think very very hard**
- Students who do not practice hard – and we mean **hard** – for these tests – will not score highly enough to be called to interview/given a lower overall score etc
- Yet: there is a difference between **practice** and **preparation...**

# Additional Examined Qualifications

The Sixth Term Examination Paper in Mathematics

- Sat in the summer of Year 13
- Mathematics at Cambridge requires STEP
- Engineering at Cambridge may require STEP
- Mathematics, MORSE (=Mathematics, Operational Research, Statistics, Economics) at Warwick may require STEP
- Imperial may require STEP for some mathematical courses

## 14 STEP 2 questions.

Students pick 6 and answer them in three hours.

Half an hour per question.

- 3 A sequence  $u_1, u_2, \dots, u_n$  of positive real numbers is said to be unimodal if there is a value  $k$  such that

$$u_1 \leq u_2 \leq \dots \leq u_k$$

and

$$u_k \geq u_{k+1} \geq \dots \geq u_n.$$

So the sequences 1, 2, 3, 2, 1; 1, 2, 3, 4, 5; 1, 1, 3, 3, 2 and 2, 2, 2, 2, 2 are all unimodal, but 1, 2, 1, 3, 1 is not.

A sequence  $u_1, u_2, \dots, u_n$  of positive real numbers is said to have property  $L$  if  $u_{r-1}u_{r+1} \leq u_r^2$  for all  $r$  with  $2 \leq r \leq n-1$ .

- (i) Show that, in any sequence of positive real numbers with property  $L$ ,

$$u_{r-1} \geq u_r \implies u_r \geq u_{r+1}.$$

Prove that any sequence of positive real numbers with property  $L$  is unimodal.

- (ii) A sequence  $u_1, u_2, \dots, u_n$  of real numbers satisfies  $u_r = 2\alpha u_{r-1} - \alpha^2 u_{r-2}$  for  $3 \leq r \leq n$ , where  $\alpha$  is a positive real constant. Prove that, for  $2 \leq r \leq n$ ,

$$u_r - \alpha u_{r-1} = \alpha^{r-2}(u_2 - \alpha u_1)$$

and, for  $2 \leq r \leq n-1$ ,

$$u_r^2 - u_{r-1}u_{r+1} = (u_r - \alpha u_{r-1})^2.$$

Hence show that the sequence consists of positive terms and is unimodal, provided  $u_2 > \alpha u_1 > 0$ .

In the case  $u_1 = 1$  and  $u_2 = 2$ , prove by induction that  $u_r = (2-r)\alpha^{r-1} + 2(r-1)\alpha^{r-2}$ .

Let  $\alpha = 1 - \frac{1}{N}$ , where  $N$  is an integer with  $2 \leq N \leq n$ .

In the case  $u_1 = 1$  and  $u_2 = 2$ , prove that  $u_r$  is largest when  $r = N$ .

# Additional Admissions Testing

## What the test designers say

- “Our testing draws on the knowledge- and skills-base specified for A-level study in the subject for which you are applying. We continue to maintain that the testing is nothing to worry about and, specifically, that it does not require preparation. The testing is not about what you know. It is designed to find out how you think.”
- “Anyone offering a paid service to help you prepare will have no more knowledge than someone who has read the online information we provide and done practice tests. So while a test-taker’s performance at any test will improve with some familiarisation or practice, we would not advise anyone to pay for such help.”
- “You are strongly advised to make sure you are familiar with the test format by downloading the specimen and past papers, test specifications and other free resources available on the web”

# Additional Admissions Testing

## What the test designers say

- “Build your confidence by doing a bit of preparation ahead of time. You may also do better in the real test if you've had a chance to practise some sample or past papers, and got used to the format and timings of the admissions test you have to take.”
- “It’s very normal to find yourself under extreme time pressure.”
- “The test is only one of the things admissions teams take into account about your application.”

# What support do we provide to prepare?

How do we help students practice, beginning now, in Year 12?

- **Thinking Aloud** sessions led by Dr Pinkerton, designed to get students thinking and problem-solving in the way required for the range of tests and interviews for arts/humanities/social sciences
- **STEM sessions** led by Mr Smythe, designed to practice for the tests and interview processes for entry to STEM courses
- **STEP sessions** if required
- Specific practice sessions in the summer term:
  - TARA and LNAT practice sessions
- Attendance at sessions is **compulsory** if a student wishes to apply for a course that requires additional testing
- Attending these sessions will also help students aiming for an A or A\*

# What support do we provide to apply?

Besides the additional practice sessions specified, a timeline

- Bespoke UCAS advice for early applicants from now until the 15 October deadline
- Leading Universities day
- Progression Week in July
- Programme of supercurricular summer reading
- Interview Preparation Day in November for those called to interview

# Applying for a course with additional testing

Students must have

- the required Most Likely Outcome grades
- attended all Thinking Aloud/STEM sessions
- shown commitment to success in the various tests required i.e. be able to show evidence of systematic test practice throughout the Summer term and into September
- If they can show this commitment, we will be happy to support such an application

# If you think this sounds complicated – it is.

- We are not giving you this information to scare you or put you off
- We **want** Tallis students who are qualified to apply for the most ambitious courses and universities
- This is because we believe they have an **absolute entitlement** to apply
- And in addition, we want them to change the world for the better - without students like ours occupying these spaces, they won't change
- We tell you how challenging this process is because we want your children to be successful in these applications – **which requires a lot of hard work**
- And – most ambitious applicants at Tallis don't need to sit additional testing

# Academic self-concept

## Example of Cambridge undergraduate mathematicians

- Average entry grades A\*A\*A\*A\* plus grade 1 in STEP II and STEP III exams
  - UK = cohort of c.750,000 18-year olds
  - India = cohort of c. 15 million
  - China = cohort of c. 15 million
- Part II of the Cambridge Mathematics tripos offers a choice of 35 course options
  - Students normally choose 8 to take for Finals; some may choose **many more** than this number
  - To get a first class degree: 3-5 correct long-answer questions per exam paper; some students will **correctly answer every question on each paper**
  - The 'Senior Wrangler' or highest-placed mathematician in each year on occasion has had a score **five times higher** than the lowest-ranked first class degree recipient
- Experience **can** be soul-crushing: the top end of ability is **globally selected**

# Big fish, small pond? An alternative

- Your child may wish to attend an elite university: but not going to an elite university as an undergraduate doesn't make you bad or stupid
- It means either that you didn't get in - or **that you didn't apply**
- Little fish in big pond, OR big fish in a big pond?
- Being a big fish (even) in a big pond can push down **academic self-concept**: your self-image can take a battering...
- There is good evidence to support the idea that academic self-concept is a better long-term predictor of educational attainment than exam results/intelligence/socioeconomic status
- Persistence and self-belief can do wonderful things
- 'There is a world elsewhere', *Coriolanus*, 3.3

# Questions?

- We'll now answer some filecard questions.
- If you have a more specific question please speak to us at the end!