

# Imperial College London

## Access and participation plan 2020-21 to 2024-25

### 1. Assessment of performance

The College has analysed the dataset released to providers in March 2019 by the OfS. It has also supplemented this analysis by conducting a review of differential outcomes using our own internal data. Our internal analysis is aligned with the OfS dataset and seeks as far as possible to replicate the methods used in the production of the HESA UK performance indicators.

Analysis shows that the College's main gaps in relation to widening participation are at the Access stage of the student lifecycle. There are statistically significant gaps in Access across all key measures: age, disability, ethnicity, sex, IMD quintile and POLAR4 quintile. On average across the latest five years of data, 2013-2017, as a proportion of the College total UG home student population 95.06% of students are young, 92.46% have no known disability, 56.02% are White, 66.68% are male and 55.14% come from POLAR4 Q5 – the quintile with the highest participation rate in higher education.

The OfS dataset shows that there are no statistically significant gaps in continuation or attainment that hold across all five years of the dataset. The only difference in progression rates in the OfS dataset is that mature students are statistically significantly more likely to progress into highly skilled or higher-level study than their younger counterparts. We have also undertaken our own more detailed analysis of differential outcomes to ensure we are fully aware of any differences in performance. We are cognisant of the need to continue to monitor our performance to ensure that statistically significant gaps do not emerge as the number of students from target groups increases.

#### 1.1 Higher education participation, household income, or socioeconomic status

##### Access

Previously the College's outreach and recruitment activity has focussed on London and the South East. For this reason, POLAR4 has not been a measure which the College has used to measure its outreach performance given the accepted limitations of POLAR in London. For example, in London, 45% of local areas are classified as POLAR4 Q5 compared with only 1.3% classified as Q1. Our outreach has instead focussed on IMD as a more appropriate measure of deprivation for our local context. The gap in Access using IMD does remain but has been falling steadily from a high of 29.6% in 2014-15 to 24.8% in 2017-18. The gap in POLAR4 however, remains significant and has grown over the last five years from 51.2% to 54.2%.

##### Success

The College does not have any statistically significant gaps in either success measure that hold across the five years of the OfS dataset. There are however some small variations in performance that the College will continue to monitor. These are detailed below.

##### *Non-continuation*

Typically, students from IMD Q5 have a better continuation rate than those from Q1 but this is only significant in 2014 where the gap in continuation rates was 6.2%. The continuation rate for POLAR Q5

was up to 1.4 percentage points lower than for Q1 students in all but the last year of the data set where POLAR Q5 continuation is higher by 4.2% than POLAR Q1.

### *Attainment*

Students from IMD quintiles 1 and 2 achieve lower proportions of good degrees than those from Q5 by 4.3% and 3.7% at College level. In Engineering these gaps were 7.3% and 7.6%, while in Natural Sciences the gap was 4.4% and 5.9%. On average for the three years students from POLAR Q1 and Q2 perform worse than students from Q5 at College level by 1.2 % and 1.0 % with the gap varying between Faculties and years. Students from POLAR Q4 achieved the lowest proportion of 1sts and 2.1s of any quintile, across all Faculties. The College will monitor the differences in attainment of IMD Q1 students to establish whether action needs to be taken. Our Learning and Teaching Strategy and curriculum review sets out explains our approach to making our curriculum more inclusive (see page 12) and we would expect to see this reflected in our analysis in subsequent years.

### *Progression to employment or further study*

POLAR Q1 students outperform POLAR Q5 students in relation to progression to employment or further study in all but one year though the gap is not statistically significant. When a three year average is analysed, students from IMD Q1 have a lower progression to employment or further study rate than students from Q5 (90% as opposed to 95%), however, IMD Q2 students have the second highest progression rates behind IMD Q5 students.

## **1.2 Black, Asian and minority ethnic students**

### **Access**

The College UG home student population largest ethnicity group is White, with the second largest group being Asian. The number of students who identify as Black, Mixed and Other entering the College has been growing and therefore the Access gaps for all three of these groupings has been shrinking. The Access gap between White and Black students has shrunk from 53.7% to 46.6%, between White and Asian from 26.2% to 19.0%, between White and Mixed from 49.4% to 44.5% and from White to Other from 54% to 48%. Despite the downward trend, this gap remains significant and the College will continue to enhance its efforts in this area.

### **Success**

#### *Non-continuation*

Students of Other or unknown and Black ethnicities have the highest rates of non-continuation into second year at the College. In 2016-17 these rates were 9.3% and 7.5% respectively. The White rate was 4.4%. However, both of these groupings have small numbers of students which can cause significant variation and in no year is the continuation gap between Black and White students statistically significant. The gap between White and Other does show statistical significance in three out of the last five years. However, this gap, for 'Other' is driven by small numbers, the absolute figures of discontinuation are 3 (of 33), 4 (of 39) and 0 (of 31) in the three years of analysis.

### *Attainment*

Students of Chinese, Mixed or Other ethnicity achieve, on average across the three years, a lower proportion of good degree outcomes than their White ethnicity peers. The difference ranges between Faculties although at College level the difference is 3.0%, 2.8% and 7.0% respectively. The OfS dataset demonstrates that the attainment gaps between White: Asian, White: Mixed, and White: Other have all been decreasing across the last five years. Black students have a higher proportion of good degrees across all Faculties, and at College level this difference is 3.5%.

### *Progression to employment or further study*

Students from non-White ethnicities are typically more likely to progress into employment or further study than their White counterparts. Where there is reportable data for this, Black students and students of Other ethnicities have statistically significant improved progression rates than White students in one and three years respectively.

## **1.3 Mature students**

### **Access**

The College does not have a large proportion of mature students. This is partly due to the nature of the courses offered: the College does not teach courses which typically have a higher level of mature student participation such as part time provision. The number of mature students at the College has been shrinking in recent years and accordingly the Access gap has grown. However, the mature students who do enrol perform better than their under-21 peers once at the College.

### **Success**

#### *Non-continuation*

Typically, mature students had a slightly increased continuation rate ranging from 0.4 to 1.5 percentage points higher, under 21 students had a higher continuation rate than mature students in only one year by 3.1 percentage points.

#### *Attainment*

Mature students outperform young students by an average of 6.5% and the gap is statistically significant in four out of the five years of the data.

#### *Progression to employment or further study*

The OfS dataset shows that mature students are statistically significantly more likely to progress into highly skilled employment or higher-level study than young students. This gap ranges from 8.5% to 12.5% and is remaining fairly steady across the five years.

## 1.4 Disabled students

### Access

The College proportion of disabled students was 7.0% in the 2017-18 entry cohort. However, this is likely to be an underestimate as disability is a self-reported characteristic. The largest disability type is those with cognitive or learning difficulties.

### Success

#### *Non-continuation*

Disabled students have a rate of non-continuation higher than the College's overall non-continuation rate across the three years considered (2014-15 to 2016-17), the disabled non-continuation rate across three years is 10.5% compared to a College rate of 5.2%. The numbers within different disability groupings are small and therefore there is considerable variation within years. However, the non-continuation rate of those with a social impairment, physical impairment or mental health condition is significantly higher than the College rate in at least two of the three years of our analysis. Given the gap in non-continuation identified, the College will conduct further research to ascertain what may be causing this difference and then put measures in place to narrow this gap over the five years of the Plan.

#### *Attainment*

At College level there is little difference between disabled students and those with no known disability. Looking at Faculty though reveals that, for the three years, in Natural Sciences a small 2.1 percentage gap does exist although this fluctuates year on year and is driven by low student numbers. However, when looking at a more granular level of disability type, across the three years of analysis, on average, students with physical or mental health conditions achieve 3.8 and 6.7 percentage points fewer 1sts and 2.1s than students with no known disabilities. It also shows that students with learning or social difficulties achieve better or equal results when compared to those without any known disabilities.

