Department Application

Bronze and Silver Award

ATHENA SWAN BRONZE DEPARTMENT AWARDS

Recognise that in addition to institution-wide policies, the department is working to promote gender equality and to identify and address challenges particular to the department and discipline.

ATHENA SWAN SILVER DEPARTMENT AWARDS

In addition to the future planning required for Bronze department recognition, Silver department awards recognise that the department has taken action in response to previously identified challenges and can demonstrate the impact of the actions implemented.

Note: Not all institutions use the term 'department'. There are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' can be found in the Athena SWAN awards handbook.

COMPLETING THE FORM

DO NOT ATTEMPT TO COMPLETE THIS APPLICATION FORM WITHOUT READING THE ATHENA SWAN AWARDS HANDBOOK.

This form should be used for applications for Bronze and Silver department awards.

You should complete each section of the application applicable to the award level you are applying for.

> Additional areas for Silver applications are highlighted throughout the form: 5.2, 5.4, 5.5(iv)

If you need to insert a landscape page in your application, please copy and paste the template page at the end of the document, as per the instructions on that page. Please do not insert any section breaks as to do so will disrupt the page numbers.

WORD COUNT

The overall word limit for applications are shown in the following table.

There are no specific word limits for the individual sections and you may distribute words over each of the sections as appropriate. At the end of every section, please state how many words you have used in that section.

We have provided the following recommendations as a guide.

Department application	Silver	This application
Word limit	**12,000***	**12,480***
Recommended word count		
1.Letter of endorsement	500	542
2.Description of the department	500	394
3. Self-assessment process	1,000	728
4. Picture of the department	2,000	3,083
5. Supporting and advancing women's careers	6,500	6,735
6. Case studies	1,000	998
7. Further information	500	0

*The department has been awarded an additional 500 words to describe features that are unique to Oxford, as agreed verbally between Adrienne Hopkins (Senior Equality Advisor, University of Oxford) and Ruth Gilligan (Athena SWAN Manager, ECU).

Name of institution	University of Oxford	
Department	Mathematical Institute	
Focus of department	**STEMM**	
Date of application	November 2016	
Award Level	**Current: Bronze**	**Applying for: Silver**
Institution Athena SWAN award	**Date: Nov 2013**	**Level: Bronze**
Contact for application Must be based in the department	Catherine Goodwin	
Email	goodwin@maths.ox.ac.uk	
Telephone	01865 283873	
Departmental website	www.maths.ox.ac.uk	

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

An accompanying letter of endorsement from the head of department should be included. If the head of department is soon to be succeeded, or has recently taken up the post, applicants should include an additional short statement from the incoming head.

Note: Please insert the endorsement letter **immediately after** this cover page.

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University of Oxford
Mathematical Institute

Dear Athena SWAN Manager,

Our Athena SWAN work supports the department's overarching aim of creating a working environment in which students and staff alike can achieve their full potential.

We are acutely aware of how important it is for the country's leading departments to take a lead in redressing the under-representation of women in mathematics. We were a founding member of the London Mathematical Society's (LMS) Good Practice Scheme in 2010, and in early 2011 set up a Steering Group to take forward initiatives relating to its principles.

The priorities identified in our previous Athena SWAN application (2013) inspired the establishment of better mechanisms for gathering and analysing data and for consulting with staff and students; and the enshrining of a Good Practice Committee in the governance of the department. The present application provides a welcome stimulus to take stock of the progress we have made since 2013.

Our analysis has revealed the relatively low proportion of women taking Further Mathematics A-level as a major challenge to increasing participation of women in mathematical careers in the UK. We have therefore devoted significant additional resources to outreach and schools liaison work, and are active in lobbying government on issues affecting the uptake of Mathematics amongst female school students.

Our new building is a great asset for engaging young female mathematicians. In 2015 we hosted the largest ever LMS 'Women in Mathematics' event – extending it to include undergraduates and school students for the first time. A priority for the coming years is to improve the percentage of our female students who are inspired to continue to advanced degrees.

As a parent with caring responsibilities, I am acutely aware of the importance of accommodating domestic life. The scheduling of meetings and events within the department is being adapted to this. We will accommodate part-time working requests from permanent faculty using the mechanisms honed for those with major fellowships, and we recently opened all Research Fellowships to job shares and part-time working.

In our 2013 application we identified a particular need to support early career researchers (ECRs). We have appointed an 'ECR Advisor' and introduced a system of career development review for these staff, which has enjoyed near-universal uptake. In 2015-16 we established a new seminar series mixing skills-training and career development sessions, particularly targeted at ECRs and research students, with great success.

We are proud that Maria Bruna, a Junior Research Fellow recently returned from maternity leave, has just won the 2016 Women of the Future Award for Science.

Putting in place effective structures is an important part of achieving our aims, particularly since the size of our faculty has doubled since 2001. In 2015-16 I created three new Associate Head positions, with remits for Career Development, Research, and Planning & Resources. Two of these Associate Heads are senior women (both Fellows of the Royal Society). Key priorities for this enhanced leadership team include: to provide more structured support for academic staff career development; and to better evaluate and manage academic staff workloads. Among the duties that I retain is that of actively seeking out a diversity of qualified candidates for senior academic positions.

The information presented in this application is an honest, accurate, and true representation of the department.

Yours sincerely,

Martin R Bridson

[Section 1 = 542 words]

2. DESCRIPTION OF THE DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

Please provide a brief description of the department including any relevant contextual information. Present data on the total number of academic staff, professional and support staff and students by gender.

The Mathematical Institute is the University of Oxford's department of mathematics. It is the organisational and physical home of the Oxford mathematical community, which is one of the largest in the UK. It sits within the Mathematical, Physical and Life Sciences (MPLS) Division of the University, comprising 13 departments and other units.

In 2014 we moved into a purpose-built building, and all staff were finally together on one site. This has provided excellent opportunities to develop mathematics within Oxford, to reach out to a wider national and international mathematics community and to the public, and to take the lead in events for women in mathematics (see Section 5.6 (viii)).

Table 1: Staff and student headcount by gender (student data as at University records 1 Dec 2015; staff data as at University records 31 July 2016)[1]

	Female	Male	Total	% female	% male
Undergraduate Mathematics (single subject degree only)	141	407	548	25.7%	74.3%
Undergraduate Mathematics (all degrees)	207	590	797	26.0%	74.0%
Postgraduate (taught)	21	127	148	14.2%	85.8%
Postgraduate (research)	42	193	235	17.9%	82.1%
Research staff	13	49	62	21.0%	79.0%
Academic staff (non-professorial)	9	38	47	19.1%	80.9%
Academic staff (professorial)	6	46	52	11.5%	88.5%
Professional and support staff	41	14	55	74.5%	25.5%

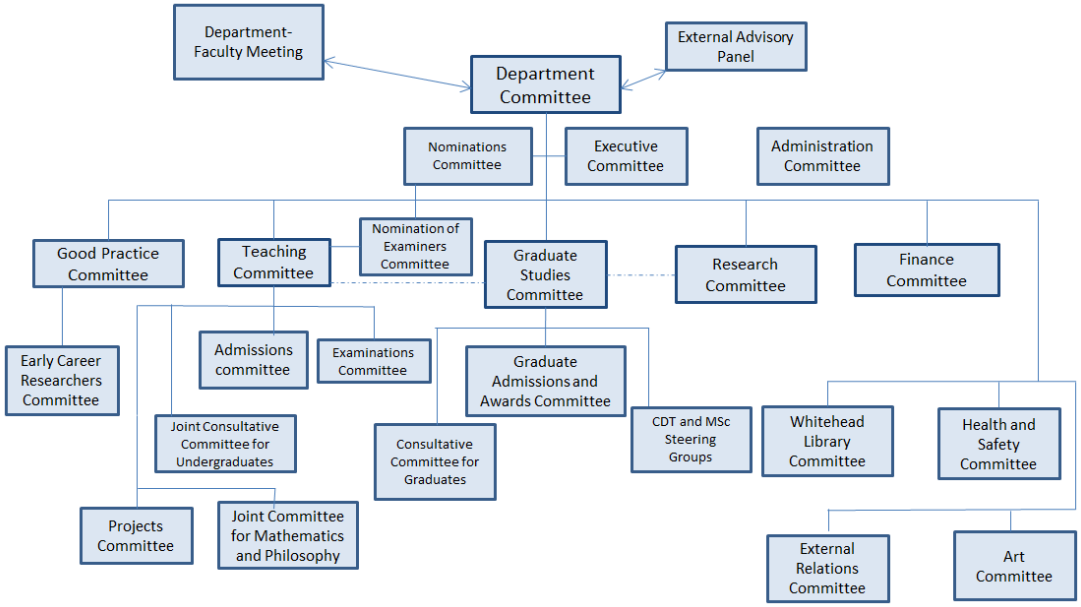
Mathematics in Oxford is not divided into “pure” and “applied”: our teaching and research covers the continuous spectrum of fundamental mathematics and applications. There is a widespread belief in Oxford that this unity is a source of strength and mutual inspiration and support. In the 2014 Research Excellence Framework Oxford Mathematical Sciences[2] was ranked first in all three categories across the UK.

[1] Note: data used throughout is the most recent available from central University data sources.

[2] ‘Oxford Mathematical Sciences’ comprises both the Mathematical Institute and the separate Department of Statistics.

The Institute is led by a Head of Department (HOD) with support from three Associate Heads of Department (AHODs). The HOD and AHODs are supported by Department Committee and its subcommittees:

Figure 1: Departmental committee structure



All students, and the majority of academic staff, are also members of an Oxford college (which are independent bodies).

Each college is responsible for the selection of its own undergraduate students, but the department does much work to set selection criteria, coordinate admissions processes, and to engage in outreach activity (see Section 4.1 (ii) and 5.6 (viii)). Small group teaching is provided for undergraduate students in colleges in the first and second years. The department coordinates teaching in the third and fourth years, as options become more specialised. Colleges provide the majority of pastoral support throughout.

The department is responsible for the academic selection and support of graduate students.

Most 'research' posts (early career postdoctoral research assistantships and fellowships) are based solely in the department. 'Academic' posts (permanent positions with full teaching and research duties) are usually joint appointments between the department and a college.

Oxford's administrative structures are quite devolved, and professional/support staff working within the department are employed and line managed by the department: many have been extensively involved in Athena SWAN work (see Section 3).

[Section 2 = 394 words]

3. THE SELF-ASSESSMENT PROCESS

Recommended word count: Bronze: 1000 words | Silver: 1000 words

Describe the self-assessment process. This should include:

(i) a description of the self-assessment team

The department established a Good Practice Steering Group in 2011, which also functioned as a self-assessment team for Athena SWAN leading up to our 2013 application. In 2014 the Good Practice Steering Group became the Good Practice Committee (GPC) – a formal committee of the department, reporting directly to the main Department Committee. The Athena SWAN Working Group (ASWG) was also established, responsible for reviewing detailed data, running staff and student consultations, and presenting information to GPC for consideration.

The remit of GPC is derived from the department's Good Practice Action Plan: to create an outstanding working environment, in which students and staff alike can achieve their full potential, in particular recognising the need to address under-representation of women in the mathematics community, and also to consider other under-represented, disadvantaged or minority groups.

As of 1 October 2016 GPC has been chaired by the Associate Head of Department for Career Development (AHOD (Career Development)). It also has a new Early Career Researchers Committee reporting directly to it, to ensure that issues relating to this group are given appropriate attention.

The GPC and ASWG together form the department's 'self-assessment team' (SAT) for Athena SWAN.

Membership of the SAT

	Name	Title	Role on SAT	Description
	Frances Kirwan	Professor of Mathematics, Associate Head of Department (Career Development)	Chair of GPC	FRS, DBE. Former LMS President. Has led work on women in mathematics nationally. Married with three adult children.
	Jennifer Balakrish-nan	Titchmarsh Research Fellow	Member of GPC	GPC member since 2013; has just left Oxford to take up an Assistant Professorship at Boston University.

	Yves Capde-boscq	Associate Professor	Member of ASWG	Has pioneered initiatives to encourage women towards mathematical research in his college. Has two children in nursery/primary education.
	Rebecca Cotton-Barratt	Admissions Coordinator and Schools Liaison Officer	Member of GPC & ASWG	Works towards increasing women in STEMM and widening participation to Oxford.
	Andrew Dancer	Professor of Mathematics and Director of Graduate Studies (Research)	Member of GPC	Supports doctoral students in the department and chairs the departmental Consultative Committee with Graduate Students.
	Emilie Dufresne	Postdoctoral Research Assistant	Member of GPC	Married to another mathematician based in the North-East, and mother of a toddler: familiar with challenge of 'two body problem'[3].
	Janet Dyson	Faculty Teaching Advisor	Member of GPC	Former lecturer and tutor, set up Access Initiative in college. Has two grown-up daughters; worked part-time when they were young.
	Richard Earl	Director of Undergraduate Studies	Member of GPC	Leads on undergraduate issues; chairs the departmental Consultative Committee with Undergraduates. Also a college tutor. Previously departmental Admissions Co-ordinator.

[3] The two-body problem is a dilemma for partners in academia, relating to the difficulty of both obtaining jobs at the same university or within a reasonable distance of each other.

	Jo French	Doctoral student	Member of GPC	Graduate student representative on GPC; Secretary of Oxford University Student Union's 'Mind Your Head' campaign for two years.
	Eamonn Gaffney	Associate Professor	Chairs ASWG; Member of GPC	Member of the Wolfson Centre for Mathematical Biology. Combines working life with bringing up two young sons.
	Catherine Goodwin	Academic Policy Officer	Member of ASWG & GPC	Coordinated drafting of 2016 Athena SWAN application. Has two young sons and works part-time.
	Sara Jolliffe	Administrator, Wolfson Centre for Mathematical Biology	Member of GPC	Secretary to GPC. Has experienced the challenges of caring for an elderly parent alongside work.
	Ursula Martin	Professor of Computer Science	Member of GPC	EPSRC Established Career Fellow. CBE. Active in initiatives for women in science. MPLS Equality and Diversity representative for Maths/Computer Science.
	Vicky Neale	Whitehead Lecturer	Deputy Chair of GPC	Teaches undergraduates, and works on public engagement with mathematics.
	Ruth Preston	Faculty Services Administrator	Member of GPC	Supports services for faculty, and administers the department's visitor programme. Has two grown-up children and two grandchildren.

	Tom Sanders	Senior Research Fellow and Royal Society University Research Fellow	Member of GPC	GPC member since 2014, and a Departmental Harassment Officer for the past year.
	Christopher Voyce	Head of Research Facilitation	Member of GPC	Nine years' experience supporting staff applying for research grants and assisting early-career researchers to develop their careers.
	Naomi Vides	Mathematics Undergraduate	Member of GPC	Diversity & Inclusion representative on MURC[4]. Has worked to support women in STEMM and women in sport.
	Brenda Willoughby	Personnel Administrator	Member of GPC	Manages the department's Personnel Team. Worked part-time for a period while her son was growing up.

