**School Education Plan 2019/2020**

Please adhere to the word limits given in each section. You may ‘spend’ the word limit by commenting on UG and PGT together and/or separately.

Note on actions within the School Education Plan (SEP):

Actions should be meaningful objectives that are **S**pecific, **M**easurable, **A**chievable, **R**elevant and **T**ime-bound. Actions should be limited to significant, core actions for the School. Any long-term actions should be broken down into constituent elements to fit within the annual timescale. Minor issues (e.g. those pertaining to one or two modules) should not be included in the SEPs, but should be monitored by the School Education Committee (or equivalent). If an action relates to a specific programme, or suite of programmes, please ensure that this is made clear within the action table(s).

Please refer to the accompanying annual review guidance on the [Annual Review Intranet](https://intranet.birmingham.ac.uk/as/registry/policy/quality/annualreview/undergraduatepostgraduate-taught-annual-review.aspx) for further information on the completion of the SEP and the annual review inputs to be considered.

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| **School:** | X | | | | | | | |
| 1. **Evaluation of 2018/19 actions**   *Please provide a strategic overview of the previous year and evaluate progress against the actions arising from last year’s School Education Plan. [Overview – up to 500 words].* | | | | | | | | |
| UG and PGT: | | | | | | | | |
| UG: 2018-19 saw a lot of unexpected activity around ensuring a smooth transition into the CTL. The CTL has introduced a step-change in the way we teach our laboratory modules, but the move to the new environment, the introduction of new equipment on a very compressed timescale and the changes in staffing brought significant pressures, especially during the Autumn term. Whilst we expected the transition into the CTL to be challenging, the reality was much worse and the impact was felt most severely by our Year 3 MSci students, followed not too far behind by our Year 2 students. The Year 1 students had a rather happier experience, primarily due to the rather simpler requirements of their experiments and the fact that much of their activity had been redesigned. The problems encountered in Years 2 and 3 undoubtedly damaged student satisfaction amongst non-graduating students and would have impacted more severely had urgent action not been taken. Although the NSS outcome for X this year was excellent (1st in the RG and 6th in the sector for overall satisfaction), the legacy may be felt in the NSS over the next couple of years and we will need to continue to work hard to recover the situation.  The move to “smart” worksheets for much of our Year 1 and Year 2 laboratory assessment provided a number of challenges that are being addressed for 2019-20. Many of the issues were teething troubles around the introduction of the new technology and it is hoped that these problems will be addressed this year by assigning staff to moderate each worksheet before the final marks are released to the students.  Work around improving the timeliness and quality of feedback appears to have had some impact, with significant increases in these scores amongst MSci students in the NSS.  While some progress has been made on reversing grade inflation, this continues to be a concern and a new approach is required to bring this under control, ensuring that our degrees properly differentiate the cohort and retain their value. This, along with assessment and feedback and the student voice, will be central themes for the 2019-20 actions. | | | | | | | | |
| PGT: The School does not currently have any PGT programmes | | | | | | | | |
| Action *[will be pre-populated using last year’s SEP]* | | | Original Deadline | | Status | | Evaluation and impact of action | |
| Move Year 1 laboratory assessments to smart worksheets | | | December 2018 | | Completed | | The purpose of the move to so-called 'smart' worksheets was to provide automatic, instant feedback on aspects of the laboratory assessment, increasing the timeliness of feedback and reducing staff marking loads, allowing academics more time to provide higher quality feedback on work where academic input is essential.  As with any new initiative of this type, it will take time to bed in and for us to see the impact – ultimately, this will be gauged by the impact on the NSS assessment and feedback scores, something that will take two to three years to see. We have surveyed the students in a number of ways, studied the results of MEQs and also conducted focus groups. The student response has been positive and modifications made this year in response to that feedback and our own experience of implementing the new technology should iron out any remaining teething issues. | |