#### *Progression to employment or further study*

Those students with a mental health condition or other/multiple disabilities are least likely to progress into employment or further study or highly skilled employment or higher study. However, these categories contain very small numbers of students. Those with a social impairment or cognitive learning difficulty outperform their non-disabled peers in both employment categories but again the numbers in these categories are small.

## 1.5 Care leavers

The College has a small number of care leavers within its student body. The small numbers do not allow for a quantitative analysis (there have been eight recorded care leavers in the entrant population in the last four years). However, it is aware of the additional barriers that care leavers and estranged students may encounter (estranged students face many of the same issues). There is dedicated support available to these students which can be found on the College webpages: <https://www.imperial.ac.uk/study/ug/fees-and-funding/bursaries-and-scholarships/imperial-bursary/care-leavers/>.

The College is aware that data from the Department for Education (2017-18) shows that around 6% of all care leavers between the ages of 19-21 were in higher education in 2018. Among other young people, 42% enter higher education. The College is committed to supporting care leavers to both enter and be successful in higher education. It is therefore offering 365-day accommodation across all years of study to students who meet certain criteria. There is also a liaison contact who can guide applicant care leavers through this process. Given the additional barriers that care leavers face, the College will also commit to signing the Care Leaver Covenant to provide additional support for those leaving care.

## **1.6 Intersections of disadvantage**

The College has undertaken some initial analysis of its entrants to determine whether additional gaps in Access are present when a student has multiple underrepresented characteristics. Given the College's STEM focus, women are less represented in the student body than men. Analysis was therefore undertaken to establish whether women from POLAR Q1 and Q2 and IMD Q1 and Q2 face a larger Access gap than their male Q1 and Q2 counterparts. This analysis found that the proportions of men and women entering the College remained fairly consistent across all five IMD and POLAR quintiles across the last three years of data. Analysis was also undertaken examining ethnicity and gender amongst College entrants. There were variations in the proportions of men and women across the different ethnicities though these were not significant. White women were the least represented group and the percentage point difference ranged from 2% to 9% across the three years of data. This analysis of intersections of disadvantage suggest that whilst the College does have significant Access gaps, these are fairly consistent when multiple underrepresented characteristics are combined and analysed.

To ascertain whether there is hidden disadvantage within the College's largest populations, we have analysed the continuation, attainment and progression rates of White male students and Asian female students. (These are our two largest demographics.) Our analysis shows that both of these groups have a lower discontinuation rate than the College average. With regards to degree attainment, White males perform 0.6% better than the overall College population and Asian females perform 2.2% better when averaged across three years. There is some fluctuation in these rates between the Faculties. A three-year average of progression shows a small -0.4% progression rate for White males into employment or further study but there is variation within the Faculties with White males being 1.8% more likely to progress into employment or further study in Engineering. Overall, Asian females are 1.8% more likely to progress into employment or further study than the College average but this again varies by subject with those in the Faculty of Natural Sciences being 3.5% less likely to be employed or in further study over the three years.

The College has undertaken preliminary analysis of the intersections between POLAR and IMD alongside ethnicity, however the small numbers produced when combining POLAR and ethnicity in particular indicated that further analysis would not be appropriate.

## **1.7 Other groups who experience barriers in higher education**

**Parental Education-** it should be noted that, for the academic years 2015-16 to 2017-18 which were analysed, 26% of students' parental education was unknown. This is a relatively large proportion of unknown data which may distort the apparent trends shown in the data.

### *Non-continuation*

The non-continuation rate for students whose parents do not hold an HE qualification was slightly higher 7.3%, than the rate for those whose parents do at 4.4%.

### *Attainment*

There was little discernible difference between the two groups with regards to attainment of a good degree either at College or Faculty level.

### *Progression to employment or further study*

In the 2017 cohort, the rate of graduates employed or in further study whose parents do not hold HE qualifications is 6.9 percentage points lower than for those students whose parents do. This is a change from the previous two years where the rate for students whose parents do not hold HE qualifications was similar to the overall College rate.

## **Bursary Recipients**

### *Non-continuation*

In the latest year, 2016-17, the non-continuation rate of students in receipt of an APP bursary was slightly higher (1.8%) than the overall College rate. Students who received no bursary or a non-APP countable bursary had continuation rates below the College average.

### *Attainment*

At College level, looking at the three-year average, students who received an APP-countable bursary in their first year of study have the lowest proportion of good degrees achieved and are 2.3 percentage points less likely to achieve a good degree than those who receive no bursary. Students who received a non-APP countable bursary are 1.9 percentage points less likely to achieve a 1<sup>st</sup> or a 2.1. This trend, of APP countable bursary recipients achieving slightly lower proportions of good degrees, is also true within each Faculty, although the percentage point difference varies.

### *Progression to employment or further study*

The highest rate of employment or further study across the three years (2015, 2016 and 2017 cohorts) was amongst those not in receipt of an Imperial Bursary. It was lowest for those graduates who were in receipt of a non-APP-countable bursary. The percentage point difference between students with no bursary and those with an APP countable bursary was 3.7 percentage points. This trend is similar for highly skilled employment or further study where, across the three years, graduates who were in receipt of an APP-countable Imperial Bursary had a slightly lower rate of highly skilled employment or further study than the College overall. The rate for this group is 3.1 percentage points lower than for the College overall. The highest rate of highly skilled employment or further study is amongst those not in receipt of a bursary and the lowest was amongst non-APP countable bursary recipients. The statistical tool provided by the OfS and used for financial evaluation has confirmed that these differences are not statistically significant. However, the gap has widened in the 2017 cohort (a cohort not currently covered by the statistical analysis conducted), so the College will monitor this gap in the future.

## 2. Strategic aims and objectives

The College's strategic aims in relation to Access and Participation are to admit those students who are best able to benefit from a degree at Imperial, and to ensure that, once here, students are supported to enable them to flourish, regardless of their background.

The degrees which Imperial offers are largely in areas where knowledge is cumulative, and a sound record of prior attainment in particular subjects is often crucial to a student's success at Imperial. We do not, therefore, propose in general to lower the A Level requirements for entry, either for the population as a whole or for particular subsets of students. (The exception is in Medicine, where attainment in the third A Level is less important for success on the course, and where we will continue to make slightly lower offers to students from target groups.) Instead, our strategy is to work closely with schools in areas with concentrations of students from target groups, in order to raise the attainment of their most talented students to a level which enables them to meet Imperial's minimum entrance requirements.

In relation to Participation, our strategy is to provide an inclusive education which closes attainment gaps between students from different backgrounds. We do this through individualised support for students through our academic departments, as well as, in particular cases such as disability, through College-wide services.

### 2.2 Target groups

The analysis above suggests that the most important and significant gaps for the College are at the **Access** stage, and in particular in relation to the socio-economic indicators of POLAR4 and IMD. Given the high proportion of our students who come from London, students of Black ethnicity are also under-represented.

Although the number of mature students entering the College is low, we do not consider that undergraduate education for mature students is a core part of our offering. Imperial College is fully committed to supporting its mature students. However, it does not believe that adopting Access for mature students as a strategic priority represents the most effective contribution that the College can make to national targets around widening participation. We offer no part-time undergraduate programmes, and our programmes are highly intensive, with limited if any scope for students to undertake part-time work alongside their study, and lack the flexibility that mature students often require. Our commitment to open these intensive programmes to a broader range of young students from POLAR Q1 and Q2, from IMD Q1 and Black students represents an intervention in the widening participation agenda that we are better placed to take, and that represents the most powerful intervention that we are able to take in terms of our contribution to the national picture.

Access for disabled students and care leavers is important to the College, but is not our principal strategic focus at the current time. We will not, therefore, run programmes targeted specifically at these groups. However, within our programmes targeted at IMD Q1, POLAR4 Q1 and Q2 and Black students, we will ensure that there is specific provision for disabled students and care leavers, and that high-potential students from these groups at our partner schools are actively encouraged to participate and given specific support during the programme.