Membership of GPC was initially determined by those who expressed an interest and those whose roles naturally led to their involvement. Members are appointed for a term of two years in the first instance, which is renewable. The membership of the committee is reviewed annually by the Head of Department in consultation with the Chair to ensure that it is representative of staff and students, and volunteers are sought as necessary. The Committee can co-opt additional members as full members or for specific items. Members of the ASWG are appointed by the Head of Department. Serving on the GPC or ASWG is taken into account in workload planning.

Daisy Hung (divisional Athena SWAN Facilitator), and Prof Helen Byrne (divisional Director of Equality and Diversity) receive papers and attend meetings several times a year, providing a link to the wider University.

(ii) an account of the self-assessment process

Full GPC meets twice a term (six times a year) while ASWG meets on an ad hoc basis as required. GPC regularly takes action items to the other major committees of the department (e.g. Teaching Committee, Research Committee).

[4] Mathematics Undergraduate Representative Committee – Naomi has just left and is due to be replaced as undergraduate representative on GPC.

Members of the SAT attend Divisional Athena SWAN meetings, which have provided a number of opportunities for sharing good practice with other departments. Members also consult colleagues in the division and the wider University on a variety of issues, and attend University briefings. Members of the SAT attend LMS Good Practice Workshops and report back.

GPC seeks input from and communicates with the wider department in a variety of ways.

- Issues are discussed at routine and special meetings of faculty and support staff.
- Online surveys are carried out (every 2-3 years for staff and students).
- In 2015-16 we ran focus groups with students and staff. We held some female-only focus groups and some mixed gender focus groups – for both students and staff – to gain a more nuanced understanding of issues in a number of areas.
- We have set up a facebook page 'Oxford Mathematics Good Practice' https://www.facebook.com/OxMathsGoodPractice/.

Drafts of this application were considered by ASWG and by GPC. Key items in the action plan were discussed at Teaching Committee, Research Committee, Graduate Studies Committee and Department Committee. These committees also reviewed the whole application. We sought feedback on the draft application from the Open University, who were writing their application at the same time.

The post of Academic Policy Officer was created in 2014, in part to support Athena SWAN work within the department, and to provide more continuity in this work.

(iii) plans for the future of the self-assessment team

GPC regularly reviews the Athena SWAN Action Plan, and will continue to have primary responsibility for taking this forward within the department, involving other departmental committees as appropriate.

GPC will continue to meet twice a term, and business is being streamlined such that one meeting each term will be devoted to student matters, and one to staff matters.

The new Early Career Researchers Committee will seek and consider feedback on recent and new initiatives relating to this group.

We are currently devising new processes for workload allocation and management (see Section 5.6 (v)), and will ensure that participation in this work is appropriately recognised under these new processes.

Action Plan 25: We will ensure that the new workload allocation model appropriately recognises participation in GPC and good practice activities, and that such duties are appropriately rotated (see also Section 5.6 (v)).

We will continue to involve members of the wider department in this work by a variety of means.

Action Plan 34: We will continue to run staff and student surveys and focus groups every 2-3 years. We will integrate our departmental surveys with a new University 'Staff Experience' survey, to better enable us to benchmark our staff feedback against that in other departments.

Action Plan 30: We will set up a weekly departmental bulletin to improve communications within the department, including communications about our Athena SWAN work.

[Section 3 = 728 words]

4. A PICTURE OF THE DEPARTMENT

Recommended word count: Bronze: 2000 words | Silver: 2000 words

4.1. Student data

If courses in the categories below do not exist, please enter n/a.

(i) Numbers of men and women on access or foundation courses

N/A

(ii) Numbers of undergraduate students by gender

Full- and part-time by programme. Provide data on course applications, offers, and acceptance rates, and degree attainment by gender.

Admissions

We offer four undergraduate programmes in mathematics. The BA/MMath in Mathematics admits around 170 students each year. The degree programmes joint with statistics, computer science, and philosophy each admit approximately 15-30 a year. Due to the small numbers involved in the joint programmes, the data have been combined.[5]

Our proportion of female students compares well with our competitor institutions – those where UK entrants typically have both Maths and Further Maths A-level, achieving A* in both (see Figure 2 below). (Note that Imperial has a much higher proportion of applications from overseas, amongst which women feature more prominently.) It is apparent though that our admissions sit within a concerning context: falling proportions of women are being admitted to Mathematics degrees at the most selective universities in the UK.

[5] The Mathematical Institute takes the lead for the Mathematics degree and for the joint degrees with Statistics and Philosophy. The Computer Science department takes the lead for the joint degree with Computer Science, and so information on that degree is not presented hereafter in this document.

Figure 2: Percentage of female undergraduates on course – Oxford and similar institutions (FTEs – HESA data – G1 Mathematics).

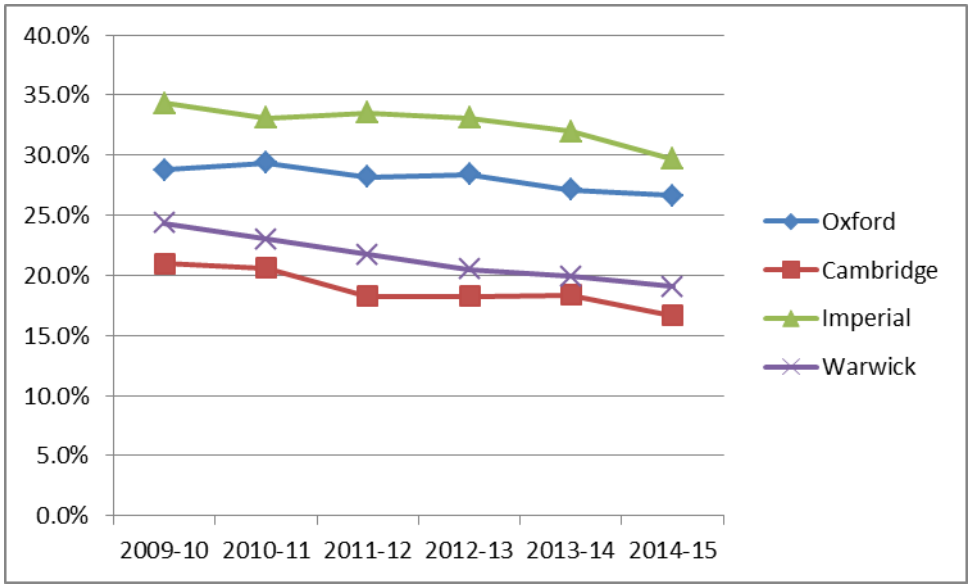


Table 2: Total numbers of female and male undergraduates 2013-15 (Mathematics, and joint degrees with Statistics and with Philosophy, University records, as at 1 Dec each year)

	Female	Male	Total	% Female
2013	208	511	719	28.9%
2014	201	503	704	28.6%
2015	190	501	691	27.5%

Candidates apply to, and are admitted by, colleges. The challenges this presents to coordinating admissions (as highlighted in the *Panel guidance* for Oxford and Cambridge Athena SWAN submissions) have long been recognised by the department. We employ a Schools Liaison/Admissions Officer and other staff to support central coordination of admissions. The Schools Liaison/Admissions Officer manages the process, with the assistance of a bespoke online database, organising communications to and meetings of all college tutors to ensure a 'level playing field' for all applicants. The Department also takes a lead in developing policy and practice in this area (e.g. determining standard admissions criteria; ensuring that all tutors have been provided with information about unconscious bias).

Applicants are shortlisted for interview on the basis of the information in their application and their performance in the Mathematics Admissions Test (MAT), noting the "flags" that are attached to candidates to highlight contextual data. They are then made an offer on the basis of these factors in combination with their performance at interview.

In 2015 an internal review found that women were more likely than men to be offered a place, all other scores and results being equal.

Whilst we do not require Further Maths A-level we strongly encourage it where possible, and the majority of our applicants do have it. It is clear that students taking Further Maths A-level perform more strongly in the selection process, despite measures which we take to control for any difference (for example we base the MAT exclusively on the core material of single Maths A-level). This factor appears to adversely impact the overall success of female applicants, who are less likely to be taking Further Maths A-level (see p.17 below).

A gap of 4 percentage points exists on average between male and female applicants in the MAT, with part of this gap explained by an over-representation of women amongst applicants without Further Maths A-level. However, the MAT is reviewed every five years by a University panel, and no statistically significant gender effects have been found. MAT is better than other mathematics admissions tests in this respect, and we continue to scrutinise it – for example analysing whether men/women do better on certain types of questions.

At interview (graded on a scale of 1-9) men perform better by around half an interview grade. Unconscious bias training is part of interview training, and unconscious bias awareness material is circulated to all interviewers immediately prior to the interview period. Short-listed applicants are guaranteed interviews at two colleges to ensure comparability and fairness.

Table 3: Admissions to Mathematics and joint degrees with Statistics and with Philosophy (data from departmental database, percentages show the proportion progressing to that stage from the previous stage: e.g. the proportion of female applicants who were shortlisted)

	Female							
	Applications		Shortlisted		Offers		Acceptances	
2011	566		265	*46.8%*	74	*27.9%*	65	*87.8%*
2012	459		222	*48.4%*	72	*32.4%*	63	*87.5%*
2013	420		193	*46.0%*	65	*33.7%*	59	*90.8%*
2014	475		236	*49.7%*	68	*28.8%*	56	*82.4%*
2015	561		228	*40.6%*	61	*26.8%*	50	*82.0%*
2016	587		205	*34.9%*	67	*32.7%*	64	*95.5%*
	Male							
	Applications		**Shortlisted**		**Offers**		**Acceptances**	
2011	871		478	*54.9%*	162	*33.9%*	149	*92.0%*
2012	744		411	*55.2%*	161	*39.2%*	143	*88.8%*
2013	759		432	*56.9%*	156	*36.1%*	140	*89.7%*
2014	766		435	*56.8%*	164	*37.7%*	150	*91.5%*
2015	913		445	*48.7%*	174	*39.1%*	156	*89.7%*
2016	1064		504	*47.4%*	179	*35.5%*	159	*88.8%*

Table 4: Percentage of female students at each stage as a proportion of the particular cohort

	Applications	Shortlisted	Offers	Acceptances
2011	39.4%	35.7%	31.4%	30.4%
2012	38.2%	35.1%	30.9%	30.6%
2013	35.6%	30.9%	29.4%	29.6%
2014	38.3%	35.2%	29.3%	27.2%
2015	38.1%	33.9%	26.0%	24.3%
2016	35.6%	28.9%	27.2%	28.7%

Action Plan 2: Admissions Committee will continue to research the individual elements of the admissions process to identify any potential areas of bias.

There are clearly challenges at the national level in terms of uptake of mathematics amongst girls. 38.8% of those taking A-level Mathematics in England in 2014-15 were female (31,830 students). Only 27.8% of those taking A-level Further Mathematics were female (3,919 students) – which helps to explain the low proportion of female students at all of the institutions in Figure 2 above.

Our analyses have made clear that **low uptake of Further Mathematics A-level amongst women has a substantial impact. We see this as an issue critical not only to women's progression in mathematics, but also in other STEMM subjects.** Therefore, we believe that in order to improve our admissions statistics we must focus our efforts on encouraging women to take Mathematics and Further Mathematics A-levels.

Since our 2013 Athena SWAN application we have significantly expanded our outreach programme, in particular events targeted at women, and events targeted at women prior to their-A-level choice in particular – see Section 5.6 (viii) for further details.

In terms of encouraging suitably qualified women to apply here, we believe that our outreach work has had an impact.

Table 5: Proportion of national pool of A-level Further Maths students achieving an A* who apply to study Maths or a joint Maths degree at Oxford

	2012	2013	2014	2015
Male	11.9%	12.2%	13.1%	14.2%
Female	15.1%	15.4%	17.4%	20.7%

Over 20% of the pool of women nationally who get A* at Further Maths A-level now apply to study Mathematics at Oxford. We consider this a tremendous success. Our goal now is to continue this work, and to work with other partners to encourage the uptake of Mathematics and Further Mathematics A-level *in general*.

Action Plan 1.1: We are collaborating with other interested parties to develop online modules to enthuse pre-A-level students about mathematics, which will enable us to reach a much broader audience than face-to-face events.

Action Plan 1.3: We will lobby at a national level with the aim of ensuring that government education policy supports uptake of Maths/Further Maths A-level by women.

Performance on course

Women perform less well than men in certain respects on the undergraduate programmes. For example, women obtain fewer Firsts than men at Parts A and B (assessment on second and third year material) though the picture is more mixed at Part C (assessment on fourth-year material)[6].

[6] Students taking the four-year course obtain a double classification – one classification for Parts A and B, and one classification for Part C.

Table 6: Degree classifications by gender (data from examiners' reports)

	Parts A and B (combines results of second and third-year assessment)				Part C (fourth year assessment)			
	Female	Female %	Male	Male %	Female	Female %	Male	Male %
	First							
2010	14	33.3%	41	36.9%	12	52.2%	37	44.6%
2011	12	28.6%	42	38.9%	7	28.0%	40	52.6%
2012	15	31.9%	42	35.3%	7	30.4%	38	50.0%
2013	8	18.6%	46	40.4%	15	50.0%	41	46.1%
2014	7	16.3%	42	36.5%	7	31.8%	38	50.0%
2015	7	17.1%	41	39.0%	8	44.4%	37	46.8%
2016	10	25.6%	46	45.1%	10	41.7%	34	54.0%
	2.1							
2010	16	38.1%	45	40.5%	9	39.1%	28	33.7%
2011	19	45.2%	48	44.4%	11	44.0%	26	34.2%
2012	20	42.6%	59	49.6%	11	47.8%	25	32.9%
2013	26	60.5%	52	45.6%	7	23.3%	35	39.3%
2014	21	48.8%	57	49.6%	13	59.1%	29	38.2%
2015	25	61.0%	44	41.9%	7	38.9%	32	40.5%
2016	17	43.6%	41	40.2%	10	41.7%	21	33.3%
	2.2							
2010	10	23.8%	17	15.3%	2	8.7%	13	15.7%
2011	8	19.0%	12	11.1%	7	28.0%	7	9.2%
2012	7	14.9%	14	11.8%	5	21.7%	10	13.2%
2013	8	18.6%	13	11.4%	7	23.3%	8	9.0%
2014	12	27.9%	9	7.8%	2	9.1%	9	11.8%
2015	8	19.5%	17	16.2%	3	16.7%	10	12.7%
2016	10	25.6%	14	13.7%	4	16.7%	5	7.9%
	Third							
2010	2	4.8%	7	6.3%		0.0%	5	6.0%
2011	3	7.1%	4	3.7%		0.0%	1	1.3%
2012	2	4.3%	3	2.5%		0.0%	3	3.9%
2013	1	2.3%	1	0.9%	1	3.3%	3	3.4%
2014	3	7.0%	6	5.2%		0.0%		0.0%
2015	1	2.4%	2	1.9%		0.0%		0.0%
2016	2	5.1%	1	1.0%		0.0%	3	4.8%
	Pass/Fail							
2010	0	0.0%	1	0.9%		0.0%		0.0%
2011	0	0.0%	2	1.9%		0.0%	2	2.6%
2012	3	6.4%	1	0.8%		0.0%		0.0%
2013	0	0.0%	2	1.8%		0.0%	2	2.2%
2014	0	0.0%	1	0.9%		0.0%		0.0%
2015	0	0.0%	1	1.0%		0.0%		0.0%
2016	0	0.0%	0	0.0%		0.0%		0.0%

Performance of women in Part B appeared to decline soon after a new exam structure was introduced in 2012, when we moved from 3 hours for 2-unit papers to 1.5 hours for

1 unit papers. From 2016-17 we will therefore be increasing the time permitted in written examinations to see if that has a positive effect.