| New system for monitoring timeliness of feedback via Canvas | | | November 2018 | | Completed | | A manual solution has been implemented. The EPS Ed Tech Team were unable to provide a fully automated solution as it would require substantial development work, but longer term the Team will investigate this. | |
| Identify an academic colleague to act as an ex-officio member of the student society committee | | | October 2018 | | Completed | | A senior professor has been appointed to this role. Our student society is very important in generating a shared sense of community and an active student society can enhance the student experience across a range of key areas, especially employability. This year the student society have been very active in organizing careers events, sporting activities, charity and volunteering opportunities and the society was nominated for several awards at the College Societies Awards. | |
| Remove laboratory notebook mark from all lab assessment.​ | | | October 2018 | | Completed | | The driver for doing this is that most students scored the full 10% for this component of their lab grade, something that was contributing to grade inflation. The maintenance of an accurate notebook is now a pass/fail requirement. There have been decreases in the laboratory module averages in Years 1 and 2. Reducing grade inflation will continue to be an important focus for the next two or three years. | |
| Tighten marking criteria for project skills module​ | | | October 2018 | | Completed | | The criteria were reviewed and revised and a smaller, better calibrated group of markers were assigned to the module. As a result, the module average decreased from 72.1% (2017-18) to 66.8% (2018-19). | |
| Update the School’s recruitment publicity material to highlight female and BAME role models, with examples of career progression and alumni case studies​ | | | September 2019 | | Carried forward (and included in Section 3, 4 or 5) | | This has not yet been completed but updated recruitment and publicity materials are planned for the autumn. In particular, female and BAME students are well represented in our MSci with Industrial Experience programme and this provides a good opportunity to showcase successful career progression. | |
| Better support students with directed career advice in Years 1&2 to make informed BSc vs MSci degree choices​​ | | | October 2019 | | Completed | | The School has taken steps to improve the Personal Academic Tutoring system, with closer oversight by the Senior Tutor. Directed careers advice is also provided by the Year 2 Director in conjunction with Careers Network colleagues. This year the School piloted an online EPS tutor referral system for careers that was able to automatically connect potentially ‘at risk’ students with the Careers Network service, with PATs clicking [www.intranet.birmingham.ac.uk/eps-tutor-referrals](http://www.intranet.birmingham.ac.uk/eps-tutor-referrals) and referring their students if they were found to have no career plans or work experience. Several such referrals were made and this scheme will continue. | |
| Review the careers guidance and support that we provide to our undergraduate cohort and include​ examples from female and BAME role models​ | | | October 2019 | | Completed | | Careers support in the School takes a variety of forms. The Student Society have their own Careers Rep. The Rep has been very active in organizing careers events such as the “Alumni Speed Dating” event this year, and she works to ensure a good ethnic and gender balance where possible. The Careers Tutor organized an academic careers lecture for students considering further studies or a career in academia, featuring two female academics (one professorial) and one male academic, outlining their career paths to date. | |
| Introduce a Canvas page detailing assessment and feedback information | | | September 2019 | | Completed | | Pages were introduced for each year group. The School will continue to build on these over the coming year to provide students with a single location for assessment criteria and assessment and feedback information. | |
| Introduce new preliminary project feedback process. | | | December 2018 | | Completed | | A new process was introduced for Year 3 and Year 4 preliminary project feedback. Preliminary reports were submitted via Canvas, distributed for feedback to project supervisors and returned on the given date to students via the ESO. In addition, copies of the annotated reports were kept by the ESO and used for a peer review of feedback, with colleagues reading one another’s feedback and meeting to discuss this. This appears to have been well received in particular by the MSci students, with the NSS score for timeliness of feedback increasing to 80% (53% last year) and “I have received helpful comments on my work” rising to 91.4% (62.5% last year). | |