In relation to the **Success and Progression** stages, we are committed to ensuring that all our students are able to fulfil their potential at Imperial. We currently have no sustained, statistically significant attainment or continuation gaps. However, we are not complacent, since we accept that this is in part due

to the low numbers of students from these groups who are currently admitted to the College. We will work to ensure that attainment gaps do not emerge as the number of students from disadvantaged backgrounds at the College grows. We recognise that, although there are relatively small numbers of students who have declared a disability at the College, the non-continuation rate of these students is higher than for students with no known disability and the College overall rate. The College will undertake research to examine what the underlying causes of this higher non-continuation rate may be and will put measures in place to halve the gap in non-continuation rates over the course of this Plan.

## **2.2 Aims and objectives**

### **Socio-economic Disadvantage**

For the two indicators which operate using quintiles, the College will aim over the course of the next 20 years to equalise the number of students in each quintile. However, the College does not plan to substantially increase its numbers of Home students over this period, and so this equalisation will involve both an increase in the numbers of students in the lower quintiles and a decrease in the numbers in the upper quintiles. Without increases in student numbers which are both unachievable (due to both financial and physical constraints – including our guarantee of College accommodation for first-year students) and contrary to the College’s strategy, a reduction in numbers of students in the group currently over-represented (Q5) is inevitable. Achieving our targets will, however, also require significant and challenging increases in the number of students in quintiles 1 and 2.

Over the five years of this APP, the College will seek to increase the numbers of students from quintiles 1 and 2 combined for POLAR and quintile 1 for IMD to levels that are consistent with achieving the 20-year OfS goal to achieve equality of opportunity within a generation. During this period, particularly with regards to POLAR, we will closely monitor the extent of our progress in quintiles 1 and 2, with the intention of adjusting our strategy in the second five years if progress in quintile 1 is insufficient. At the current time, given the underrepresentation of students from both quintiles 1 and 2 for POLAR4, we consider that it would be premature to focus exclusively on quintile 1.

#### *IMD*

In 2017-18 the College admitted 104 students in quintiles 1 and 392 in quintile 5. This is a current gap in entry rate of 24.53%.

The total number of entrants with a known IMD quintile was 1174. We are aiming to increase our numbers of IMD Q1 students entering the College. By the end of the five years of the Plan we intend to recruit an additional 48 IMD Q1 students per year which would change the College access gap from a gap of 24.53% to a 18.31% gap. This is a reduction of 6.22 percentage points and represents an overall reduction of the gap by just over one quarter.

The College has made considerable investment in programmes which target IMD over the last five years, and accordingly we consider that a broadly straight-line trajectory is appropriate.

#### *POLAR4*

In 2017-18 the College admitted 124 students in quintiles 1 and 2 combined, and 712 in quintile 5 who were aged under 21 on entry.

The total number of under 21 entrants with a known POLAR quintile was 1229. The College’s current access gap between POLAR Q1 and Q2 students to Q5 students is 47.84%. By the end of the five years

of the Plan we intend to recruit an additional 41 POLAR Q1 and Q2 students per year which would reduce the access gap to 42.38%, a reduction of 5.46 percentage points.

The College's outreach activity has been centred on London over the last five years. As a result of this, and in view of the limitations of POLAR in London, it is unsurprising that less than 10% of our outreach participants who go on to study at the College typically come from POLAR Q1 or Q2 households. In order to make any significant impact on the participation of students from this group, the College will need to launch new programmes outside of London. Since this is new activity, and since our activity will be focussed on long-term engagement in order to raise attainment, we expect the increase in numbers to be slow at first. Therefore, we will seek to increase our number of students from POLAR4 Q1 and Q2 (combined) from 124 to 165 over the next five years.

### **Race- Black students**

The Office for Students reports that the College has an Access gap between White and Black students of 46.5%. However, this metric is a 'raw' participation gap, not weighted by population. Nationally, Black people make up 3.3% of the population. Of the age group likely to be starting undergraduate programmes during the quinquennium, 5% are Black (as per 2011 census). The proportion of entrants at the College is currently 4.98%. The College therefore reflects the UK population. In London, however, Black people make up 18.3% of the total population, and given the proportion of our students drawn from London, we would expect to see a higher proportion of Black students at the College.

Furthermore, analysis of data from UCAS shows that whilst a Black 18-year-old is disproportionately likely to apply to the College compared to a White 18-year-old, they are disproportionately unlikely to receive an offer. This analysis has been confirmed by Professor Emma McCoy from our Department of Mathematics, who found a statistically significant effect in examining applications from 2010-2016.

Accordingly, the College aspires to increase the number of Black students admitted to the College each year from 63 to 126 over the next five years.

### **Attainment**

The College will work over the course of the next year with the possible partners for our programmes to establish specific metrics to measure improvement in STEM GCSE and A Level results amongst participants in our Outreach programmes. The College will set an attainment raising target over the course of the next year as a result of this work.

### **Interim Process Goals**

As previously mentioned, the degrees which Imperial offers are largely in areas where knowledge is cumulative, and a sound record of prior attainment in particular subjects is often crucial to a student's success at Imperial. Our strategy, therefore, is to work with groups of schools in disadvantaged areas in order to raise the attainment of their most talented STEM students. However, this approach will not deliver rapid results. We will offer programmes during years 12 and 13 and years 9, 10 and 11 (subject to detailed design in collaboration with our partner schools). Our expectation is that these programmes will be most transformational for students who follow them through from the beginning. As programmes begin in September 2020, we will see a cohort of students arrive at the College in 2022 to 2024, with a larger cohort in 2025, and steady state reached by 2026.

As well as working to increase the number of applications received from well-qualified students from target groups, we will work to ensure that our admissions processes take applicants circumstances fully into consideration. For 2020 admissions, we will trial a number of new approaches to admissions, with the intention of increasing the number of applicants from target groups who receive offers from the College (but not – with the exception of Medicine, noted above – making lower offers). We will evaluate these trials in the autumn of 2021, when we will have data not only on the numbers of students admitted through those trials, but also on their performance in year 1 and progression to year 2. On the basis of the outcome of the trials, we will consider moving towards a College-wide approach if there is evidence to suggest a material and positive impact.

In view of the long-term nature of activity to raise attainment, we are proposing a number of interim process goals:

By September 2020, we will have:

- Launched programmes in up to three locations outside of London, targeting students from POLAR4 Q1 and Q2 neighbourhoods. Each programme will explore a different model of delivery.

We anticipate that each programme will be delivered to students starting in year 9/10 and 12. We anticipate a total cohort across all programmes of 90 students. In steady state, therefore, we will be working with 360 - 450 students at any one time. Not all of these students will fall into our target groups. We will select schools with a significant proportion of their intake from POLAR4 Q1 and Q2 neighbourhoods, but our programmes will be open to all suitably qualified students at those schools. We do not consider that it is acceptable to select individual students based on postcode.

Our ambition is to recruit a significant proportion of students from these programmes, whilst others should go on to study at other Russell Group universities. (We strongly believe that students should study at a university which is suited to them; not all highly-performing students will want to study in London, and not all STEM students will want to study at an exclusively STEM university – but we will not attempt to select outreach participants on this basis.)

- Launched a digital programme supporting attainment in Further Maths, with at least 100 participants per year (so 200 participants overall in steady state), with 25 of these receiving additional support in the form of peer mentoring.
- Launched a programme in London targeting Black students – in partnership with a third party.
- Decided in principle whether to launch a Maths Sixth Form College, targeting students from IMD Q1 and Black students, and also POLAR4 Q1 and Q2 (though its likely location in London reduces its impact of the latter).

## **Strategic measures**

### **3.1 Whole provider strategic approach**

#### **Overview**

The College's approach to Access and Participation sits within the context of its Societal Engagement Framework (particularly the Access aspects), its Learning and Teaching Strategy, and its Equality, Diversity and Inclusion Strategy.