Action Plan 4.1: Lengthen time permitted in exams.

We have found no conclusive evidence that women perform less well in certain types of assessment (e.g. written examinations).

Our recent analysis of the data demonstrated that, although their average mark is lower, women improve somewhat more on average than men while they are here:

Table 7: Longitudinal study of students taking first exams 2007-2014

	Average mark in first-year exams	Average mark in second-year exams	Average mark in third year exams
Female	61.4	63.3	64.8
Male	65.9	67.0	67.4

This, alongside research done in Cambridge Physics, has informed developments to support women, such as the use of 'scaffolded' problem sheets in the first year (the problems are highly structured and/or give students more guidance about how to proceed). We have also held focus groups with female students and used findings from these, alongside research findings, to inform new guidance given to tutors in supporting female students. We also support the student-led Mirzakhani Society for female and non-binary students (see Section 5.3 (iv)).

Due to the continued differential in performance we have set up a new Working Group to further analyse the data.

A gender gap in attainment is an issue for a number of Oxford departments, and the University has also set up a Working Group to address the problem.

Action Plan 4.2: The departmental Working Group will further explore our data on performance. The Group will also seek to learn from any findings of the University Working Group, and implement appropriate action.

A small number of students fail first-year exams and leave, and a small number withdraw. Colleges work to support students to enable them to stay where possible.

Table 8: Undergraduate completion rates (University annual census data, as at 1 Dec 2015; *2012-13 cohort still taking fourth-year)

	Cohort starting in:	Quali-fied	Failed	With-drew	Incom-plete	Total	Quali-fied	Failed	With-drew	Incom-plete
Female	2009/10	47	2	1		50	94%	4%	2%	
	2010/11	52	1			53	98%	2%		
	2011/12	43	1	4	1	49	88%	2%	8%	2%
	2012/13*	17	1	2	36	56	30%	2%	4%	64%
Male	2009/10	131	5	5		141	93%	4%	4%	
	2010/11	124	2	1		127	98%	2%	1%	
	2011/12	118	4	2	7	131	90%	3%	2%	5%
	2012/13*	30	5	5	95	135	22%	4%	4%	70%

(iii) Numbers of men and women on postgraduate taught degrees

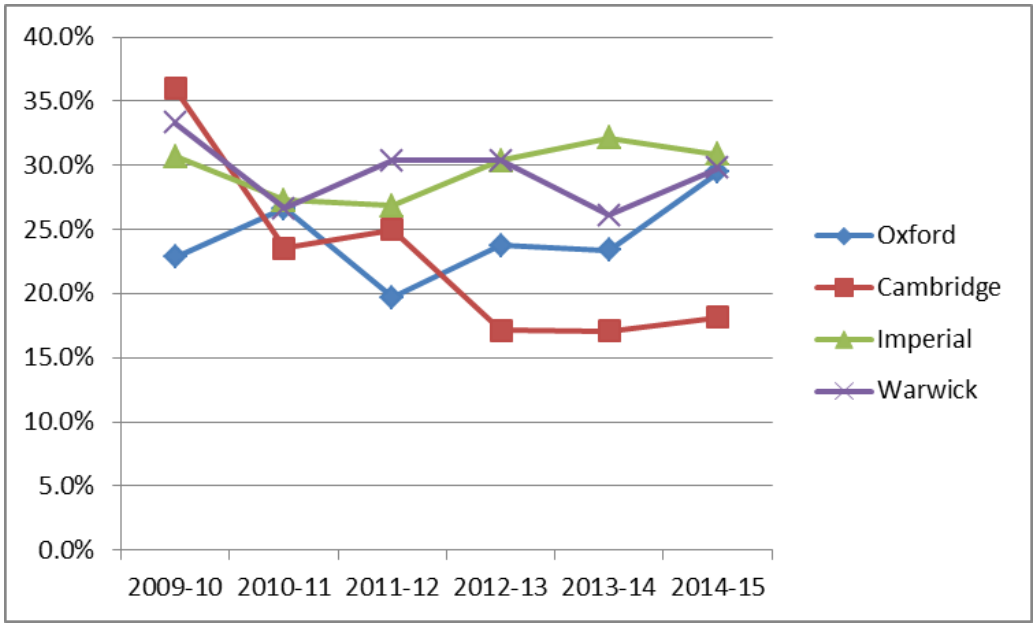
Full- and part-time. Provide data on course application, offers and acceptance rates and degree completion rates by gender.

We offer five Masters programmes (*two in collaboration with other departments) which each admit between 10-35 students a year:

- MSc Mathematical Modelling and Scientific Computing (MMSC)
- MSc Mathematics and Foundations of Computer Science (MFoCS)*
- MSc Mathematical and Theoretical Physics (MTP) *(started 2015-16)**
- MSc Mathematical and Computational Finance (MCF)
- MSc Mathematical Finance (MF)

Due to the small numbers involved, the data for all courses have been combined. All courses are offered on a one-year full-time basis only except for the MSc in Mathematical Finance, which is designed for those in full-time employment, and is taken on a part-time basis over 2.5-6 years.

Figure 3: Female taught graduate students in mathematics, as a proportion of all taught graduate students in mathematics (FTEs - HESA data)



We have had some recent success in improving the number of women on taught graduate programmes, though the numbers are relatively small and vary from year to year.

The number fell again in 2015-16 (comparator data not yet available from HESA):

Table 9: Total numbers of female and male taught postgraduates in mathematics 2013-15 (University records, as at 1 Dec each year)

	Female	Male	Total	% Female
2013	31	106	137	22.6%
2014	36	110	146	24.7%
2015	21	127	148	14.2%

Overall, women who apply to our postgraduate taught programmes do not have such a good success rate as men, but this is largely due to the impact of one particular MSc:

Table 10: Applications, offers and acceptances, by gender (University data, postgraduate taught study in mathematics, Oxford University, years of entry 2011-12 - 2015-16)

	Female			Male		
Year of Entry	Applications	Offers	Acceptances (students starting)	Applications	Offers	Acceptances (students starting)
2011-12	119	28	18	307	138	92
2012-13	114	35	26	257	110	71
2013-14	100	32	22	303	123	85
2014-15	122	40	32	292	132	87
2015-16	143	30	17	425	145	68

Table 11: Percentage of female students at each stage of the admissions process for taught postgraduate study, as a proportion of the particular cohort (including MSc Mathematical and Computational Finance)

Year of Entry	Applications	Offers	Acceptances
2011-12	27.9%	16.9%	16.4%
2012-13	30.7%	24.1%	26.8%
2013-14	24.8%	20.6%	20.6%
2014-15	29.5%	23.3%	26.9%
2015-16	25.2%	17.1%	20.0%

If we remove the MSc in Mathematical and Computational Finance (MScMCF) success rates are more comparable:

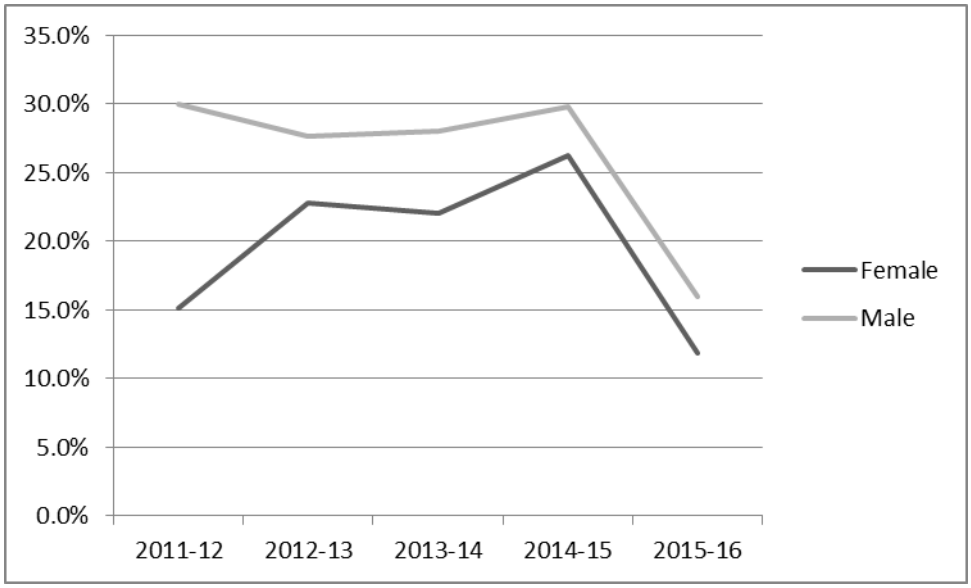
Table 12: Percentage of female students at each stage of the admissions process for taught postgraduate study, as a proportion of the particular cohort (excluding MSc Mathematical and Computational Finance)

Year of Entry	Applications	Offers	Acceptances
2011-12	18.9%	19.0%	18.2%
2012-13	24.0%	24.8%	29.9%
2013-14	16.1%	16.9%	16.7%
2014-15	20.0%	18.5%	20.9%
2015-16	18.6%	13.2%	15.0%

MScMCF prepares students for employment in the financial sector and has a very particular demographic. It receives many Home and EU applications from men, but a much larger number of applications from overseas – in particular China – where applications from women are much more numerous. Applications from China are in general weaker, which skews the results by gender. However, Chinese women do perform particularly poorly at admission. The selection of applicants to interview is mainly determined by fixed criteria in terms of score achieved on an admissions exercise. Pre-interview meetings are held to brief all staff involved with interviews on the potential effects of unconscious bias, and a Chinese female research student now sits on every interview panel (there are no female faculty in this area).

Overall, differences in success rates between male and female applicants to MSc programmes are closing:

Figure 4: Postgraduate taught study: acceptances (students starting) as a proportion of applications, by gender



When MScMCF is excluded there is no consistent difference, and we are continuing to analyse the factors at play in relation to that MSc.

Action Plan 5.1: We will undertake analysis of each stage of the admissions processes for MScs, as has been done at undergraduate level. We will review admissions practices; drawing on good practice from elsewhere, with particular attention to the MSc MCF.

There is evidence of some apparent underperformance of women at MSc level:

Table 13: MSc results by gender for cohorts starting 2009-2014

Programme		Dist-inction	% Dist-inction	Pass	% Pass	Exit Award	% Exit Award	Fail	% Fail
MSc Mathematical Modelling &	Female	7	16.7%	34	81.0%	1	2.4%		
Scientific Computing	Male	36	40.9%	51	58.0%			1	1.1%
MSc Mathematical &	Female	10	23.8%	32	76.2%				
Computational Finance	Male	31	23.3%	102	76.7%				
MSc Mathematics & Foundations	Female	19	54.3%	16	45.7%				
of Computer Science	Male	43	58.9%	30	41.1%				
MSc/PGDip Mathematical Finance	Female	0	0.0%	5	62.5%	3	37.5%		
	Male	12	19.4%	32	51.6%	18	29.0%		

Note: the MSc in Mathematical Finance (MF) is specifically designed so that students can leave early with an 'Exit award' PGDiploma – it is one of the attractions of the programme to those working in industry.

MMSC has analysed four years' data but failed to find conclusive evidence that assessment type (written exam, project) influences performance by gender. It was found that although fewer women were getting distinctions, they often obtained 'high' passes. Clearly, more work is needed here.

Action Plan 6.1 and 6.2: We will analyse performance by gender on the MScs – for example across different types of assessment (e.g. written examinations, dissertations), as has been and is being done at the undergraduate level. We will produce guidance for MSc tutors (as has been produced for undergraduate tutors) on the basis of educational research findings and feedback from student focus groups.

We are currently in the process of planning a new MSc in Mathematical Sciences (to start in 2019-20). We are devising practices from the start to be inclusive. For example, we are planning a new style of class teaching which incorporates small student study groups, responding to student feedback. As we undertake this planning we will begin to roll out these ideas to existing courses.

Action Plan 6.3: Design processes for a proposed new MSc to be as inclusive as possible, for example introduce small student study groups within classes, and roll out the new practices to existing programmes.

Degree completion rates are high:

Table 14: Completion rates for postgraduate taught courses (University data, as at 1 Dec 2015)
(Note: most 'Incomplete' are on the part-time MSc Mathematical Finance, which is taken over 2.5-6 years.)

	Cohort starting in:	Complete	Fail	With-drawn	Incom-plete	Total	Complete	Fail	With-drawn	Incom-plete
Female	2010/11	20				20	100%			
	2011/12	17				17	100%			
	2012/13	23		1	2	26	88%		4%	8%
	2013/14	21			1	22	95%			5%
	2014/15	25			7	32	79%			22%
Male	2010/11	58		3	1	62	93%		5%	2%
	2011/12	68		2	5	75	90%		3%	7%
	2012/13	53	1	4	14	72	73%	1%	6%	19%
	2013/14	58		2	25	85	69%		2%	29%
	2014/15	53		2	31	86	61%		2%	36%

(iv) Numbers of men and women on postgraduate research degrees

Full- and part-time. Provide data on course application, offers, acceptance and degree completion rates by gender.