| Focus groups with UGs around the transition to the CTL | | | January 2019 | | Completed | | Two focus groups were carried out by HEFi on behalf of the School. The transition into the CTL was not a smooth one, with numerous operational difficulties coming on top of the introduction of new experiments and new technology to assist teaching and assessment. Some areas of concern have been identified and these will be addressed through some of the 2019/20 SEP actions. | |
| 1. **Education Strategy for 2019/2020**   *Looking forward to the coming year, and with reference to ‘Birmingham 2026’, please provide an overview of the School’s education strategy and provision, including the School’s strategy around the size and shape of its portfolio. This section should serve as a précis of the actions recorded elsewhere in the SEP. [Overview – up to 500 words].* | | | | | | | | |
| UG and PGT: | | | | | | | | |
| UG: The vision of the School fits with the broader University vision for Birmingham 2026 as a place of transformative education at the cutting edge of educational delivery. Slick new experiments and industry-standard equipment, coupled with flipped delivery alongside traditional teaching methods and new 'smart' online assessments are transforming our curriculum and will ensure we become a destination of choice for the best students around the world. Better trained graduates, equipped with the skills desired in industry and trained in the use of industry-standard instrumentation, will be highly employable, driving up that key metric.  The School offers ten programmes for undergraduate entry, all based around a common core of modules. Central to this are our single-honours BSc and MSci programmes, the first two years of which are taught in common. Increasingly popular is MSci with Industrial Experience, mapping on to MSci but with Year 3 spent on placement and engaging with distance-learning modules. MSci with Study Abroad also maps on to the MSci programme but with Year 3 spent at a partner university. The programmes with a Modern Language is a relatively niche programme but integrates well with our other offerings, with the language replacing 20-credits of optional material each year. Our two major/minor programmes are with Business Management and with Pharmacology, both offered in BSc and MSci variants. With Pharmacology has seen a decline in firm acceptances for 2019-20 entry and has suffered from poor student satisfaction associated with the delivery of the minor component. These two factors have resulted in the School reluctantly withdrawing the BSc and MSci programmes to new entrants from 2020-21.  **Reflection on the past year**  The School is still engaged in a process of curriculum review that will see all years of every programme modified on a rolling basis.  The new Year 1 was introduced in 2016/17, the new Year 2 in 2018/19, the new Year 3 is set to be introduced in 2019/20, with finally some fine-tuning of Year 4 in 2020/21.  This will produce a more streamlined programme structure, reduced assessment and an improved choice of optional material.  Crucially, the new Year 3 will bring with it the long sought after BSc exit route from the MSci programmes.  A major task last year was to implement a new set of Year 1 practicals that make use of the new equipment and facilities of the CTL.  We are aiming to deliver a transformed student experience in the CTL, with better integration of experiment and theory, more timely feedback and access to industry-standard equipment driving up employability.  The key task in 2019/20 is to introduce a completely new set of Year 3 laboratories that will take the form of one-week or two-week mini-projects with a strong research focus. | | | | | | | | |
| PGT: | | | | | | | | |
| 1. **Core Actions for 2019/2020**   *Please use this section to detail actions relating to the strategy outlined above; any actions arising from the annual review inputs; or any discipline-specific issues. Please note that there are separate sections for actions relating to diversity and student surveys. [Overview – up to 300 words]* | | | | | | | | |
| UG and PGT: | | | | | | | | |
| UG:  This year we will replace existing Year 3 laboratory practicals by Year 3 mini-projects, thereby addressing two long-standing issues, namely the lack of Year 3 experimental projects for BSc students and the lack of a BSc exit route for MSci students. Both have been the cause of some student dissatisfaction, reflected in NSS free text comments. These mini-projects will be very much research led and, to support them, project-skills training will be provided to all students in Year 3, something designed also to address student dissatisfaction with the timing of the existing project-skills training.  A perennial grumble from students in NSS free text comments, likely also reflected in NSS assessment and feedback scores, is the lack of ‘model answers’ to exam questions. Whilst the School takes the view that model answers are counterproductive, with students attempting to learn them and regurgitate them irrespective of the question, an effective mechanism to support students in their revision is to improve the quality of the examiners’ feedback to students that is published along with the examination papers from previous years. We will use the pre-term teaching meeting in September to share best practice across the School in this regard.  