For the Access stage, as stated above, the College’s strategy is to work on raising attainment in schools, and to ensure that its Admissions processes fully take account of applicants’ circumstances. Our outreach programmes are in general ‘whole institution’ – e.g. STEM Potential, but with a specially tailored programme aimed at potential medical students (Pathways to Medicine). Whilst there are a large number of departmental initiatives and links, and a targeted programme of school visits, often involving individual academics or student champions, our strategic efforts are focused on models of multiple interventions with students from partner schools in London and, in future, on partner organisations in specifically selected areas outside of London.

All our programmes will follow a Theory of Change model (Figure 1), allowing us to assess which are generating the required outcomes. The model was based on two internal pieces of research: the first on the success of multiple interventions in outreach [Smith, Alexander, Murphy and Dubb, 2013, *Opening Doors and Minds: A path to widening access*. The Clinical Teacher 10, pp.124-128]; the second on how practical STEM activities and mentoring in the Wohl Reach Out Lab impacted on disadvantaged students [Moss, A. C. (2015) *Identifying impact at the Reach Out Lab: A grounded theory study of the factors that facilitate increased STEM engagement* PhD Thesis]. Our Evaluation Strategy (section 3.3 below) below provides more details.

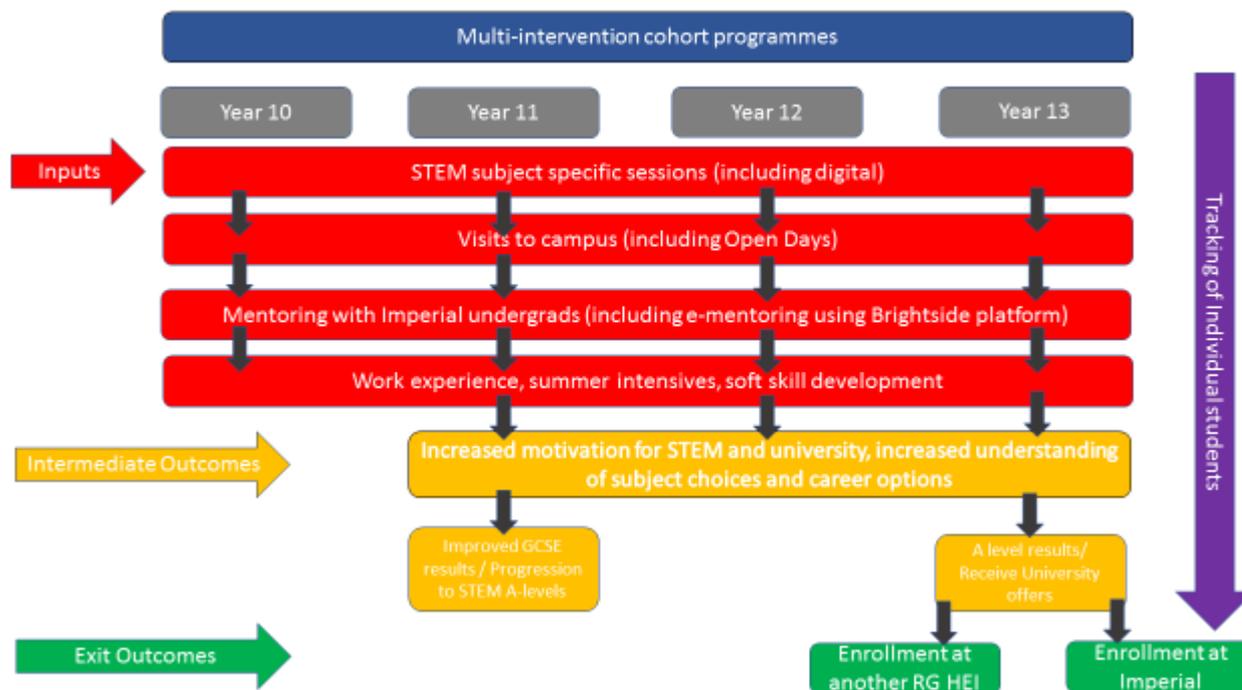


Figure 1. Theory of Change Model for STEM Outreach Programmes at Imperial

## Alignment with Other Strategies

### (1) Learning and Teaching

We have completed a review and redesign of 102 undergraduate programmes, to be delivered to incoming students from October 2019. Creating more inclusive curricula has been a key element of the review, recognising that diversity in backgrounds and cultural perspectives can be an asset in teaching that involves application of concepts to real-life situations. Ensuring that all of our students are seen and heard, this work was undertaken in partnership with students from a broad range of backgrounds. To support the Curriculum Review we launched a new Teaching Toolkit on Inclusive Learning and Teaching,

accompanied by a 'Making Teaching More Inclusive' workshop and associated workshops on using inclusive technology and inclusive learning for students with specific learning difficulties. As a result of this work on inclusive curricula, alongside a significant investment in assistive technologies, the College would expect the gap in non-continuation rates for disabled students to close and work to ensure an inclusive curricular and overall College experience will continue.

A positive climate in classrooms and on-campus, alongside interactive teaching, can improve students' persistence in learning, their academic and emotional development, and their future professional engagement. Bias in academic environments can lead to students underperforming and being less visible and less actively engaged. For instance, bias against women in engineering leads to them taking on lesser roles in group work and even being discouraged from pursuing a career in the field. Similar effects have been documented for Black and minority ethnic students and for first generation students. Our Learning and Teaching Strategy encourages teaching staff to become aware of their own unconscious biases, for instance towards women and minorities in STEM, and we will provide staff and students with the tools to minimise the effects. For example, in 2018 five innovative teaching projects were funded from the President's Excellence Fund which focussed on diversity and inclusivity. The College's new Centre for Higher Education Research and Scholarship (CHERS) has been established to support and expand our growing pedagogic research agenda and this will include work to identify the barriers faced by underrepresented student groups. Other research being undertaken in CHERS is examining student efficacy, belonging and well-being and the relation that this has to the curriculum, approaches to teaching and learning and the student journey.

We are also developing institutional measures and policies and will align this work to our evolving programme of work in widening participation and in equality, diversity and inclusion College-wide. As a priority we plan to focus on the development and support of students' learning skills in parallel with the roll out of the new undergraduate curricula.

Making our learning and teaching more inclusive means:

- Creating equal opportunities for our students to succeed, regardless of their gender, sexual orientation, ethnicity, cultural and socio-economic background or disability;
- Recognising and harnessing our students' diverse cultural backgrounds, identities and experiences by creating opportunities for them to learn from each other and to make their different backgrounds an asset;
- Facilitating all students' sense of personal and professional identity and sense of belonging within a field, so that their background can contribute to their success;
- Designing a diverse range of teaching, learning and assessment approaches that recognise and support the needs of students both as individuals and as members of a learning community;
- Removing barriers to learning and creating a more equitable experience to assist all students, regardless of health issues or language support needs;
- Counterbalancing the effects of unconscious bias in individuals and in institutional structures through creating and implementing evidence-based policies;

- Using lecture capture and captioning, as well as making comprehensive lecture notes available in advance.

When applied well and sensitively, interactive teaching can counterbalance some of the negative effects of being part of an underrepresented minority, including for students with disabilities (Sharpe et al., 2006). The use of more active learning, for example group-based learning, can initially be challenging for students. There may be particular initial difficulties for those who are introverted, lack confidence or are culturally trained not to speak up in class, however structured approaches to interactive and group learning can help all students to feel included. The College has identified an attainment gap for students from IMD Q1 which is not statistically significant. Given the emphasis in this Plan on increasing entrants from IMD Q1, the College will monitor this gap carefully. The College will aim to ensure that this gap does not become statistically significant and the work being undertaken on inclusive curricula and on learning and teaching environments is mindful of the barriers to success that students from disadvantaged backgrounds may face. As a result of the Learning and Teaching Strategy, we would expect attainment gaps for all disadvantaged groups to narrow.

Culturally mixed team-working will be incorporated to enable students to practise intercultural communication and collaboration and to build a sense of community amongst the cohort. When considering how best to construct diverse teams, we will also take active steps to combat the potential effects of stereotyping and implicit bias that can be an issue in group work.