Approximately 60 doctoral students are admitted each year, with just under half being admitted to our two new EPSRC-funded Centres for Doctoral Training (CDTs). **We have a low proportion of women on postgraduate research degrees, and it has fallen in the last few years. This is a serious cause for concern.**

Figure 5: Female graduate research students in mathematics, as a proportion of all graduate research students in mathematics (FTEs - HESA data)

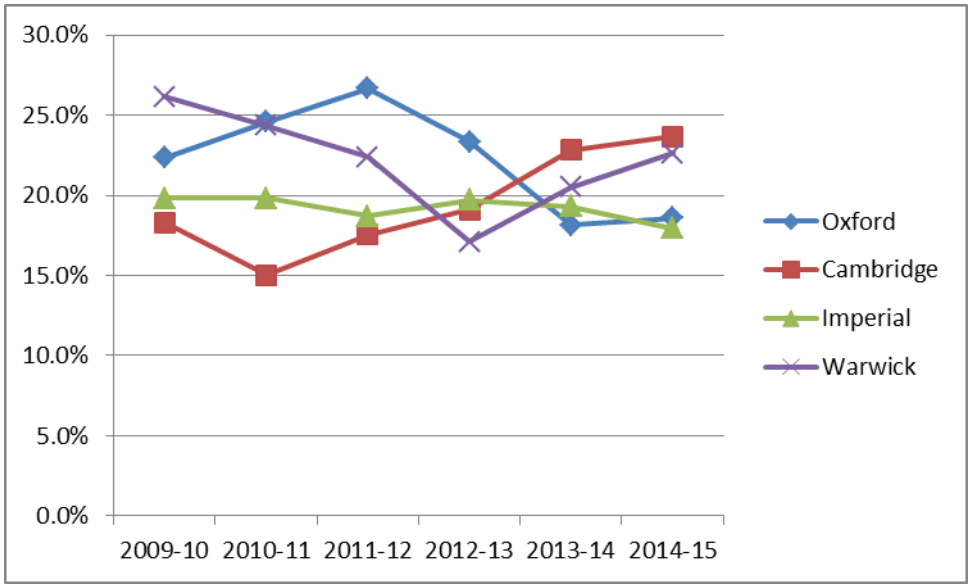


Table 15: Total numbers of female and male graduate research students in mathematics 2013-15 (University records, as at 1 Dec each year)

	Female	Male	Total	% Female
2013	44	180	224	19.6%
2014	43	196	239	18.0%
2015	42	193	235	17.9%

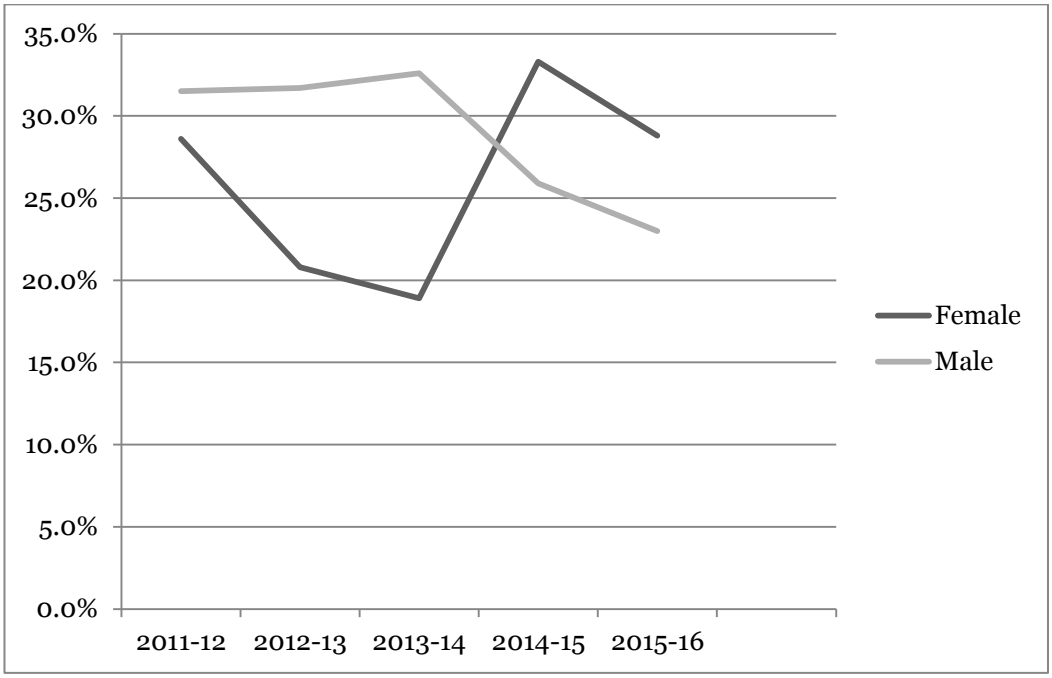
Table 16: Applications, offers and acceptances, by gender (postgraduate research study in mathematics, University records, years of entry 2011-12 – 2016-17)

	Female			Male		
Year of Entry	Applications	Offers	Acceptances (students starting)	Completed Applications	Offers	Acceptances (students starting)
2011-12	49	14	10	203	64	37
2012-13	53	11	5	240	76	40
2013-14	53	10	5	242	79	45
2014-15	66	22	9	340	88	51
2015-16	80	23	12	374	86	48

Table 17: Percentage of female students at each stage of the admissions process for postgraduate research study, as a proportion of the particular cohort

Year of Entry	Applications	Offers	Accepts
2011-12	19.4%	17.9%	21.3%
2012-13	18.1%	12.6%	11.1%
2013-14	18.0%	11.2%	10.0%
2014-15	16.3%	20.0%	15.0%
2015-16	17.6%	21.1%	20.0%

Figure 6: Postgraduate research study: offers made as a proportion of applications received, by gender



There does not appear to be any consistent bias in admissions processes – in some years women are more successful than men in being made an offer, in some years less successful. However, we are conducting a review of our admissions procedures to ensure that these are functioning optimally at this crucial stage of the academic career.

Action Plan 9: Review and revise guidance given to those selecting students for admission, to make it as clear as possible, so that they are best supported through the process.

The primary issue appears to be that we are not attracting sufficient female applicants, rather than that female applicants are less successful.

We thoroughly revamped our admissions website, to make it more attractive, and added a page on women at Oxford.

Action Plan 7: We are developing a 'virtual open day', to give a more vivid impression of research study at Oxford to a wider audience. We will also explore possibilities for obtaining funding for graduate scholarships specifically for female students.

There is variation in the number of women across programmes, with industry-based CDTs (Industrially Focussed Mathematical Modelling / Systems Approaches to Biomedical Sciences) having much higher proportions of women. It does appear that women may have a stronger orientation towards careers in industry (see 5.3 (iv) for further discussion).

Table 18: Students on postgraduate research courses at Oxford by gender (University data - 1 Dec 2015)

	Female	Male	Total	% Female
Doctorate in Mathematics	24	133	157	15.3%
MSc (Research) in Mathematics		1	1	0.0%
EPSRC CDT Partial Differential Equations: Analysis and Applications (new)	2	24	26	7.7%
EPSRC CDT Industrially Focussed Mathematical Modelling (new)	7	16	23	30.4%
EPSRC CDT Life Sciences Interface		2	2	0.0%
EPSRC & MRC CDT Systems Approaches to Biomedical Science	5	6	11	45.5%
EPSRC CDT Systems Biology	4	11	15	26.7%
Total	**42**	**193**	**235**	**17.9%**

Some admissions data led us to speculate that women were less likely to accept an offer from us. So in 2015 we set up an online survey for all those withdrawing their applications. Initial indications were, as suspected, that funding is a major factor for all. We have been seeking to streamline the timetable for making offers and funded offers in order to be able to make these as early in the admissions round as possible. We are also striving to make the interview experience much more welcoming, and have begun to offer interviewees the opportunity to have lunch with students (female interviewees

to have lunch with female students where possible) and take part in other departmental activities, to give a much greater insight into the life of the department.

Action Plan 8: Continue to analyse data on withdrawers as we get a larger dataset, to better understand factors which might be crucial to retaining female applicants. Ensure that all interviewees have an enhanced interview experience.

Completion rates are relatively high:

Table 19: Outcomes for postgraduate research students (University data, as at 1 Dec 2015)

	Cohort starting in:	Qual-ified	Sub-mitted	Incom-plete	Lower Award	With-drew	Total	Qual-ified	Sub-mitted	Incom-plete	Lower Award	With-drew
Female	2007/8	4	1			1	6	67%	17%			17%
	2008/9	13			1	1	15	87%			7%	7%
	2009/10	13					13	100%				
	2010/11	9	2	3			14	64%	14%	21%		
	2011/12	4	4	2			10	40%	40%	20%		
Male	2007/8	37			2	1	40	93%			5%	3%
	2008/9	28	2			5	35	80%	6%			14%
	2009/10	37	2			3	42	88%	5%			7%
	2010/11	25	3	2	1	2	33	76%	9%	6%	3%	6%
	2011/12	19	9	8	1	1	38	50%	24%	21%	3%	3%

(v) Progression pipeline between undergraduate and postgraduate student levels

Identify and comment on any issues in the pipeline between undergraduate and postgraduate degrees.

Undergraduates have the option to leave after their 3rd year with a BA or continue to the 4th year to obtain an MMath. Historically women have been disproportionately likely to leave after the third-year, regardless of degree class obtained in the third-year. We identified this as a crucial issue in our 2013 application and have addressed this in a number of ways (see Section 5.3 (iv) and Action Plan 3).

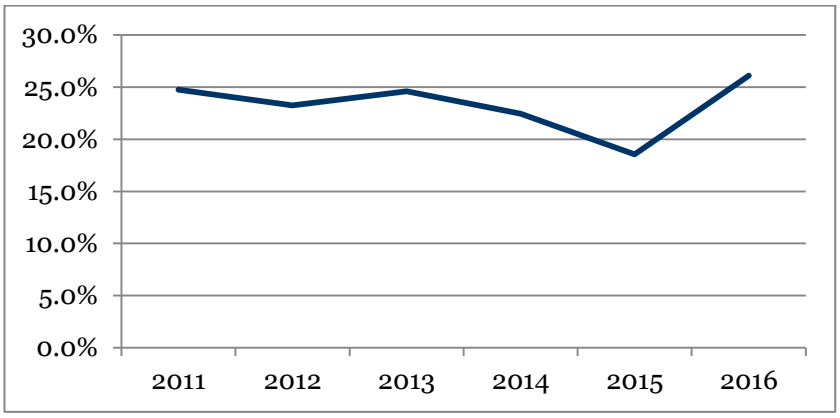
The proportion of women taking the fourth-year in 2016 was healthier than in recent years, and is now – for the first time - in line with the proportion of women starting undergraduate degrees.

Table 20: Students taking the fourth-year of the undergraduate MMath degree

Fourth-year Exam taken in:	Women	Men	Women as % of those taking fourth year
2011	25	76	24.8%
2012	23	76	23.2%
2013	29	89	24.6%
2014	22	76	22.4%
2015	18	79	18.6%
2016	24	68	26.1%

(Note: 2016 was the first year of students paying increased (£9k) fees – we believe this may have slightly lowered the overall numbers taking the fourth year.)

Figure 7: Women as a proportion of those taking the fourth year of the MMath degree, by examination year



Lower proportions of women go on to undertake postgraduate research:

Table 21: Progression to higher degrees by research (Oxford mathematics undergraduate respondents to Destinations of Leavers from Higher Education (DLHE) survey (leavers 2012-2014)

	Female	Male
Total respondents	58	189
Undertaking a higher degree by research	12 (20.7%)	54 (28.6%)

We are now focussing on undergraduate summer research projects as a way to enthuse students to carry on into the fourth year and future research, and are continuing to develop mechanisms for providing more information to women about postgraduate research – see Section 5.3 (iv) for details.

4.2. Academic and research staff data

(i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

As in other Mathematics departments in the UK, female faculty numbers are low. Whilst numbers compare reasonably well with UK averages (see Table 22 below), they are notably better than those at institutions with which we are routinely compared within the Russell Group (see below). We have a relatively high proportion of female professors – substantially better than some of these particular institutions, and higher than the UK average. Of the seven female mathematicians who are Fellows of the Royal Society, three are active members of our faculty.

Table 22: Academic staff by post – Oxford and UK

Oxford University (data from University sources: headcounts, except for two posts which are equally shared with other departments, and are counted as 0.5 each)									
	Research staff[7]			**Academic staff[8] (non-professorial)**			**Academic staff (professorial)**		
	Female	**Male**	**% Female**	**Female**	**Male**	**% Female**	**Female**	**Male**	**% Female**
2012	10	50	16.7%	8	34	19.0%	4.5	35	11.4%
2013	13	65	16.7%	9	39	18.8%	4.5	35	11.4%
2014	16	67	19.3%	7	39	15.2%	5.5	43	11.3%
2015	12	54	18.2%	8	37	17.8%	6	44	12.0%
2016	13	49	21.0%	9	38	19.1%	6	46	11.5%
All HE institutions in the UK (data from Athena SWAN website, FTE in Mathematics)									
	Academic staff (non-professorial)[9]						**Academic staff (professorial)**		
	Female		**Male**		**% Female**		**Female**	**Male**	**% Female**
2013-14	655		2240		22.7%		60	645	8.7%

[7] 'Research staff' – staff on a research-only academic contract.

[8] 'Academic staff' – staff on an academic contract which includes both teaching and research.

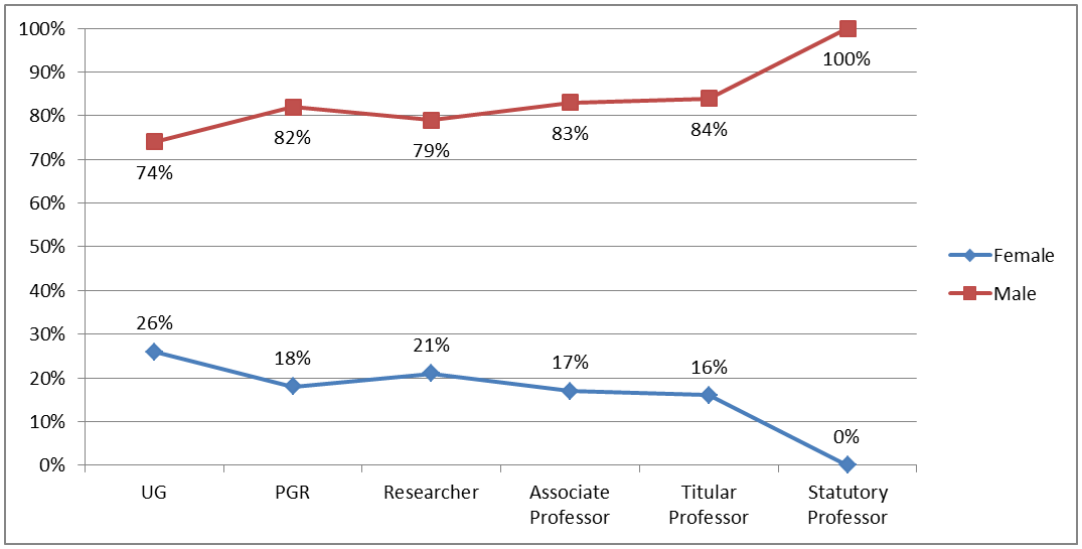
[9] HEFCE definition of academic staff – equivalent to 'Research staff' and 'Academic staff' categories at Oxford.

Table 23: Comparators - proportions of female staff at some other institutions

University of Cambridge (data from Faculty of Mathematics Athena SWAN application 2013)			**University of Warwick (data from Department of Mathematics Athena SWAN application 2013)**		
Researchers	Faculty	Professors	Researchers	Associate Professors	Professors
14%	8%	2%	17%	14%	3%
University of Bristol (data from School of Mathematics' Athena SWAN application 2014)			**Imperial College London (data from 2016 Athena Swan submission)**		
Researchers	Lecturers & Readers	Professors	Researchers	Lecturers & Readers	Professors
12%	17%	0%	22%	9%	2%

The proportion of women also remains fairly steady throughout the pipeline until the most senior level:

Figure 8: Academic pipeline 2015-16: staff and students



Academic posts

Oxford titles and grades do not parallel those in other universities:

- Statutory Professors (SP) (0%) are the most senior posts. They are university-only post holders and have no college teaching responsibilities, although they are, in most cases, members of a college. The number of SPs is limited by University statute.