It is clear from NSS assessment and feedback results that additional work needs to be done to ensure that students are fully aware of assessment criteria. Last year we developed Canvas pages for each cohort detailing assessment and feedback information. The School will continue to build on these over the coming year to provide students with a single location for assessment criteria and assessment and feedback information.  Despite significant efforts last year, grade inflation continues to be a concern and this, along with assessment and feedback and the student voice, will be central themes for the 2019-20 actions. | | | | | | | | |
| PGT: | | | | | | | | |
| SMART Action  (**S**pecific) | | Issue it will address  (**R**elevant) | | Role responsible  (**S**pecific) | | Planned evaluation  (**M**easurable) | | Deadline  (**T**ime-bound)  (**A**chievable) |
| Replace existing Year 3 laboratory practicals by Year 3 mini-projects | | Lack of Year 3 experimental projects for BSc students, lack of BSc exit route for MSci students | | Laboratory Coordinator | | Module evaluation questionnaires, feedback surveys and focus groups, with NSS free text comments as a longer term measure of satisfaction with the option to undertake practical work in Year 3 | | January 2020 |
| Provide project-skills training to all students in Year 3 | | Student dissatisfaction with timing of existing project-skills training | | Head of Education | | Feedback surveys and focus groups | | March 2020 |
| Improve the quality of the examiners’ feedback to students that is published along with the examination papers from previous years | | Improved support for exam preparation | | Exams Officer and Head of Education | | Seek the views of student reps and SSC | | July 2020 |

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| 1. **Student Data, Diversity and Inclusivity** 2. Student Data   *What issues have arisen from the School’s student data, particularly with regard to continuation and degree classification gaps within different diversity groups? How will the School provide an inclusive education to ensure positive outcomes for all? [Overview – up to 300 words]*  *When completing this section, Schools should also take into account the following:*   * *Any possible issues regarding perceived grade inflation* * *Actions arising from Teaching Excellence and Student Outcomes Framework (TEF) metrics* | | | | | | | | | | |
| UG and PGT: | | | | | | | | | | |
| UG:  Section (a) principally focuses on grade inflation. Issues of inclusivity and differential performance within student diversity groups are dealt with in part (b).  The percentage of firsts has steadily risen over recent years, in part reflecting an improving intake. While some progress has been made on reversing grade inflation, this continues to be a concern and a firmer approach is required to bring it under control, ensuring that our degrees properly differentiate the cohort and retain their value. Our External Examiners have made a number of helpful suggestions that we will adopt this year. They noted that some questions are excessively fragmented, something that can lead to higher marks. While multi-part questions provide a desirable structure and require the students to focus on the key aspect being tested, in some of the final year papers more integration of questions, permitting students to deliver a greater depth of analysis without such frequent prompting, should differentiate genuine first-class performances from good 2.1 answers. Questions which are either wholly descriptive or wholly calculation based can lead to question spotting and a very skewed profile of answers. It is clear that some question setters need to strike a better a balance, with both problem-solving and discursive elements to their questions.  In an effort to address this, the first step is to hold a pre-term teaching meeting in September where the best practice across the School will be shared. The examination review process seems to be increasingly time pressured. A group of colleagues review each exam paper, a process that is essential to ensure that rigorous standards are upheld. We plan a significant shift forward in the deadline for exam question setting next year to give us more time to review papers (and to request revisions to questions if necessary), with the objective of producing papers that are capable of properly differentiating the cohort.  Whilst there are some high averages for isolated modules in Year 4 that can be addressed for next year through appropriate question setting, the problem spans all years and most modules and is not one that we can fix quickly: a similar number of students will enter Year 4 next year with first-class averages from Years 2 and 3 and we will need to work over the coming years to reduce module averages across the board before the full impact is seen. Most notable is the impact of lab work; the introduction of mini-projects in Year 3 this year gives us an opportunity to review and, where necessary, tighten the marking criteria for this substantial component of coursework and at the same time we can review and refine the marking criteria for labs in other years. | | | | | | | | | | |