Through the transformation of our pedagogy as part of our Learning and Teaching Strategy, we are creating an environment of *Inclusive Excellence*.

Improving support available for disabled students remains one of our early key strategic priorities. As such, the College has made a significant additional investment in supporting students with specific learning difficulties (SpLDs) particularly through upgrading and enhancing assistive technologies (and providing workshops and training to support and encourage use of these technologies). These are available to all staff and students at the College alongside a dedicated assistive technology space on campus. The College provides an extensive range of support for students with SpLDs, including: advice and support during the assessment process; providing specialist study skill sessions with a tutor trained in SpLDs; providing longer book loans; facilitating additional examination arrangements; and providing the assistive technology room. In addition, the College estate is currently being reviewed (both infrastructure and wayfinding) to ensure that space and facilities are accessible and functional for those with disabilities. We anticipate that this additional support for disabled students will help close the gap in non-continuation for these students. As stated in relation to our target groups on page 7 and below in our strategic measures, we will be undertaking research over the next year to determine what additional interventions and strategic actions are likely to be most successful for our disabled students.

The 2.6FTE Mental Health Advisers are responsible for improving the co-ordination, consistency and accessibility of support for students and to work with students across the whole spectrum of mental health difficulties, helping them to obtain appropriate treatment, support and adjustments to enable them to successfully complete their studies. Additional funding has also been put in place to support students with mental health difficulties with specialist study mentoring.

## **(2) Equality, Diversity and Inclusion**

The College has significantly bolstered its commitment to integrating equality, diversity and inclusion in all its operations. It has created a new role of Assistant Provost (EDI), who sits on a new EDI Strategy

Group, chaired by the Provost, and created an EDI Forum, chaired by the new Assistant Provost (EDI). Together, these new committees oversee equality and diversity activity across the College and are dedicated to promoting and embedding all aspects of equality throughout the College community. The strategy group has deliberately been kept small and high-level to give it executive agility. It is informed in its deliberations by the EDI Forum, membership of which includes representatives from across all academic and professional services departments, the students' union called the Imperial College Union (the Union), the Trades Unions, and the College's equality advisory groups for race, disability, sexual orientation and gender identity equality. The EDI Forum is a broad-based 'listening post' that is empowered to formulate and present proposals to the Strategy Group. Together the Strategy Group and the EDI Forum place a strong emphasis on monitoring services, making recommendations for additional actions (many of which are then owned by the relevant operational functions in the College) and evaluating success and progress in addressing the needs of staff and students. In October 2018, the College published its first EDI Strategy. We continued with our root-and-branch overhaul of sexual harassment and a working group has been set up to revise our policies and procedures for dealing with sexual harassment following an external review process. Imperial is now a member of the ECU's Race Equality Charter and will be applying for a full award. We have set up a Race Equality Charter Self-Assessment Team which will be examining the experience of Black, Asian and Minority Ethnic staff and students at the College. As part of this, students and staff were surveyed in the autumn with over 1500 responses from staff and over 500 from students which will feed into and inform the action plan being developed.

## **Strategic measures**

### **Aims, objectives and targets**

All our Access stage activities map onto the Theory of Change model with the overall aim to increase the number of students from target groups studying at the College (see section 2.2. above) through multiple intervention programmes over a five year period. This will involve assessing intermediate outcomes on a cohort and individualised basis, in particular, progression between programmes, examination results (where relevant) and increasing readiness for university. Though each of our strategic measures is designed to address specific target groups, due to the nature of intersectionality individual participants might belong to several groups. In addition, we will introduce new admissions practices to increase the number of applicants from target groups to receive offers to the College, irrespective of whether they attended a programme. We will, however, track the final destinations of all participants to assess our successes holistically.

The aims and objectives for programme are described in further detail below:

(1) The College will continue to develop its flagship London-based programmes, **STEM Potential** and **Pathways to Medicine**, and will launch a programme targeting Black students. This new programme targeting Black students aims to increase the number of students of Black ethnicity participating on our outreach programmes by 30 students a year, from the current 155 to 305 by 2024-25 with the overall aim of contributing to our target to double the number of students of Black ethnicity entering the College by 2024-25.

Our cohort programmes in London have shown success in attracting underrepresented students into the College. However, given the very low number of POLAR4 Q1 and Q2 areas in London, we will need to target new cohort programmes in areas outside of London where there is a high density of POLAR Q1 and 2 students. The STEM Potential programme will therefore be rolled out in new locations. The

objective of these new programmes is to contribute to our targets to increase the number of entrants from these neighbourhoods over the next five years. The College will therefore increase the number of POLAR Q1 and Q2 students on its Outreach cohort programmes from 26 to 135 in 2020-21 and then to 270 in the subsequent four years. Existing and new multiple-intervention programmes in London will aim to increase the number of Black students on our programmes who then enter the College by 63 students a year by the end of five years, and to increase students from IMD Q1 by 48 a year over the same period (potentially including entrants from a new Maths Sixth Form College). The new cohort programmes will have their first intake of students in September 2020 and will reach a steady state of student numbers by September 2021.

**STEM Potential** takes pupils from Year 10 to Year 13 through a series of interventions aimed at raising attainment in STEM subjects at GCSE and A Level. There are approximately 400 students on cohort programmes at any one time with at least 180 students in Years 12 and 13 of STEM Potential. By recruiting pupils at the Year 10 stage, the programme aims to identify talented cohorts of pupils from disadvantaged backgrounds who can then be given tailored subject-specific and soft-skill support through the key milestones that they face. There is also an additional entry point at Year 12. The Sixth Form element of the STEM Potential programme is intensive and curriculum based. It enhances pupils' understanding of difficult concepts at A Level through personalised teaching with mentors and innovative use of practicals. By working closely with teachers at the targeted schools, the programme aims to retain pupils across the two or four years and provide sufficient contact with participants for information on their post-school destinations to be requested.

The **Pathways to Medicine** programme, which is supported by the Sutton Trust, Health Education England, and the Royal Society of Medicine is a long-term, cohort-based programme that runs a series of activities for each cohort over a three-year period from Year 11 through to Year 13 with the specific aim of supporting pupils make strong and informed applications to study medicine at university. Activities include informative talks by admissions tutors and medical students, e-mentoring with current Imperial medics, a subject and skills-based summer school at the College, personal statement advice, and guaranteed work experience placements in a healthcare setting. Furthermore, master-classes and subject revision sessions are held termly to ensure the participants are on track to achieve the grades they need to meet offers. The College works closely with Vision, an Imperial student-run medical society which aims to widen participation in medicine and was initially set up through a collaboration with the Outreach team and the student body within the Faculty of Medicine. The synergistic collaboration between the School of Medicine, the Outreach Office (which has a dedicated Medical Outreach Officer) and Vision has significantly increased the impact of the College's medicine outreach activities. Pathways to Medicine also includes specific training on the BMAT exam as our research has suggested that this is one of the largest hurdles for pupils to overcome when applying to Imperial.

The College also provides extensive support for medical students during the application process and once they are studying. Admissions tutors take into account contextual information when deciding which applicants to invite to interview. Each student has a personal tutor with whom regular meetings are timetabled, and is also paired with a student in the year above who provides advice and support. Every year group has a senior tutor who supports the personal tutors and helps students who have more complex problems. The Imperial College School of Medicine Students' Union (ICSMSU) also has a dedicated welfare officer. Academic support is provided through the Faculty Education Office, while financial support is provided through the College's bursary scheme and through the availability of hardship funding.

Though we have a successful track record in running cohort programmes in London, the College has met with the deliverers of successful schemes focused on raising attainment for Black pupils through multiple interventions and has decided to deliver a new targeted programme in collaboration with expert partner organisations.