- Titular Professors (TP) (16% F) are Associate Professors (AP) and senior researchers who have been awarded the title of professor in the University's annual Recognition of Distinction (RoD) exercise, described in section 5.1 (iii).
- Associate Professors (17% F) are the standard academic post and correspond very approximately to Senior Lecturers at other UK universities. They hold a joint contract of employment between the department and a college and have teaching and administrative responsibilities in both, as well as conducting research.

There are a small number of other academic posts with atypical contracts, such as externally funded teaching and research fellowships, and Departmental Lectureships.

Table 24: Academic staff: breakdown by grade and gender (University data, headcounts, except 2 joint appointments with other departments which are accounted for as 0.5 each)

		Female	Male	% Female	All full-time except:	All permanent except:
Statutory Professor	2012	0	14	0.0%		
	2013	0	13	0.0%		
	2014	0	14	0.0%		
	2015	0	14	0.0%		
	2016	0	15	0.0%	1 part-time male	
Titular Professor	2012	4.5	21	17.6%	1 part-time male	
	2013	4.5	22	17.0%	1 part-time male	
	2014	5.5	29	15.9%	1 part-time male	1 male fixed term
	2015	6	30	16.7%	1 part-time male	
	2016	6	31	16.2%	1 part-time male	
Associate Professor (also includes 2 'Readers' - a post no longer recruited to, which is at a level between AP and Professor)	2012	6	27	18.2%		
	2013	7	32	17.9%		
	2014	6	31	16.2%		
	2015	5	29	14.7%		
	2016	6	29	17.1%		
Other (includes some externally funded teaching and research fellowships, and Departmental Lectureships)	2012	2	7	22.2%	1 male part-time	4 male, 1 female fixed-term
	2013	2	7	22.2%	2 male part-time	4 male, 1 female fixed-term
	2014	1	8	11.1%	2 male part-time	4 male fixed-term
	2015	3	8	27.3%	1 female, 1 male part-time	5 male, 1 female fixed-term
	2016	3	9	25.0%	1 female, 1 male part-time	3 male, 1 female fixed-term

Numbers of women have not grown in recent years. SPs and APs are appointed via recruitment exercises only (there is no promotions process to these roles). The number of SPs is limited by University statute (the research area is also specified by statute to some extent), and currently all are men. In the three years to 2016, no SP positions fell vacant, and only one has been filled in the last five years. However, starting in 2016, a number fall vacant, and we are prioritising identifying a diverse field of candidates (see Section 5.1 (i)). We have in the past used 'RSIV' posts (which the department can ask the university to create, and which can have pay and duties equivalent to statutory professorships) to supplement the small number of statutory professorships. Currently three female titular professors hold 'RSIV' posts (two joint with other departments), and have pay and duties equivalent to statutory professors. Eight men (7.25 FTE) hold RSIV posts, with varying contracts.

Despite efforts to recruit more women to AP and other posts (see section 5.1 (i)) numbers have only remained stable.

Academic staff are rarely part-time, and when they are this can be due to other professional commitments, or impending retirement, rather than family responsibilities. It has culturally been the 'norm' for staff to be full-time, but we are exploring whether there is demand for part-time working, and how it might be better facilitated and supported (see Section 5.5).

Research posts

The proportion of female postdoctoral researchers is low, although comparable to the proportion of female doctoral students. There has been limited change in the figures over the last five years. We have focussed on support for career development for this group (see Section 5.1).

Table 25: Research staff: breakdown by grade and gender (University data, headcounts)

		Female	Male	% Female	all full-time except:
Grade 6/7 (junior) fixed term research staff[10]	2012	8	43	15.7%	1 male part-time
	2013	12	51	19.0%	1 female, 1 male part-time
	2014	13	45	22.4%	1 female part-time
	2015	10	38	20.8%	1 female part-time
	2016	10	37	21.3%	2 female, 3 male part-time
Grade 8/Marie Curie (senior) fixed term research staff	2012	2	4	33.3%	1 female part-time
	2013	1	8	11.1%	
	2014	3	11	21.4%	
	2015	2	11	15.4%	
	2016	3	7	30.0%	
Other fixed term research staff	2012	0	0		
	2013	0	2	0.0%	
	2014	0	6	0.0%	
	2015	0	1	0.0%	
	2016	0	1	0.0%	
Other research staff - senior, permanent (includes Royal Society Professor and Senior Research Fellows)	2012	0	3	0.0%	
	2013	0	4	0.0%	1 male part-time
	2014	0	5	0.0%	1 male part-time
	2015	0	4	0.0%	1 male part-time
	2016	0	4	0.0%	1 male part-time

Historically research staff have usually been full-time, but we now have more who are part-time, and, where possible, we are advertising new posts as being available on a part-time, or job-share basis.

[10] There are only two Grade 6 researchers – one male and one female.

Note: numbers of academic/research staff who are both female and BME are so low that no meaningful analysis of this data is possible.

SILVER APPLICATIONS ONLY

Where relevant, comment on the transition of technical staff to academic roles.

N/A

(ii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender

Comment on the proportions of men and women on these contracts. Comment on what is being done to ensure continuity of employment and to address any other issues, including redeployment schemes.

Associate Professors and Statutory Professors are appointed on permanent contracts to retirement[11]. Departmental Lecturers have historically been on fixed-term contracts. However, we have recently taken steps to harmonise the terms and conditions of these posts with those of Associate Professors. Three (of which one female) out of six (of which two female) Departmental Lecturers now hold permanent contracts, and procedures for probationary review of these staff are being made more consistent with those for other academic staff.

Postdoctoral research assistants and research fellows are all fixed-term appointments (see Table 25 above), usually externally funded. They rarely stay in Oxford at the end of their contract: it is traditionally seen as beneficial to move between institutions at this stage of the career. The department has numerous initiatives, such as ECR mentoring and career development fellowships, to support this group in making the transition to permanent academic roles (See Section 5.3 (iii)).

The only staff on zero-hours contracts are teaching assistants: doctoral students who are paid to teach on an 'as needed' basis, as part of their professional development, and within limits which are compatible with the pursuit of their research. All doctoral students are expected to do this.

[11] For Associate Professors this is subject to a five-year probationary period.

(iii) Academic leavers by grade and gender and full/part-time status

Comment on the reasons academic staff leave the department, any differences by gender and the mechanisms for collecting this data.

Retention rates of academic staff are high. University 'exit' data shows as follows:

Table 26: Academic and research staff leavers

		2012		2013		2014		2015		Total leavers 2012-2015	Total leavers as % of staff in post
		Staff left	Staff in post	Staff left	Staff in post	Staff left	Staff in post	Staff left	Staff in post		
Academic staff	Female	2	14		12	2	13	2	13	6	11.5%
	Male	5	68	3	68	1	74	5	81	14	4.8%
Research staff	Female	7	9	2	8	4	13	7	16	20	43.5%
	Male	18	50	18	51	36	65	30	67	102	43.8%
Female academic staff: reasons for leaving		2 resigned for career reasons, 4 retired. (All had been full-time.)									
Male academic staff: reasons for leaving:		6 resigned for career reasons, 3 resigned for personal/family reasons, 1 came to the end of a fixed-term contract, 4 retired. (2 had been part-time.)									
Female research staff: reasons for leaving		9 were at the end of a fixed term contract, 2 resigned due to pay/conditions, and 2 for 'other' reasons. (1 had been part-time.)									
Male research staff: reasons for leaving:		47 were at the end of a fixed term contract, 6 resigned due to pay/conditions, 5 resigned for personal/family reasons, and 6 for other reasons. (4 had been part-time.)									

During this period only two female academic staff (Associate Professors) actively chose to leave (as opposed to leaving due to retirement). Both went on to promotions (to Chairs) elsewhere.

We have no reason to believe there is a gender element to leavers' data. Our repeated experience is that if any factors 'push' academic staff away from Oxford they are the relatively high cost of living and low academic salaries compared with overseas (especially the USA).

The majority of our postdocs go on to progress their careers elsewhere, but we currently do not formally record more leaving information than is shown in the table above.

Action Plan 16: The Advisor for Early Career Researchers will explore in more detail with research staff their reasons for leaving/destinations, and this information will be recorded.

[Section 4 = 3,083 words]

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

Recommended word count: Bronze: 6000 words | Silver: 6500 words

5.1. Key career transition points: academic staff

(i) Recruitment

Break down data by gender and grade for applications to academic posts including shortlisted candidates, offer and acceptance rates. Comment on how the department's recruitment processes ensure that women (and men where there is an underrepresentation in numbers) are encouraged to apply.

One of our greatest challenges is recruiting women to academic and research posts. This is in part due to the lack of women in mathematics nationally and internationally. The following figures show no statistically significant difference between the numbers of women and men starting with us, given the numbers applying.

Table 27 : Recruitment to academic and research posts 2011/12 – 2014/15

Recruitment for Associate Professors and Professors*

* Only one statutory professorship - 1 woman and 7 men applied; man appointed.

	Female	Male	Total	Female as % of total
Applied	135	795	930	14.5%
Shortlisted	17	121	138	12.3%
Offer Accepted	3	21	24	12.5%

Recruitment to other academic posts

	Female	Male	Total	Female as % of total
Applied	14	83	97	14.4%
Shortlisted	3	20	23	13.0%
Offer Accepted	1	5	6	16.7%

Recruitment to research posts

(4 Grade 6 posts; 64 Grade 7 posts; 5 Grade 8 posts)

	Female	Male	Total	Female as % of total
Applied	247	1207	1454	17.0%
Shortlisted	55	238	293	18.8%
Offer Accepted	12	72	84	14.3%

At the time of our last application we modified the further particulars for jobs to include information on maternity and adoption leave, childcare and other support. Since then we have reviewed the information again to emphasise the importance of good practice to the department. Academic and research vacancies are now advertised to the 'European Women in Mathematics' mailing list. In the three-year period before our last application 9.4% of applicants for academic jobs were women; this has increased to 14.5%. The corresponding figures for research applicants were 15.9% and 17.0%.

The department follows the University's Equality Policy and code of practice to avoid discrimination in recruitment https://www.admin.ox.ac.uk/eop/policy/equality-policy/. All Chairs of Selection Panels are required to complete recruitment training. In 2013 we adopted a policy that all selection panels should have both male and female members.

Chairs of selection panels for academic posts are required to seek out applications from both sexes, and to report to the Division on gender balances at application, shortlisting and interviewing stages.

A number of statutory chairs fall vacant in 2016 and beyond. In order to maximise the number of potential female candidates we have established a process whereby a 'Search Committee' is appointed for each chair. The role of the Search Committee is to identify potential candidates of both sexes, and from different backgrounds, and diverse geographical areas. **We hope that this will lead to a greater diversity in the pool of applicants for these highly prestigious positions, and that we may appoint our first female statutory chairs**.

Action Plan 17: We will monitor the operation and impact of Search Committees for statutory professorships.

Over the last couple of years we have taken steps to raise awareness of unconscious bias. In the 2016 staff survey 84% of academic staff said that they had been provided with information/training on unconscious bias.

Action Plan 31: Run further training sessions to ensure that *all* staff are aware of the potential impact of unconscious bias on decision-making.

(ii) Induction

Describe the induction and support provided to all new academic staff at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

New academic staff have a comprehensive induction involving senior members of the department and covering teaching, research, and support in planning for research funding. They are assigned a mentor, meet with the Head of Department, and attend the University's three-day course 'Introduction to academic practice at Oxford'.

At the time of our last application (2013) there was no consistent induction process in place. Now all new staff have a formal induction programme which covers practical matters and signposts further sources of support and guidance. The Advisor for Early Career Researchers (currently a female Professor in the department) meets with all new fixed-term research staff soon after arrival.

Our survey data show that as cohorts move through more staff have experienced an induction: in 2012 35.5% of respondents had experienced induction, in 2016 it was 51.9%, and 79.3% of staff who had been in the department for five years or less. All academic staff respondents in 2016 who had experienced an induction and expressed a view had found it useful.

(iii) Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

There is no formal promotions process at Oxford for any category of staff. However, all Associate Professors and senior research staff are eligible to enter the annual 'Recognition of Distinction' exercise. This is the process by which the title of full Professor can be conferred on those judged to have demonstrated exceptional achievements in research, teaching and citizenship. Success in the exercise does not change an individual's underlying role but APs who are awarded title receive a salary increase of £2.6k p.a. and, from Autumn 2016, are eligible to apply for professorial merit pay awards.

All faculty are circulated with information about the process of applying for Recognition of Distinction, and are encouraged to talk about it to the Head of Department or another named senior faculty member. (We have ensured the availability of both a male and female senior faculty member for staff to consult, with experience of serving on University panels awarding Recognition of Distinction.)

When women have applied their success rates have been comparable to those of men (see Table 28 below), and the ratio of Titular Professor:Associate Professor is the same across genders (see Table 24 above).

Table 28: Applications for 'Recognition of Distinction'

[REDACTED]

We have recently introduced a number of measures to support career development and progression for postdoctoral research staff and our priority now is to do more to support academic staff (see Section 5.3 (iii)). We are currently formalising the role of Research Groups in this. All academic staff are members of a Research Group, and senior members of the Group often do much to guide and mentor other members. However, these responsibilities have not previously been formally articulated.

Action Plan 19: Research Groups will be responsible for providing additional support for career development of academic staff including supporting staff in applying for Recognition of Distinction and professorial merit awards.

(iv) Department submissions to the Research Excellence Framework (REF)

Provide data on the staff, by gender, submitted to REF versus those that were eligible. Compare this to the data for the Research Assessment Exercise 2008. Comment on any gender imbalances identified.

Table 29: Staff entered for REF 2014

	Female	Male	All
Eligible staff entered	[redacted]		
Eligible staff not entered			
% of those eligible who were entered	81.0%	93.8%	91.7%

The department followed University guidance to maximise the quality of the publications of those submitted rather than the number of staff submitted. Once the Panel became aware that a higher proportion of men than women were going to be submitted, they discussed this in some detail with the Pro-Vice-Chancellor for Research. The papers of all those on the borderline for submission were evaluated independently by two, three, or more assessors.

The department no longer holds comprehensive records of those who were entered for RAE 2008 compared with the eligible population, but on that occasion virtually all staff were entered.

SILVER APPLICATIONS ONLY

5.2. Key career transition points: professional and support staff

(i) Induction

Describe the induction and support provided to all new professional and support staff, at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

Professional and support staff have a similar induction timetable to academic staff – which ensures that all practicalities are covered, that they meet with their line manager and any other team members, and are assigned a mentor. Further sources of support and guidance are also signposted. Recent focus group feedback on induction has been positive, with all agreeing that it has improved significantly in recent years, and now broadly works well.

(ii) Promotion

Provide data on staff applying for promotion, and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

There is no formal promotions process and promotion can usually only be achieved by applying for a new post. Focus group discussions have indicated that, due to the size of the department, many understand that opportunities for progression are necessarily only available outside the department. However, posts can also be regraded (to a higher grade) if a change in duties warrants this. Feedback indicated that the department should do more to demonstrate equality of opportunity in the regrading of posts. In the last five years the department has applied to the University for the posts of seven female and three male members of support staff to be regraded. However, some staff are not clear on the process, or that it is available to them.