| PGT: | | | | | | | | | | |
| SMART Action  (**S**pecific) | Issue it will address  (**R**elevant) | | | Role responsible  (**S**pecific) | | | Planned evaluation  (**M**easurable) | | | Deadline  (**T**ime-bound)  (**A**chievable) |
| Improve quality of the exam review process by allowing more time for critical review of draft questions | Exam questions that don’t properly differentiate the cohort, contributing to grade inflation | | | Exams Officer | | | The spread of module marks demonstrate differentiation of the cohort | | | November 2019 |
| Pre-term teaching meeting to share best practice on exam question setting | Exam questions that don’t properly differentiate the cohort, contributing to grade inflation | | | Head of Education | | | The spread of module marks demonstrate differentiation of the cohort | | | September 2019 |
| Review and, where necessary, tighten lab marking criteria | High lab mark averages | | | Head of Education and Laboratory Coordinator | | | The spread of module marks demonstrate differentiation of the cohort | | | October 2019 |
| 1. Office for Students (OfS) Access and Participation Plan   *What actions are required by the School to address targets outlined in the University’s Access and Participation Plan? [Overview – up to 300 words]*  *Key priorities identified in the Office for Student (OfS) Access and Participation Plan 2019-20:*   * *Non-continuation for male Black, Asian and Minority Ethnic (BAME) students and white low socio-economic class (SEC) students;* * *Degree classifications for BAME students;* * *Graduate employability for low-SEC BAME students and low-SEC male students.* | | | | | | | | | | |
| UG and PGT: | | | | | | | | | | |
| UG:  The School has a diverse undergraduate population and promotes inclusivity and equality of opportunity across all of its degree programmes.  Despite a dip in BAME recruitment and attainment this year, historically our gender balance and proportion of minority ethnic students reflects that of the discipline nationally and our success measures, including continuation, degree outcome and DLHE data indicate that there are no barriers affecting the performance of any student group.  The School has been successful in consistently recruiting to its targets with a trend of increasing tariffs. The School also has been successful in using the Unconditional Offer Scheme to attract the most able students. Indeed, this has been an increasing trend over the last three years and last year just under half the intake came through this Scheme. The Scheme is limited to those predicted high grades (AAA or above) and so likely favours those attending high achieving schools, hence the likely fall in the ratio of Polar 1–2 students. This may also account for the lower BAME ratio. In contrast, it seems that females are more likely to favour the Scheme and this has led to a majority of females in our Year 1 cohort despite the sector and our direct competitors having more males in their cohorts. The use of the Unconditional Offer Scheme is being phased out across the University for 2020 entry, so this influence is likely to diminish.  It is hoped that the planned update to the School’s recruitment publicity material, highlighting female and BAME role models, will restore the decline in BAME and POLAR 1–2 entrants. Additionally, our Outreach Officer is targeting local schools with poorer Ofsted reports and holding activities in local libraries with groups from traditionally non-university backgrounds. She also has a link with a home-schooling group of mainly Asian families and is training current students who come from areas of low participation to return to their schools to run outreach events.  In terms of addressing attainment levels, this year we have planned a number of improvements to the Personal Academic Tutorial system designed to identify and support ‘at risk’ students. We are currently developing a PAT database that will provide performance and attendance information to Tutors, leading to more meaningful discussions of performance and better guidance by the Tutor at review of progress meetings. This year we will schedule review of progress meetings between PATs and students in the student timetable, ensuring that these happen in a timely fashion, with uniformity of student experience. More frequent meetings of the ‘Due Diligence’ group, comprising the Senior Tutor, Head of Education and Directors of Year, will ensure that we are in a position to intervene at an early stage and proactively manage poor attendance and under performance. | | | | | | | | | | |