(2) The College will develop versions of **STEM Potential** that it will deliver outside of London in target regions across the UK. A number of versions will be trialled in different locations as well as digitally targeting students from POLAR Q1 and Q2 neighbourhoods. A pilot model in Peterborough with 10 Year 10 students from local state schools is currently underway having targeted schools that draw pupils from POLAR Q1 and Q2 neighbourhoods. The College will establish several different models with partner schools or universities. Drawing on the results of our earlier programme 'Reaching Further' (a hub and spoke model funded by RCUK) curricular activities will either be delivered fully at the partner organisation(s), or via a mixed model of local and College-based activity, depending on the respective distance from our campuses. There will be entrance points in Years 10 and 12 as experience has shown there is some degree of drop-out as individual circumstances change. A programme for target students furthest away from London will include multiple school visits signposting our digital resources (including our Maths MOOCs with e-mentoring) complemented by visits to the College at residential summer schools and/or Open Days. A key message from our recent market research has been that digital methods alone will not be sufficient for developing a sense of belonging to Imperial so visits to the College will feature in all programmes.

(3) The College will consider whether to launch a Maths Sixth Form College by September 2020. This would have a number of strategic aims for Imperial, including increasing value-added attainment (as in existing Maths Schools models) and supporting the training and professional development of STEM teachers. The school would also provide a vehicle for attracting a proportion of our targeted students from IMD Q1, and Black students, as well as POLAR4 Q1 and Q2 (though its likely location in London reduces its impact of the latter). Discussions are ongoing about how the possible admissions criteria and curricular enhancement elements would complement the College's Access activities were we to decide to proceed.

(4) **Summer intensive residential and non-residential STEM programmes.** The College runs a series of week-long summer schools for Year 9, Year 10, Year 11 and Year 12 pupils who meet very specific criteria for disadvantage and academic ability. As per our Theory of Change model, the residential programmes are designed to attract bright and underrepresented pupils from outside of the London area and provide them with direct experience of the College campus with hands on practical experience. The Year 12 residential summer school is run in collaboration with the Sutton Trust and provides 100 pupils at each of the two week-long events with an insight into studying STEM at Imperial. Summer programmes for younger pupils are designed to raise aspirations and attainment in STEM, as well as to provide information around STEM careers, soft-skill sessions and the opportunity to immerse themselves in a STEM-related project in an area that is of interest to them.

(5) The College has opened a new outreach space in White City – **the Invention Rooms**. This houses the Reach Out Maker Space which is an additional and highly technical new outreach facility in which we run hands-on programmes for different progression routes by exposure to a broad range of design and making techniques and facilities. It offers training not only in technical skills, but also business and soft skills for children of very mixed ability, all of which will contribute to narrowing the national skills gap. Through a collaboration with some external funding bodies, the College has been able to boost its spend to run such programmes for a wider audience of pupils and run showcase events that bring together their parents, siblings and the local community. The Invention Rooms are also used as a space for Maths and coding afterschool clubs that pupils from local secondary schools can attend. Some of these activities will

act as a small pipeline into our targeted programmes through participants' increased familiarisation with the College. They strategically link the aims of our Societal Engagement Framework (largely externally funded) with the objectives in this plan.

(6) The College is committed to helping pupils increase attainment in Maths (GCSE and A Level) and Further Maths (A Level) and has developed a series of programmes to achieve this. The Theory of Change model that Imperial has developed emphasises the importance of high attainment at GCSE and A Level for accessing highly selective universities. Our online programmes will be open-access, which will help to decrease attainment gaps nationally in Mathematics for any student (at GCSE) and A Level. There is a bespoke version of the on-line course for 100 Year 12 pupils which is in its first year of running and will recruit students from our target groups in future years. It includes a mentoring component for target students to increase their levels of engagement and likelihood of completion. Success measures for these programmes will include the overall number of MOOC participants and the completion rates of modules, but there will be a particular focus on increasing the grades of the mentored participants. There are also after-school maths tutoring clubs held in school and at Imperial's South Kensington and White City campuses which provide pupils with an experienced maths undergraduate or postgraduate tutor, support from an academic from Imperial and also, for the clubs held on College campuses, a hot meal as well. Most of these programmes are in their first year of running and we anticipate that they will continue.

(7) The College has identified a gap in the non-continuation rates between disabled students and students with no known disability. Although the College has been taking steps to create more inclusive curricula and a more accessible estate, the reasons for this gap will require further investigation. The College will undertake research to examine the causes for this gap and aims to halve the gap in non-continuation over the course of the five years of this Plan. As the reasons for the gap have not been identified and measures will need to be put in place to address these, the College target to halve this gap will begin in 2021-22. The College will explore this area of work further in 2019-20.

### **3.2 Student consultation**

The College continues to work in close partnership with Imperial College Union in the development of its Access and Participation Plan and in the development of strategy more generally. In both shaping and responding to the College's new Learning and Teaching, Societal Engagement and EDI strategies, the Union has prioritised the development of the roles of Liberation & Community Officers, which have historically had a lower profile at Imperial than at some other institutions.

The eight Liberation & Community Officers are the voices of underrepresented groups and ethical causes at Imperial. Elected by the entire student body, they lead on campaigning, lobbying and policy change within the Union and the wider Imperial community to ensure that all members have a fair and equitable experience. The officers are:

- The Black & Minority Ethnic (BME) Officer
- The Disabilities Officer
- The Ethics & Environment Officer
- The Gender Equality Officer
- The Interfaith Officer
- The International Officer
- The LGBT+ Officer
- The Mental Health Officer

The Access, Participation and Student Support Working Group has representation from two sabbatical officers of the Imperial College Union. All members of the working group have an equal opportunity to comment on and shape the APP prior to it being submitted.

In addition, the APP strategy was presented to the Union Board of Trustees at the Union's invitation. Students were additionally consulted and provided an opportunity to feed in recommendations and suggestions on the APP strategy at a lunch time session held with the Union Liberation Officers, the Union Head of Student Voice and interested students.

The College's new Learning and Teaching (L&T) Strategy, which includes our ambitions around Access and Participation, was also developed through a consultative process with staff and students. The College and Imperial College Union worked in partnership in forming and writing the strategy. This included, for example, incorporating recommendations from the Union's 2015 and 2016 NSS Responses, working with the Union on the College-wide strategy consultation, and the Union President and Deputy President (Education) playing a full role alongside the Vice Provost (Education) in drafting the final document.

Students are also engaged in a number of ways in the implementation of the L&T Strategy; we strongly advocate students as partners. For example, we have a Framework for Student Engagement with Curriculum Review; all bids for funding to support Pedagogy Transformation are expected to demonstrate how they will engage students as partners in their approach; and, for specific L&T Strategy programmes, students will be supported to engage with a broad range of activities in support of the implementation of the strategy, including the evaluation of the impact of these changes. Inclusivity is built into our approach to Curriculum Review and Pedagogy Transformation, and our Framework for Student Engagement makes it clear that departments should engage with the whole student community, beyond the elected academic representatives.

In addition, following a pilot, the College has established a graduate intern role to act as the formal link between the College's outreach team and the Union to aid collaboration and alignment further. This will be a post recruited to each year to ensure new graduates can take part and to keep the student voice active. We also employ a large number of undergraduate mentors who contribute regularly to our curriculum-based work in the Wohl Reach Out Lab (WROL). They provide role models for both their subjects and for higher education and provide regular feedback to us. Many of our mentors are now students who have come through our Access programmes. They want to take part and to share their experiences as a participant as well as a student mentor. We greatly value their input and feedback, for example, to assist in delivering the desired outcomes for our planned programmes.

## **Student Financial Support**

Targeted financial support is integral to access and student success at the College. Its key purpose is to enable capable prospective students, regardless of their financial circumstances, to apply to, study at, and succeed at the College. This is particularly important given the higher costs of London, and is compounded by the College's relatively longer STEM courses.

Each year, the College carries out extensive evaluation of the success of its financial support package across the whole student lifecycle (access, success and progression). This takes into account sector research, internal data analysis, and all of the three elements of the financial support evaluation toolkit developed by the OFFA-commissioned project to understand the impact of institutional financial support: the financial support statistical evaluation model, interview tool, and the financial support survey. The statistical model was used for the first time in 2017-18 and was repeated in 2018-19. The College also

conducted the third element, the interview tool, in 2018-19, hence using all three elements of the toolkit for its annual evaluation of financial support. The interviews were conducted as a pilot in the first instance and findings from the first year will be taken forward when conducting these in future years.