Action Plan 22: Ensure that staff better understand the regrading process, and that it is seen as being fair and accessible to all: incorporate clear guidelines for staff and managers into new guidance for annual Career Development Review discussions.

Professional and Support staff (and Research Staff) may also receive an award under the University's Reward and Recognition Scheme. Staff can self-nominate or be nominated to receive a one-off or recurrent pay increment, or a recognition award (a fixed, one-off payment). In the past three years the following staff have received an award. Women have received more awards than men – higher even than might be indicated by the higher proportion of women amongst professional and support staff (74.5%).

Table 30: Awards made to professional and support staff under the University's Reward and Recognition Scheme 2014-16

	Women	Men	% Women
Non-recurrent increments (grades 1-5)	3	0	100%
Non-recurrent increments (grades 6-10)	4	1	80%
Recurrent increments (grades 1-5)	3	0	100%
Recurrent increments (grades 6-10)	11	8	58%
Recognition awards (grades 1-5)	15	0	100%
Recognition awards (grades 6-10)	10	0	100%
Total	**46**	**9**	**84%**

5.3. Career development: academic staff

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

The Oxford Learning Institute (OLI) runs a wide range of courses for staff. Some training sessions are compulsory – such as training for those who will be chairing selection panels.

Table 31: Attendance by staff at University training courses 2011-2016

2011-2016: Staff attending OLI training courses				
	No of staff attending one or more courses	No. of courses attended by those staff	% of those attending courses who are female	*[% of staff in that category who are female (for comparison purposes)]*
Academic	57	117	19.30%	*[15.2%]*
Researcher	57	98	18.90%	*[21%]*
Support	31	88	77.40%	*[74.5%]*
OLI Courses most commonly attended by Academic Staff:				
Course title				**No. of staff**
Recruitment and Selection Refresher				20
Undergrad Admissions Online				14
Learning and Teaching (various - bespoke)				9
IAP Introduction to Academic Policy & Practice				9
Recruitment and Selection online course				9

IAP Introduction to Teaching at Oxford	8
Online Unconscious Bias	8
IAP Academic life at Oxford:support for your students & for you	6
IAP Research Student Supervision	4
IAP UK Research Environment	4
OLI Courses most commonly attended by Research Staff:	
Course title	**No. of staff**
Welcome event for Research Staff	17
Undergrad Admissions Online	16
Learning and Teaching (various – bespoke)	5
Interview skills for research staff	5
Undergrad Admissions Practice	5
Job search, CV and cover letter skills for research staff	4
Teaching Fellowship Preparation (Sciences)	4
OLI Courses most commonly attended by Professional and Support Staff:	
Course title	**No. of staff**
Recruitment and Selection Refresher	14
Introduction to Research Administration at Oxford	5
Minutes and Agendas	5
Personnel Administration on Research Awards	5
Assertiveness	4

The MPLS Division also runs a number of training courses in academic skills which are targeted at scientists, and particularly at ECRs and research students. However, uptake in the past had been low, despite our efforts to publicise these courses and encourage attendance. (In 2014-15 two members of research staff and 13 students attended one or more courses.)

In 2015-16, following feedback from ECRs and graduate students, we felt that a new approach was needed. A weekly seminar series was established, mixing skills training and career development sessions with interdisciplinary mathematics colloquia (organised and delivered by ECRs) – always with a focus on the needs and interests of mathematicians. Graduate students were keen that the seminars should take place at the same time each week, and should be preceded/followed by social events, which the department has supported them in organising. Consequently, attendance has far exceeded the usual norms.

Table 32: Staff and students attending 'in-house' training sessions 2015-16

Title:	*headcount of attendees[12]:*
Telling the World about your Work	50
Planning your Career	45
Making the Most of Mentoring	28
Scientific Writing	70

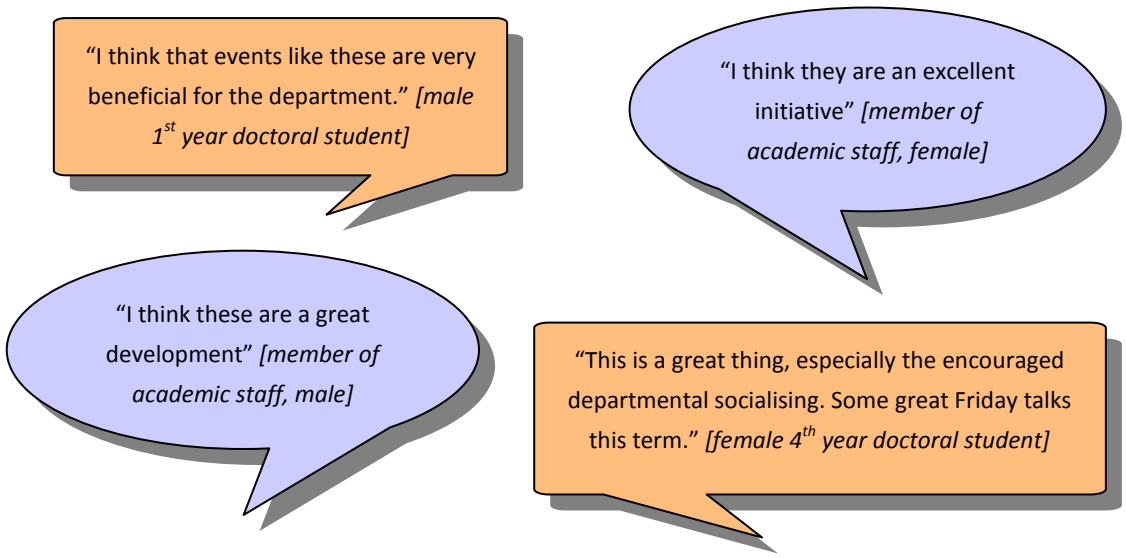
[12] To reduce barriers to attendance we did not require participants to register in advance, and do not have precise data on attendees, but women have been well-represented amongst the doctoral students and postdocs (and academic staff) who have attended.

Making a poster about your work	30
Self-awareness, assertiveness, and productive relationships	30
Careers with a Maths PhD	45
Journals and metrics	70
Speaking and listening	60
Maths societies: what are they for?	18
Owning a successful DPhil	55
Interview training	12
Training for those applying for jobs	12

Students and researchers have made suggestions for topics, and the session on 'Owning a successful DPhil' was led and part-delivered by students. A number of sessions have been presented by research staff, and twelve ECRs gave interdisciplinary colloquia, giving them opportunities for skills development.

In the 2016 surveys 76.9% of research staff and 72% of research students had attended some of the sessions. 35.1% of academic staff had also attended, although the sessions were not primarily aimed at them.

This has been a tremendous success compared with previous, rather low uptakes of divisional training.



For some decades the department has run programmes to train graduate students and postdocs in teaching. These programmes are led by the Director of Undergraduate Studies and the dedicated Faculty Teaching Advisor (FTA). In 2015-16 we held a seminar on good practice in teaching, and more are planned. The seminar covered support for students in the transition to University mathematics, an area where we have reason to believe that women may particularly benefit from additional support (see 4.1 (ii)).)

(ii) Appraisal/development review

Describe current appraisal/development review schemes for staff at all levels, including postdoctoral researchers and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

Research staff

Since our 2013 application we have made good progress in relation to research staff. Feedback from researchers had indicated that they would benefit from support from another senior academic (besides their PI). In 2015 the department appointed an 'Advisor for Early Career Researchers' (ECR Advisor). During the summer of 2015 the ECR Advisor met with each ECR individually to explore what support they might find useful. Partly as a result of these meetings, in spring 2016 the department introduced a system of annual Career Development Review (CDR) for research staff. CDR had previously been rather patchy, relying on initiation by individual PIs. A key feature of the new system has been support from the ECR Advisor, who meets individually with each researcher (including those affiliated to but not employed by the department) to outline the scheme, and to agree with them who might be the best person to carry out their review. The Scheme uses divisional template paperwork, modified for the department. The result has been extremely high levels of participation: 78% of all postdoctoral research staff have had a review; with a further 16% only declining because they had already had a discussion with a senior colleague, or were in the process of leaving the department to go elsewhere.

"I think it's [ECR Advisor] an excellent idea. It makes ECR feel like they are an important part of the department." *[Postdoc, female]*

"this [ECR Advisor] is great for ECRs - I strongly support this initiative" *[academic member of staff, female]*

Action Plan 14: Review the first year of the Career Development Scheme for research staff and refine/develop as necessary.

Academic staff

Newly appointed Associate Professors have an 'initial period of office' of five years. They are formally reviewed after two years, and then again at five years, when a decision is made on reappointment to retirement. (In recent years all have been reappointed to retirement.)

Each year all staff are offered an opportunity to reflect on their work objectives and successes and difficulties in meeting them over the past academic year, their objectives for the coming year, and any support, career development or training needs they may have. They are offered an opportunity to provide information on this for their Head of

Department, and to meet with the Head of Department[13] for discussion. A review discussion is compulsory every 5 years. Such career development discussions can cover work-life balance and promotion.

However, uptake of the non-compulsory (annual) review discussions has not been high. Further exploration of these issues in a small discussion group revealed that some staff felt that the reviews might be more effective if carried out by someone in a similar research area. As the department has grown in recent years, it has also become a more difficult task for the Head of Department to be able to effectively advise a growing number of academic staff.

We wish to enhance support for career development review for academic staff: this will be one of the priorities for the new Associate Head of Department for Career Development over the next few years.

Action Plan 20: The new Associate Head of Department for Career Development will oversee a review of this. We will aim to make review development discussions more effective by handling them in different ways: for example some compulsory five-yearly review meetings could be carried out by Associate Heads of Department; and staff could be encouraged to take-up non-compulsory review meetings more frequently if these could be carried out by Heads of Research Groups, or other senior staff in the relevant field.

(iii) Support given to academic staff for career progression

Comment and reflect on support given to academic staff, especially postdoctoral researchers, to assist in their career progression.

Academic staff

New academic staff have a reduced teaching load in their first year. If this is their first faculty post, they will also be shielded from administrative and examining duties for the first five years. Their formal review after two years provides the opportunity for critical reflection and identifies actions and support needed for successful completion of probation.

Established academic staff are entitled to one term of sabbatical leave for every six terms worked. This provides a space to focus on research, and all are encouraged to take this up. Those who undertake significant administrative duties for the department or who win research grants covering 25% or more of their time (fully costed) are given relief from some teaching duties.

[13] For statutory professors reviews are carried out by the Head of Division and for other academic staff they are carried out by the Head of Department.

All faculty are encouraged to apply for senior research fellowships and are supported throughout the process by the Research Facilitation team, from application to interview.

However, **enhancing support for career progression for academic staff is a priority, and the new Associate Head of Department for Career Development will oversee changes in this area.** Initial plans include formalising the role of Research Groups in supporting career development.

Action Plan 19: The new Associate Head of Department for Career Development will be overseeing development of mechanisms for better supporting career development for academic staff: this will involve a review of the role of Research Groups.

Research staff

The University is signed up to the Research Concordat, implemented through Oxford's Code of Practice for the Employment and Career Development of Research Staff https://www.admin.ox.ac.uk/personnel/cops/rsemp-career/rscop/.

Support for research staff has been an area of particular focus since our 2013 application. The Friday seminar series described at 5.3 (i) was designed to support the career development of ECRs, as was the introduction of an ECR Advisor, and annual CDR for these staff. We continue to develop mechanisms to support their career progression.

Mock applications and interviews – a pilot scheme

During summer 2016 the department ran a pilot scheme offering doctoral students and postdocs the opportunity to apply and be interviewed for fictional jobs, both within and beyond academia. There were training sessions on applying for jobs and being on an interview panel, and ECRs were included on the panels. The Department employed a part-time 'Good Practice Facilitator' to support this. The scheme was well-received.

Table 33: Participation of research staff and graduate students in summer 2016 pilot job application/interview scheme

	Research staff		Doctoral students		Total
	Female	Male	Female	Male	
Interviewer Training Session	3	7	1	1	12
Job Applications Training Session	4	2	1	5	12
Job Interviewees	2	2	3	6	13
Job Interviewers	5	4			9

Action Plan 15: Continue and expand the scheme of mock job applications/interviews in future years.

There has been an expectation internationally that those aspiring to a research career in mathematics will spend time in several different leading departments around the world. Focus groups with female students have revealed concern about the challenges which this poses to personal life, and concerns about opportunities for progression from 'postdoc' to a more stable 'academic' career.

In 2013 the department set up a new initiative, and persuaded the University to allow it to offer eight 'career development fellowships' from departmental funds. **These 'Hooke and Titchmarsh' fellowships, like the Junior Research Fellowships sometimes offered by colleges, were designed to offer greater opportunities for career progression: the researcher would not be tied to a particular research project and would be free to conduct their own research programme.** The positions were thus seen as a very attractive 'step up', allowing greater opportunity for progression to a permanent academic role.

The eight positions drew a very strong field of applicants and two of the new appointments were women. Both of these postholders have now secured highly prestigious positions – a Royal Society University Research Fellowship and a tenure-track post in the USA (see Section 6 Case Studies). The department has also recently been able to offer an additional career development fellowship from philanthropic funding, and is currently raising further funds for a prestigious five-year career development fellowship specifically for female mathematicians. The department will continue to offer the Hooke and Titchmarsh fellowships and make all such fellowships available on a part-time or job-share basis.

Action Plan 13: We will continue to offer departmental career development fellowships, and will offer them as available on a part-time or job-share basis. We will pursue opportunities to create more positions like this via philanthropic funding (including one for female mathematicians), by partnering with colleges, and via fee income from a new MSc. We will encourage members of the European Women in Mathematics mailing list to advertise these posts to junior colleagues.

Other postdoctoral research staff are externally funded and recruited to carry out specific research duties. We are increasingly including teaching duties in the contracts of these staff where the terms of their funding permits, as we consider this to be beneficial to their career development and integration into the life of the department, and we support them to develop their teaching skills.

Mentoring

All academic staff and research staff are assigned a mentor in the department when they arrive. Female academic staff may also request a mentor (possibly from another department) via the 'Ad Feminam' scheme, which is targeted at senior women who aspire to take on leadership roles. Incoming female postdocs and graduate students are offered mentoring at a lunch which is held each year for new starters (see below). However, the number of staff who report that they have experienced mentoring is not very high: 17/37 (46%) of academic staff and 5/13 postdocs (38%) in the 2016 staff survey.

Action Plan 19: Explore more opportunities for mentoring for academic staff, as part of a review of the role of Research Groups.

Support targeted specifically at female staff

T**here are now a number of established mechanisms via which we support women in particular**, addressing the need identified in our 2013 application.

The department has supported the Mathematrix lunches for over three years: informal weekly lunch meetings coordinated by female graduate students to discuss issues particularly of interest to female mathematicians.

Female faculty hold a welcome lunch for new female postdocs and graduate students to introduce resources available and offer mentoring, and there is a twice-termly lunch for senior female faculty members.

Action Plan 27: Continue to run and support these events targeted specifically at women.