| PGT: | | | | | | | | | | |
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| SMART Action  (**S**pecific) | Issue it will address  (**R**elevant) | | | Role responsible  (**S**pecific) | | | Planned evaluation  (**M**easurable) | | | Deadline  (**T**ime-bound)  (**A**chievable) |
| Update the School’s recruitment publicity material to highlight female and BAME role models, with examples of career progression and alumni case studies | Dip this year in BAME recruitment | | | Admissions Tutor | | | Number of BAME entrants in 2020 | | | September 2019 |
| Improved PAT system to identify ‘at risk’ students, broken down into the following actions: |  | | |  | | |  | | |  |
| Develop a PAT database providing performance and attendance information | More meaningful discussions of performance and better guidance by PAT at review of progress meetings | | | ESO | | | Feedback from PATs, improved performance and retention of ‘at risk’ students, as measured by module marks and KPIs such as drop-out rate | | | October 2019 |
| Scheduling review of progress meetings between PATs and students in timetable | Ensuring that these happen in a timely fashion, with uniformity of student experience | | | Central Timetabling | | | Feedback from PATs | | | October 2019 |
| More frequent meetings of Due Diligence group comprising Senior Tutor, Head of Education and Directors of Year | Early intervention and proactive management of poor attendance and under performance | | | Senior Tutor | | | Improved performance and retention of ‘at risk’ students, as measured by module marks and KPIs such as drop-out rate | | | October 2019 |
| Training sessions and a new School-specific handbook for PATs | Quality and consistency of guidance across all PATs | | | Senior Tutor | | | Feedback from PATs, improved performance and retention of ‘at risk’ students, as measured by module marks and KPIs such as drop-out rate | | | October 2019 |
| 1. **Student Survey Issues** 2. NSS   *What key issues have arisen from the NSS (and focus groups held during 2018-19 in place of the BSS) and how does the School plan to address them? [Overview – up to 300 words]* | | | | | | | | | | |
| UG:  We plan to focus on the Student Voice aspect of the NSS this year. In particular, the lowest scoring aspect of this is the question “It is clear how students’ feedback on the course has been acted on”. We plan to address this in two ways. The Student Reps system is a real strength within the School, but we need to ensure that actions that result from Student Reps raising issues with us are properly relayed to the whole cohort, something that we will do via Canvas and “you said, we did” posters. At the start of the new academic year we will let students know the summary of findings from our own Student Learning Experience Survey and, in particular, how we have taken this info into consideration when preparing for teaching in the new academic year.  The Head of School and Head of Education will speak to all years at the start of term to detail the actions taken in response to the NSS (a “you said, we did” feedback session). We are also looking at our SSLC and its function and from next year we will include a standing item to report on actions taken since the last meeting, to ensure the student voice and the actions taken as a result of it is clearly signposted.  Student satisfaction with the Guild is very low, in common with many schools across the University. We will invite a Guild representative to work with our student body to see if the level of satisfaction with the Guild can be improved. | | | | | | | | | | |
| SMART Action  (**S**pecific) | | Issue it will address  (**R**elevant) | | | Role responsible  (**S**pecific) | | | Planned evaluation  (**M**easurable) | | Deadline  (**T**ime-bound)  (**A**chievable) |
| School “you said, we did” posters | | Cohort unaware of how we have acted on their feedback | | | ESO, in conjunction with Student Reps and SSC | | | Feedback from cohorts collected by Student Reps and SSC | | December 2019 |
| Inform students of the findings from our own Student Learning Experience Survey at induction meetings | | Cohort unaware of how we have acted on their feedback | | | Directors of Year, coordinated by Head of Quality | | | Feedback from cohorts collected by Student Reps and SSC | | October 2019 |
| Invite Guild representative to work with SSC | | Low satisfaction with Guild | | | Chair of SSC | | | Feedback from student reps and SSC | | March 2020 |
| 1. PTES   *What key issues have arisen from PTES and how does the School plan to address them? [Overview – up to 300 words]* | | | | | | | | | | |
| PGT: No PGT provision | | | | | | | | | | |
| SMART Action  (**S**pecific) | | | Issue it will address  (**R**elevant) | | | Role responsible  (**S**pecific) | | | Planned evaluation  (**M**easurable) | Deadline  (**T**ime-bound)  (**A**chievable) |