In relation to Access, an analysis of the profile of the College's bursary recipients is carried out annually. The results of this analysis have indicated that being a College bursary recipient (and hence from a lower income background) correlates with other indicators of under-representation in higher education, including not having a parent with a higher education qualification, school type and coming from a lower participation neighbourhood. This suggests that the College's financial support package is being closely targeted at those groups that are disadvantaged in terms of accessing higher education. The College also explores the impact of financial support on students' decision-making processes pre-entry through its annual survey of current bursary recipients, run in collaboration with the Union. The College's 2018-19 survey was updated and re-timed following consideration of the financial support survey developed by the OFFA-commissioned project. The College and the Union receive the outcomes from the survey. The Union prepares a response to the survey with recommendations which is shared with the Access, Participation and Student Support Working Group, the Provost's Board and subsequently published by the Union.

A key finding from the survey was that financial support continues to be necessary to cover the costs of living and studying in London; 70% said that it was essential and 96% reported that it was at least helpful. Also, nearly 70% stated that knowledge of the bursary scheme was an important factor in considering whether to come to the College with recipients in lower income bands more likely to say the bursary affected their decision as to whether to study at Imperial.

The College also undertakes evaluation of its financial support package in relation to student success and progression. The College has used the financial support evaluation model originally provided by OFFA to compare APP-countable bursary holders with non-bursary holders for five outcome measures. It has compared the degree completion, achievement of good honours, achievement of first class honours within five years of entry and graduate employment rates of the 2012-13 cohort along with non-continuation into second year for the 2015-16 cohort. The 2012-13, 2013-14 and 2014-15 entry cohorts (where the bursary amounts were identical) were combined and non-continuation rates into second year were compared for bursary recipients and non-bursary recipients. The statistical tool found no significant differences between APP-countable bursary students and non-bursary recipient students on all but one measure (non-bursary students were more likely to receive a first-class degree than students who received an APP-countable bursary). As a result, it can be considered that bursary holders have the same outcomes as the comparison group and therefore indicates that the financial support is effective. This result has been determined according to the technical guidance supplied alongside the OfS tool. The survey and interviews the College conducted, supported the conclusion that the bursary can be considered effective.

The College's financial support package (illustrated in the table below) will provide up-front cash support to students from lower income backgrounds with the aim of enabling disadvantaged students to meet the difference between government maintenance support and the cost of living and studying in London. Student feedback is taken into account in the design of the package. The package will pertain to eligible Home students entering the College from 2020-21 for each year of their study at the College (clinical medical students, normally in their fifth and sixth years of study, will not be eligible because they receive an NHS bursary).

Household income	Total support
Up to £16K	£5,000
£16K - £45.8K	£4,000

The College is committed to providing timely, clear and accessible information to prospective applicants so that the best prospective students from disadvantaged groups are encouraged to apply to the College. It is, therefore, necessary to ensure an appropriate awareness amongst school pupils of the financial support available before they apply. Information and advice will continue to be provided through the College's outreach programmes, prospectus, website and other materials.

The College will provide timely, accurate information to UCAS (for courses that receive applications through UCAS) and to the Student Loans Company (SLC) so that they can populate their course databases in good time to inform applicants.

### 3.3 Evaluation strategy

#### What our evaluation strategy has measured

For many years the College has had an evaluation framework covering all Access programmes stating our aims and objectives, target audiences and broad measures of success. It is reviewed annually to ensure our criteria continue to be appropriate and that we have reflected on feedback. The framework also links to the specific targets identified in our Access and Participation Plan. There are two key methodologies to help us understand our ambitions and goals:

Continuous monitoring - the systematic collecting and analysing of information, data and feedback on our programmes and activities. This includes pupil post-activity evaluation, pre and post programme evaluation, teacher feedback (including an intensive partnership with Westminster Academy School), final destination tracking (through HEAT), participants' entry surveys and analysis of admissions data. The Outreach senior team also meets every fortnight to maintain a constant level of overview. It is used to:

- Assess our activities against each programme's aims, objectives, and APP targets
- Learn lessons and make informed improvements to all of our STEM programmes

Original research and investigation - more in-depth study, literature reviews and analysis of other external research by our practitioners and PhD students. It is used to:

- Understand whether activities 'work'
- Understand why certain types of activities 'work'
- Explore impacts and effects upon both audiences and practitioners

As a research-led university, we have appointed PhD students to provide robust and rigorous academic research on specific outreach programmes and/or activities. Presently we have two researchers: one is focusing specifically on access to medicine and the barriers that exist; the other is looking at teaching styles and pedagogy in STEM, using the College's Wohl Reach Out Lab as an exemplar for curriculum-led outreach programmes. These students are located within the Faculty of Medicine and our central outreach team respectively so that they can influence practitioners directly. The aim is that they will publish articles and papers to disseminate findings across the sector. Prior to this, a joint Imperial and

Kings College London PhD student spent three years looking into how the Wohl Reach Out Lab and published his thesis on the value of using hands-on practicals to increase attainment and interest in STEM in school pupils [Moss, A. C. (2015) '*Identifying impact at the Reach Out Lab: A grounded theory study of the factors that facilitate increased STEM engagement*' PhD Thesis].

In 2013, a collaborative paper was published by Imperial Outreach and Faculty of Medicine staff that demonstrated multiple interventions were the key to successful outcomes for disadvantaged pupils [Smith, Alexander, Murphy and Dubb, 2013, '*Opening Doors and Minds: A path to widening access*'. *The Clinical Teacher* 10, pp.124-128]. These two ground-breaking pieces of research have helped to inform the College's outreach programme design. In 2014, we undertook a holistic evidence-led review of all our Access initiatives, resulting in a fundamental change to a cohort-based model for core outreach programmes rather than one-off sessions based on the research paper that was published. A complementary review of the research literature has allowed us to develop STEM Potential (the flagship STEM-focused programme for Year 10 to Year 13 pupils) and Pathways to Medicine (Year 11 to Year 13 medical outreach programme) and to finesse our Theory of Change model for multiple-intervention cohort programmes. Based on this approach, we know that targeted cohort programmes would be likely to have the greatest impact, and our key strategy is to expand our flagship STEM potential cohort programmes into new areas of the UK using a variety of delivery methods in order to establish whether we can reach and support more academically talented neighbourhoods through these intensive STEM programmes.

We recently commissioned independent market research with students and teachers into what types of activities (including digital) our target students (inside and outside of London) prefer and the challenges they faced: this has helped us to fine-tune the activities within our proposed programmes and to update our Theory of Change model. To attract target students into Imperial from further afield, we'll need to build in a range of with trips to the campus, and we also need to address our messaging more broadly. Consequently, providing free travel to Open Days will be a core feature of our multi-intervention programmes across the UK.

### **What we will measure and how we will secure continuous improvement**

We are, however, aware of improvements that could be made to our approach to evaluation over the next 5 years. With that in mind, we have recently appointed a new Outreach Evaluation and Impact Coordinator to develop and coordinate our activities and will deploy more of our resources towards external evaluation. We will continue to develop a whole-institutional approach through a new APP evaluation delivery group, including expert lay members and representation from all Faculties. This will allow us to monitor all regulated programmes on a termly basis and, where appropriate, realign departmental outreach activities with the aims and objectives of this plan. We will be seeking to measure the recruitment, progression (funnelling) between programmes, increases in attainment, and progression into the College (and other selective universities) of students from our target groups. We will assess the experience of participants on activities considering aspects such as confidence and their increasing readiness for university. The academic progress of all students at Imperial who have been flagged as having attended one of our programmes will also be assessed.