(iv) Support given to students (at any level) for academic career progression

Comment and reflect on support given to students at any level to enable them to make informed decisions about their career (including the transition to a sustainable academic career).

Undergraduate students

The University has a dedicated careers service for students, and we partner with them to run an annual event 'Careers for Mathematicians'.

Students also receive close pastoral and academic support and supervision in the collegiate system: within their college each student has a personal tutor and access to a dedicated welfare team and other support services.

Shortly after our 2013 application students set up the Mirzakhani Society. The Society supports students identifying as female or non-binary via weekly meetings with tea/cake, and other events. The department provides funds and facilities for the Society, and faculty members have spoken at events.

Since our 2013 application (2013 Action Plan items 3.8-3.11) we have undertaken much work to better understand why women are less likely to progress into academic careers, and to devise appropriate measures to support them into academic careers.

Female students have historically been less likely to choose to continue into the fourth year. Women are also less likely than men to progress to research degrees (see Section 4.1(v)).

After identifying progression to the fourth year as a key issue in our 2013 application we introduced a briefing for students on the benefits of the fourth year. By 2016 78% of third-year student survey respondents said that they had received information about the fourth year from the department and found it helpful (compared with only 38% in 2012).

Recent student focus groups, surveys, and other data, have identified that many women are positively opting out of the fourth year as they are particularly aware of their excellent skill set and choose high-earning careers. Destination data of graduates supports this:

Table 34: Median salaries 6 months after graduating (students leaving in 2012-14; DLHE survey)

Women (Maths Dept)	**£29,000**
Men (Maths Dept)	£28,000
Women (MPLS Division)	£26,000
Men (MPLS Division)	£28,000
Women (University overall)	£21,000
Men (University overall)	£25,000

Our survey data showed that female undergraduates were more likely to undertake industrial placements than men (in a 2014 survey 58% of third-year female undergraduate respondents had done so, as opposed to only 28% of males). Focus group feedback from women who had undertaken a summer research project showed that it could serve to really enthuse them about a potential research career. The limited data we had on those taking summer research projects – on 20 undergraduates – showed that 19 of them had gone on to graduate study.

> My tutor was great – he found me a research project and encouraged me to do it. I really appreciated that
>
> *(Female undergraduate, focus group participant)*

Summer research projects had not been coordinated centrally, and had not always been advertised to all eligible students within the department. They were often advertised later in the year than industrial placements. In 2015-16 the department provided £15k funding for summer research projects, to

increase the overall number of projects available, and to ensure that some could be confirmed earlier in the year. Administration of projects was centralised to ensure that all available projects were advertised to all eligible students as early in the year as possible. This has led to a larger number of students taking funded projects than in previous years[14], and there has been a higher proportion of women amongst those taking projects (30%) than there is in the undergraduate population overall (26%) – especially amongst those securing funded projects (37.5%):

Table 35: students taking summer research projects, 2016

	Female	Male	% Female
Funded Projects	9	15	37.5%
Unfunded Projects	6	20	23.1%
Total	15	35	30.0%

We are also planning to run shorter (week-long) summer 'Collaborative Undergraduate Research Experiences' to give more students a taste of what it is like to pursue mathematics at an advanced level.

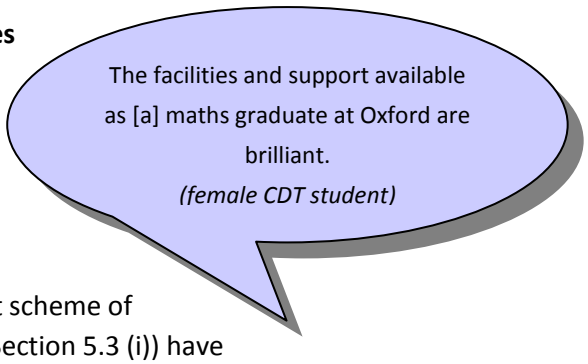
Action Plan 3.4: continue to fund and coordinate summer research projects, and run new week-long 'Collaborative Undergraduate Research Experiences', to give more undergraduates a taste of research.

Female undergraduates in focus groups were particularly keen to begin earning money at an earlier stage, and to 'get settled' prior to starting a family. However, a number were unaware that funding for graduate research study could cover both fees and a 'salary' (in contrast to the undergraduate system of loans); and felt unaware of what life as a graduate research student was really like. In 2016 the Mirzakhani Society ran a well-attended session on graduate options – faculty members attended to speak and answer questions.

Action Plan 3: We will continue to support the Mirzakhani Society event and to develop ways of providing information to undergraduate students about graduate research: we will put information on our website (including clear and accessible information about funding). In addition to the annual graduate open day, we will hold an event specifically designed to allow undergraduates to meet with graduates to learn more about what life as a research student involves.

[14] The number taking funded projects is larger than we have been aware of in previous years, but we do not have accurate data on previous years – precisely because we did not coordinate or monitor these projects centrally.

There are signs that female undergraduates are now more likely to stay on to the fourth year (see Section 4.1(v)) and we hope that this will also translate into more going on to further research.



Graduate students

The new Friday seminar series and the pilot scheme of mock job applications and interviews (see Section 5.3 (i)) have been designed for graduate students as well as ECRs.

Female research students are invited to a welcome lunch, and to Mathematrix events.

In 2015 we introduced a 'buddy' scheme for new graduate research students. Each new student was assigned a current student (a 'buddy') to welcome them to the department and assist with their induction. Very positive feedback was received.

All current graduate research students were also invited to find a 'mentor'. However, uptake has not been high, and feedback was that students did not feel able to approach potential mentors.

Action Plan 11.1 and 11.2: We will better support allocation of mentors by involving Research Groups, and by providing more guidance for potential mentors and mentees. We will also explore ways to encourage 'good citizenship' amongst graduate students – for example some could specifically take responsibility for encouraging uptake of mentoring amongst their peers.

Feedback in a staff survey indicated that some faculty members would appreciate more guidance in how to support students experiencing difficulties – particularly mental health difficulties.

Action Plan 11.3: We will arrange for the University Counselling Service to run a session for staff on supporting students experiencing difficulties.

(v) Support offered to those applying for research grant applications

Comment and reflect on support given to staff who apply for funding and what support is offered to those who are unsuccessful.

The department pioneered the provision of a dedicated research facilitation team in an Oxford department. The team now comprises three staff, who extensively support

researchers submitting grant applications. The support ranges from one-on-one advice on career planning and grant application submission strategies, to in-depth advice on individual grant applications. A typical grant application of >£20k will involve collaborative iteration between the applicant and the research facilitation team. This will involve several stages, including discussion of the suitability of calls, detailed input on drafting and costing applications, iterative feedback, coordination of input from other faculty members (internal peer review is available where time permits), and mock interviews. Finally, feedback from throughout the process is collated for the benefit of future applicants.

Women appear to be more likely to apply for research funding than men:

Table 36: Applications for research funding 2015-16

	Female	Male	% Female	[for information: approximate % of women in potential applicant 'pool']
Applications for research funding	74	249	23%	*15%*
Of which, applications for personal fellowships	20	67	23%	*21%*

The approach taken by the research facilitation team contributes significantly to the career development and guidance of early-career researchers. The team is also available to help with follow-up in the case of an unsuccessful application.

SILVER APPLICATIONS ONLY

5.4. Career development: professional and support staff

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

The University runs a number of courses for professional and support staff. Details on uptake are given in Table 31. These opportunities are flagged at induction, during Personal Development Review with line managers, and in departmental-wide communications. Recent staff focus groups showed that most staff felt that they had good access to appropriate training to support them in undertaking their current role, and that the department supported them in this. However, some felt that attendance at training was not encouraged.

Action Plan 23: We will take steps to actively ensure that a positive message is conveyed about training and development: we will publicise information about training courses in our new departmental bulletin alongside encouragement to attend, and will alert staff to training opportunities at staff meetings.

(vi) Appraisal/development review

Describe current appraisal/development review schemes for professional and support staff at all levels and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

Personal development review (PDR) is compulsory annually for all professional and support staff. The department had provided forms and guidance which were not universally popular, and the use of those forms was made non-compulsory. However, feedback obtained in recent focus groups indicated that people would appreciate more guidance and structure.

Action Plan 24: We will review the PDR scheme and will devise new documentation on it for the guidance of staff and managers.

(ii) Support given to professional and support staff for career progression

Comment and reflect on support given to professional and support staff to assist in their career progression.

Feedback from focus groups indicated that most felt that access to training and development opportunities was good. However, some felt that they were not supported to undertake training which might enable them to move into another role. It was suggested that the department might support 'job shadowing' or

offer opportunities for staff to undertake projects outside their usual area.

Four members of staff have undertaken secondments in the last three years, but there was evidence that more would wish to do so.

Action Plan 23: We will consider mechanisms for supporting staff who wish to develop the skills and experience to enable them to move beyond their current role, such as offering 'job shadowing' or more opportunities for undertaking different projects/secondments.

There is a University-wide mentoring scheme for support staff, but feedback revealed that only a small number of support staff were aware of this, so it has been more extensively publicised.

5.5. Flexible working and managing career breaks

Note: Present professional and support staff and academic staff data separately

(i) Cover and support for maternity and adoption leave: before leave

Explain what support the department offers to staff before they go on maternity and adoption leave.

The University offers a generous maternity leave scheme. If employees have 26 weeks service they qualify for full pay for the first 26 weeks of maternity leave (followed by 13 weeks statutory pay). The department has awarded maternity pay to two graduate students who, not being University employees, had no standard entitlement to this. This has encouraged us to develop a general policy on this going forward.

Action Plan 12: We will underwrite other sources of funding to ensure that all graduate research students can be provided with six months' 'maternity pay' at RCUK stipend rates. We will lobby nationally to encourage funders to improve maternity provision for graduate students.

All members of the department are advised about maternity / paternity / adoption / parental leave at induction, and this is reinforced by information on our website.

The department supports those due to go on maternity / shared parental leave in developing a plan for their leave, and offering advice on entitlements and provisions.

(ii) Cover and support for maternity and adoption leave: during leave

Explain what support the department offers to staff during maternity and adoption leave.

When support staff go on leave we aim to fill the role for the period, with additional time for handovers. When academic staff go on leave we arrange for their teaching duties to be covered, often using this as a career development opportunity for a member of research staff (see Section 6 Case Studies).

Those on leave are offered 'Keeping in touch' (KIT) days, for which they are paid, to enable them to come into work whilst on leave if they wish, to keep up-to-date. Five members of professional/support staff have used these in the last three years. Academic staff often come in to keep in contact with their research group.

(iii) Cover and support for maternity and adoption leave: returning to work

Explain what support the department offers to staff on return from maternity or adoption leave. Comment on any funding provided to support returning staff.

In 2014 the department adopted a policy that all academic staff should be exempt from departmental teaching in their first term back at work after maternity leave.

Those returning have access to the University's 'Returning Carers' Fund' – a University-wide grants scheme to support the return to research of individuals who have taken a break for maternity or other caring responsibilities. A member of staff has successfully applied to this.

All those returning from extended leave are also now offered a 'return to work' induction.

The department sponsors four waiting list places at University nurseries, to help staff secure a nursery place promptly.

In our 2013 application we identified a need to support academics with parental/caring responsibilities attending conferences. In 2015 we established a fund to pay for additional costs associated with attending conferences, incurred by such responsibilities. In 2016 we extended this to seminar speakers and others visiting the department.

(iv) Maternity return rate

Provide data and comment on the maternity return rate in the department. Data of staff whose contracts are not renewed while on maternity leave should be included in the section along with commentary.

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Provide data and comment on the proportion of staff remaining in post six, 12 and 18 months after return from maternity leave.

Between 2009-10 – 2014-15 all 7 academic and research staff who took maternity leave returned to work. 5 were members of academic staff who are still in post, and 2 were postdoctoral researchers who subsequently moved on to become Assistant Professors at other universities.

During the same period 10 members of professional/support staff took maternity leave. 8 returned and 2 chose to leave. Of the 8 who returned 2 chose to leave within 12 months due to changes in individual personal circumstances.

(v) Paternity, shared parental, adoption, and parental leave uptake

Provide data and comment on the uptake of these types of leave by gender and grade. Comment on what the department does to promote and encourage take-up of paternity leave and shared parental leave.

Where academic staff are taking up to two weeks of ordinary paternity leave they have not always notified the department, unless it falls within termtime and their teaching is affected. We have recently again urged all staff formally to notify us. In the last three years at least four faculty members, five researchers, and one member of support staff have taken two weeks' ordinary paternity leave.

The recent changes on Shared Parental Leave have been advertised widely and full participation is encouraged: one male academic will take leave next term.

(vi) Flexible working

Provide information on the flexible working arrangements available.

The University has a well-developed and well-advertised scheme to allow employees to apply for flexible working, including part-time working. However, it tends to be used primarily by professional/support staff. For academic staff, autonomy and a departmental policy of tailoring lecture slots, and moving seminars and meetings to core hours, provide day-to-day flexibility, allowing much freedom to work around the constraints of childcare.

In the past five years we have received 18 applications under the University scheme from professional/support staff to alter their hours, almost all of which have been approved. We have not received any applications from academic staff to work part-time under these provisions. However, a couple with a small child share a postdoctoral position.

> I think that there has been definite progress in recent years … a better appreciation of the needs of those with caring responsibilities. (*Female, professional staff*)

We have now resolved to accommodate requests to work part-time on a permanent or temporary basis, and will publicise this widely. We will also seek to develop robust mechanisms for negotiating with colleges over the duties owed under the college part of the employment contract – arranging to cover the college teaching as we do for holders of external research fellowships.

This may lead to some degree of culture change – historically the expectation has tended to be that all academic staff work full-time.

Action Plan 21: We will accommodate requests from academic staff to work part-time temporarily or permanently and will publicise this widely. We will also seek to make arrangements when appropriate to relieve postholders of duties which they owe to their college.

(vii) Transition from part-time back to full-time work after career breaks

Outline what policy and practice exists to support and enable staff who work part-time after a career break to transition back to full-time roles.

This has not previously been an issue in relation to academic and research staff, as all have previously chosen to continue on a full-time basis. However, we will ensure that due consideration is given to this in relation to any future applications for part-time working under (vi) above. Professional and support staff who have gone part-time may request to increase their hours: a number have done so successfully.

5.6. Organisation and culture

(i) Culture

Demonstrate how the department actively considers gender equality and inclusivity. Provide details of how the Athena SWAN Charter principles have been, and will continue to be, embedded into the culture and workings of the department.

In 2015 the department set out as a goal in its Good Practice Action Plan to "create an outstanding working environment, in which students and staff alike can achieve their full potential". Our new building has given us particular opportunities to embed inclusivity into the fabric of our environment. The department was previously fragmented across several sites. The new building was specifically designed with a variety of inclusive social spaces. These now host a number of regular events. Everyone is invited to morning coffee and Friday 'happy hour', and there is good attendance from all groups: academic, research, professional/support staff, and graduate students. There are also termly 'Department-Faculty' meetings for all staff, where a specific slot is reserved for any staff member to put a question to the Head of Department.