We will secure continuous improvement by commissioning more targeted external evaluation of regulated activities and assessing progress against relevant sectorial benchmarks. We will employ experts to review our existing events so that they will be welcoming for students from target groups. As our approach involves a range of pilots, if any programme is not performing adequately against proposed targets it will be reviewed and modified, or terminated at an appropriate time with resources reallocated to other models.

We will increasingly measure our progress against established and developing frameworks, for example those produced by the Network for Evaluating and Researching University Participation Interventions (NERUPI): one of our PhD students has already presented to this forum. The College is encouraged by developments in the literature on evaluation, such as those discussed in Burke, P. J., Hayton, A., and Stevenson, J. (eds) 'Evaluating equity and widening participation in Higher Education.' 1st edn. London: UCL Institute of Education Press] and King, H. et al. (2015) 'Highlighting the value of evidence-based evaluation: Pushing back on demands for impact', *Journal of Science Communication*, 14(2), pp. 1–11. However, we will also engage with the literature on the ethics of different methodological approaches such as Random Control Trials (see Rogers, P. (2008) 'Using programme theory to evaluate complicated and complex aspects of interventions', *Evaluation*, 14(1), pp. 29-48) working closely with experts from our new Centre for Higher Education Research and Scholarship.

### **Mechanisms to enable future evaluation to influence practice**

In developing our new programmes, we will continue to work closely with partner schools to develop metrics which adequately track the rising attainment of our outreach participants in ways which are sensitive and respond to local circumstances, and which cohere with the academic strategies of the schools concerned. Our overall aim is to raise participants' attainment to a level where they would be credible candidates for admission to the College.

We will develop a Praxis-based approach to disseminating research and insights from our evaluation with practitioners, researchers and PhD students informing practice and attending national and international conferences. Where appropriate we will facilitate visits, staff exchanges, and secondments with other HEIs or organisations building on our current engagement with practitioners within the Russell Group and at NERUPI events. We will submit relevant research to the Evidence and Impact Exchange, whose findings we will follow with close attention.

Finally, our ambition for Access and Participation forms part of our new Learning and Teaching Strategy, with a focus on diversity and inclusivity. The implementation of the strategy will be evidence led and used for continuous improvement both within the College and across the sector. For example, "As we innovate our teaching methods, we will evaluate the impact and effectiveness of our learning and teaching on the staff and the student experience, and on our students' study success and learning gains, to form our own evidence base, publish our results in peer reviewed journals and contribute to the 'second generation' of global evidence on interactive teaching."

### **3.4 Monitoring progress against delivery of the plan**

The APP will be monitored by Council, the College's governing body, on an annual basis. They will monitor the College's performance and progress towards targets. If Council believes that insufficient progress is being made or that performance is worsening, then the APP will be referred to the Audit and Risk Committee for additional monitoring. This Committee sits four times a year.

In addition to this, the APP will continue to be monitored at a more granular level by the Access, Participation and Student Support Working Group (APSSWG) which meets multiple times throughout the academic year. This group was set up since 2010 to support the development, delivery and monitoring of the APP (and formerly the Access Agreements). The membership of this group includes the President of Imperial College Union and the Deputy President (Welfare) of Imperial College Union and ensures that the Union and the student body are fully included in the decision making and monitoring of the APP. The

APSSWG will continue to have oversight of the whole student journey with regard to access, success and participation. It will report regularly to the Provost's Board on the monitoring and evaluation of progress against the targets in the Plan.

In addition, given the new initiatives being trialled, reporting into the APSSWG will be delivery groups with responsibility for each area of Access work, including evaluation. We will monitor our strategic measures as projects, under an overall Programme Board which will have the authority to divert resources away from less successful programmes to more successful ones, and to close a programme if it were not delivering value for money in terms of enabling the College to meet its strategic objectives at a rate proportionate to the investment.

#### **4. Provision of information to students**

We give details of the Financial Support Package available to students in the College Prospectus. Students can also find information on the bursary on the College website. The bursary pages can be found at <https://www.imperial.ac.uk/study/ug/fees-and-funding/bursaries-and-scholarships/imperial-bursary/>. These pages clearly set out the eligibility criteria and the levels of financial support available to students in each year of their studies.

The College website provides information to applicants and new entrants at <http://www.imperial.ac.uk/study/ug/fees-and-funding/> and for continuing students at <http://www.imperial.ac.uk/students/fees-and-funding/undergraduate-funding/>.

The College Access and Participation Plan will be published on the College website. This is published under Admissions and Registration within the section regarding Academic Policy <https://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/admissions/>.

#### **5. Appendix**

The OfS will append the following items from the fees and targets and investment documents when an access and participation plan is published:

1. Targets (tables 2a, 2b and 2c in the targets and investment plan)
2. Investment summary (tables 4a and 4b in the targets and investment plan)
3. Fee summary (table 4a and 4b in the fee information document)

**Summary of 2020-21 entrant course fees**

\*course type not listed

**Inflationary statement:**

Subject to the maximum fee limits set out in Regulations we intend to increase fees each year using the RPI-X

**Table 4a - Full-time course fee levels for 2020-21 entrants**

Full-time course type:	Additional information:	Course fee:
First degree		£9,250
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	Faculty of Engineering	£925
Sandwich year	Faculty of Natural Sciences	£1,850
Erasmus and overseas study years		£1,385
Other	*	*

**Table 4b - Sub-contractual full-time course fee levels for 2020-21 entrants**

Sub-contractual full-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

**Table 4c - Part-time course fee levels for 2020-21 entrants**

Part-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

**Table 4d - Sub-contractual part-time course fee levels for 2020-21 entrants**

Sub-contractual part-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

# Targets and investment plan 2020-21 to 2024-25

Provider name: Imperial College of Science, Technology and Medicine

Provider UKPRN: 10003270

## Investment summary

The OFS requires providers to report on their planned investment in access, financial support and research and evaluation in their access and participation plan. The OFS does not require providers to report on investment in student success and progression in the access and participation plans and therefore investment in these areas is not recorded here.

### Note about the data:

The investment forecasts below in access, financial support and research and evaluation does not represent not the total amount spent by providers in these areas. It is the additional amount that providers have committed following the introduction of variable fees in 2006-07. The OFS does not require providers to report on investment in success and progression and therefore investment in these areas is not represented.

The figures below are not comparable to previous access and participation plans or access agreements as data published in previous years does not reflect latest provider projections on student numbers.

Table 4a - Investment summary (£)

Access and participation plan investment summary (£)	Academic year				
	2020-21	2021-22	2022-23	2023-24	2024-25
<b>Total access activity investment (£)</b>	£2,947,000.00	£3,045,000.00	£3,140,000.00	£3,063,000.00	£3,104,000.00
Access (pre-16)	£1,293,000.00	£1,290,000.00	£1,375,000.00	£1,273,000.00	£1,279,000.00
Access (post-16)	£1,288,000.00	£1,382,000.00	£1,384,000.00	£1,401,000.00	£1,429,000.00
Access (adults and the community)	£257,000.00	£262,000.00	£267,000.00	£273,000.00	£278,000.00
Access (other)	£109,000.00	£111,000.00	£114,000.00	£116,000.00	£118,000.00
<b>Financial support (£)</b>	£6,384,181.00	£6,444,517.00	£6,424,710.00	£6,425,165.00	£6,425,634.71
<b>Research and evaluation (£)</b>	£70,821.00	£75,070.00	£28,340.00	£30,041.00	£31,844.00

Table 4b - Investment summary (HFI%)

Access and participation plan investment summary (%HFI)	Academic year				
	2020-21	2021-22	2022-23	2023-24	2024-25
<b>Higher fee income (£HFI)</b>	£21,426,385.00	£21,497,775.00	£21,497,775.00	£21,497,775.00	£21,497,775.00
<b>Access investment</b>	8.1%	8.4%	8.7%	8.6%	8.7%
<b>Financial support</b>	28.1%	28.3%	28.2%	28.2%	28.2%
<b>Research and evaluation</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total investment (as %HFI)</b>	36.2%	36.7%	36.9%	36.7%	36.9%