University staff survey 2016:

98% of staff agreed they felt integrated into the department (University average 72%)

93% felt able to 'be themselves' at work (University average 90%)

"Friendly and motivating environment" *male 2nd year doctoral student*

"The working environment is very friendly and healthy" *female MSc student*

A new study area has given undergraduate students a 'home' in the department, a room is available for feeding babies/infants, and there are a number of gender-neutral toilets.

We have utilised the building to develop more events to support the mathematical community in general, women in mathematics in particular (see (viii) below) and to reach out to a wider community with events such as public lectures.

Departmental staff survey 2016:

92.4% of staff who responded (91.7% of female staff) 'would recommend working at the Mathematical Institute to a friend or a colleague'

(ii) HR policies

Describe how the department monitors the consistency in application of HR policies for equality, dignity at work, bullying, harassment, grievance and disciplinary processes. Describe actions taken to address any identified differences between policy and practice. Comment on how the department ensures staff with management responsibilities are kept informed and updated on HR polices.

Training which unnecessarily impinges on teaching and research time for academic staff has been unpopular in the past. We have therefore made efforts to deliver any training as efficiently as possible – for example running a session on unconscious bias as part of the routine termly meeting for all departmental staff.

The departmental personnel team monitors compliance with all University policies in relation to recruitment and selection procedures. In terms of policies applying to existing staff, the department's personnel team advises and circulates material to all staff. New policies are considered by appropriate departmental committees and published on departmental policy webpages. Focus groups with academic and support staff did however identify some lack of clarity or confusion about policies in some areas. All information is now being consolidated onto one webpage.

Action Plan 32: In addition, staff will be reminded of key information in the new, weekly departmental bulletin.

In a recent internal review we identified a need to provide more training for managers – both academic and professional/support staff.

Action Plan 33: Run training sessions for managers within the department, to support them in this role.

Bulllying and harassment

In virtually all areas covered by a staff survey in 2016 responses were as positive or more positive than they had been in a similar 2012 survey. However, responses in 2016 to a question about bullying/harassment were a cause for serious concern. 14 staff out of 81 – spread across all staff categories and genders – reported that they had experienced bullying or harassment in the last year. (In 2012 only 3/91 reported this.) Only two staff had contacted a departmental harassment advisor about it, one of whom felt that the matter had been resolved. We have extensively re-publicised information on bullying and harassment, drawing attention to the departments' harassment advisors. Such a trend has been seen elsewhere in our division, and we are consulting others to seek best practice on tackling this issue.

Action Plan 28: Connect with other departments within the University to explore approaches taken there to inform practices within our department. HOD to circulate all staff urging them to raise any concerns with Harassment Officers or with HOD personally. HOD to lead activities in anti-bullying week 2017.

(iii) Representation of men and women on committees

Provide data for all department committees broken down by gender and staff type. Identify the most influential committees. Explain how potential committee members are identified and comment on any consideration given to gender equality in the selection of representatives and what the department is doing to address any gender imbalances. Comment on how the issue of 'committee overload' is addressed where there are small numbers of women or men.

Table 37: Representation of women and men on departmental committees

		2013-14		2014-15		2015-16	
		Female	Male	Female	Male	Female	Male
Major committees							
Department Committee	*Academic staff*	2	11	2	12	4	9
	Research staff					1	
	Professional/support staff	1	2	2	2	2	2
	Students					1	1
Teaching Committee	*Academic staff*	1	9	1	9	3	7
	Professional/support staff	2	1	1	1	3	1
	Students		1		1	1	
Research Committee	*Academic staff*	1	17	1	15	1	16
	Research staff						1
	Professional/support staff	1	2	2	2	1	2
	Students		1			2	
Good Practice Committee (was Good Practice Steering Group)	*Academic staff*	3	5	4	5	4	4
	Research staff	2		2		2	
	Professional/support staff	4	3	6	1	7	2
	Students	2		1	1	2	
Finance Committee (was Finance sub-committee)	*Academic staff*		3	1	3	1	4
	Professional/support staff	2	1	3	1	3	1
Graduate Studies Committee	*Academic staff*	1	7	1	8	1	11
	Professional/support staff	1	1	1	1	1	1
	Students						4
Key coordinating/advisory committees							
Executive Committee	*Academic staff*		7	1	8	2	7
	Professional/support staff	1	3	1	3	1	3
Administration Committee	*Professional/support staff*	4	4	5	4	5	4
Nominations Committee	*Academic staff*	Committee not established				1	4
	Professional/support staff					1	
Nomination of Examiners Committee	*Academic staff*	1	2	2	4	1	2
	Professional/support staff	1	1			1	2
Other Committees							
External Relations Committee	*Academic staff*		2	1	5	1	4
	Professional/support staff	2	3	3	3	3	3
Graduate Admissions and Awards Committee	*Academic staff*	1	5	1	4	1	4
	Professional/support staff	1		2		2	
Undergraduate Admissions Committee	*Academic staff*	1	4	1	4		5
	Professional/support staff	2	1	2	1	2	1

		2013-14		2014-15		2015-16	
		Female	Male	Female	Male	Female	Male
Examinations Committee	*Academic staff*	2	7	2	8		10
	Professional/support staff	2	2	2	2	2	3
Projects Committee	*Academic staff*	2	5	2	6	2	6
	Professional/support staff	1	1	1	1	1	1
Joint Maths & Philosophy Committee	*Academic staff*		1		7	2	5
	Professional/support staff	1	1	1	1		1
	Students	1		1			1
Whitehead Library Committee	*Academic staff*	1	7		8		8
	Research staff					1	
	Professional/support staff	1		1		1	
	Students		1		1	1	
Health & Safety Committee	*Academic staff*		1		1		2
	Research staff				1		1
	Professional/support staff	3	3	5	2	5	3
	Students	1		1			
Art Committee	*Academic staff*	1	5	1	5	1	5
	Professional/support staff	1	2	1	2	1	2
	Students				1		1
Joint Consultative Committees with Students							
Consultative Committee with Undergraduates	*Academic staff*	1	1	1	1	1	1
	Professional/support staff	2	1	2	1	2	1
	Students	2	10	3	8	5	6
Consultative Committee with Graduates	*Academic staff*		2		2		2
	Professional/support staff	1		1		1	
	Students	2	4	2	4	3	7

We have increased representation of students and research staff on a number of committees.

We have worked to ensure female academic staff representation in particular on key committees (notably Department Committee and Executive Committee) and to balance this against committee-overload for this group of staff. The Head of Department monitors distribution and rotation of duties. He will be assisted in this in future by the Nominations Committee and new database (see (v) below).

We have taken a number of measures to improve transparency of governance, such as putting committee papers and minutes online, and having an online forum for discussion of issues as part of a recent internal review.

(iv) Participation on influential external committees

How are staff encouraged to participate in other influential external committees and what procedures are in place to encourage women (or men if they are underrepresented) to participate in these committees?

Many of our male and female faculty have taken leadership roles within the external mathematical and scientific community, e.g.:

- Prof Alison Etheridge – Council of the London Mathematical Society; President elect, Institute of Mathematical Statistics.
- Prof Frances Kirwan – recently on the Council of the Royal Society.
- Prof Terry Lyons – recently President of the LMS
- Prof Ursula Martin – Royal Society's Diversity Committee
- Prof Ulrike Tillmann – Council of the Royal Society and LMS
- Prof Nick Trefethen – recently President of SIAM (the Society for Industrial & Applied Mathematics).

The HoD has maintained an overview of duties, has supported and encouraged women and men to participate in the external mathematics community, and will be assisted in this in future as described in (v).

(v) Workload model

Describe any workload allocation model in place and what it includes. Comment on ways in which the model is monitored for gender bias and whether it is taken into account at appraisal/development review and in promotion criteria. Comment on the rotation of responsibilities and if staff consider the model to be transparent and fair.

The primary issue which has been identified in surveys and focus groups with academic staff is that of overload.

Moreover, women with caring responsibilities appear to be disproportionately affected in terms of being able to maintain/progress their career alongside balancing family/other responsibilities.

Table 38: Survey responses to "I have found it possible to maintain/progress my career alongside balancing family/other responsibilities"

	Female	Male
Number of academic staff who agree or tend to agree (of which have current caring responsibilities)	[redacted]	
Number of academic staff who don't agree or tend to disagree (of which have current caring responsibilities)		

Focus group feedback indicated potential areas where workload was within departmental control and could beneficially be reduced/streamlined (e.g. by reducing

the number of options in taught courses, harmonising assessment methods, streamlining processes for setting and marking projects).

Action Plan 26: We will undertake a comprehensive review of the workload across the department, with the aim of streamlining and reducing the workload overall.

Historically the Committee for the Nomination of Examiners has identified examiners, Teaching Committee has identified lecturers, and the HoD has allocated other duties, maintaining an overview of all. Those whose time is 'bought out' by a grant or who take on significant administrative duties for the department (e.g. the new AHODs) are relieved of some teaching duties. As the department has grown in recent years overseeing all duties has become a larger task. In our 2013 application we identified a need to set up a database to better comprehensively record academic workloads. This is not an entirely straightforward process at Oxford, where most academic staff have joint appointments with colleges, and there have been some delays. However, the database has now been written, and a new 'Nominations Committee' has been established to support the Head of Department in allocating duties. The Committee is chaired by the new AHOD for Planning and Resources, and has five further members, to include the Chair of GPC or their nominee. The Committee will liaise with Research Groups to better understand workloads in particular areas.

We have been exploring workload models in use at Oxford and in Mathematics departments elsewhere, and do not want to rush to use an entirely quantitative model as we have doubts about whether such can adequately capture the subtleties necessary.

Action Plan 25: The Nominations Committee will develop a more comprehensive workload planning model, using the new, more comprehensive dataset, and considering both quantitative and qualitative approaches. This will better enable us formally to recognise the full range of burdens on individuals, and to support them in managing their career development.

(vi) Timing of departmental meetings and social gatherings

Describe the consideration given to those with caring responsibilities and part-time staff around the timing of departmental meetings and social gatherings.

Since our last application we have ensured that no departmental meetings begin before 10am. We have recently moved Department-Faculty meetings to the earlier time of 3.30pm, so that they are finished by 4.30/5pm. Historically, a number of departmental seminars were held in the evening. We have now moved all to start by 4pm, with two exceptions which are timed to accommodate the specific family circumstances of the particular participants. (We have an extensive seminar programme, and unfortunately it would not be possible to accommodate all seminars within quite reduced hours, such as 10am-2pm, which has been done elsewhere.) The department has a number of

annual social events (Christmas and summer parties) to which staff and students are encouraged to bring their children.

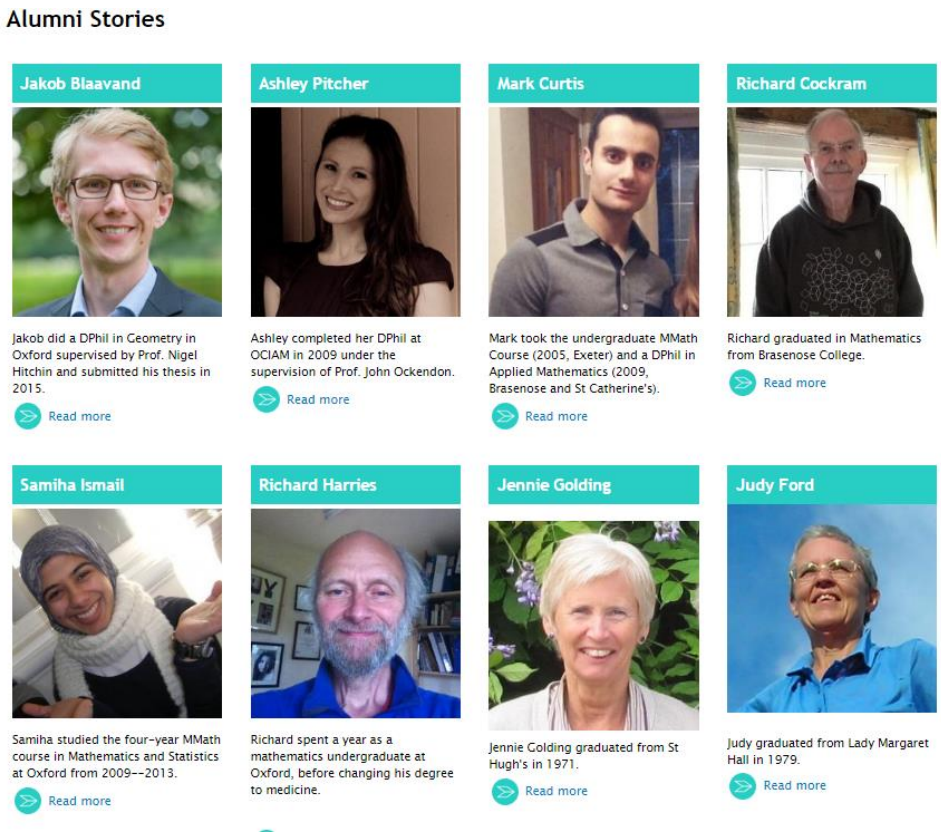
(vii) Visibility of role models

Describe how the institution builds gender equality into organisation of events. Comment on the gender balance of speakers and chairpersons in seminars, workshops and other relevant activities. Comment on publicity materials, including the department's website and images used.

- In 2014 we created a new departmental website and images of women have been used throughout. There is a new page on 'Women at Oxford' specifically for potential applicants:

- We ensure that both genders are represented amongst speakers at open days and outreach events, and that at least six first- and second-year undergraduate lecturers are women, with at least three lecturing core first-year topics.

- Alumni Stories online illustrate diversity amongst mathematicians:



- Research Committee has recently undertaken a policy of reviewing data on speakers at seminars and public lectures and other events, and drawing it to the attention of the whole department, asking seminar organisers to reflect on gender balance. This was first done during 2015-16 and there has been some improvement but we would hope to see more as we go into 2016-17. The number of women speaking at colloquia (flagship events, held 6-7 times a year) will be particularly pleasing this year, with four female speakers in a row March-June 2017.

Table 39: Gender of seminar speakers

	Female seminar speakers	Male seminar speakers	Unknown/ combination	Women as a proportion of seminar speakers (where gender is known)
Aug 2012 – July 2015	277	1817	53	13.2%
Aug 2015 – July 2016	115	582	32	16.5%

Action Plan 29: Continue to circulate data on gender of seminar speakers to all in the department, in particular to draw attention to areas where the gender split is not representative of the population, and to encourage seminar organisers to actively seek out speakers from underrepresented groups.

(viii) Outreach activities

Provide data on the staff and students from the department involved in outreach and engagement activities by gender and grade. How is staff and student contribution to outreach and engagement activities formally recognised? Comment on the participant uptake of these activities by gender.

Given the factors mentioned in Section 4.1 (ii) we have made significant efforts since our 2013 application to increase our outreach activity which is targeted at women, and particularly at women prior to A-level choice. We have had considerable success in this:

Table 40: Growth in outreach activity 2012-13 - 2015-16

Academic year	No. of outreach events targetted specifically at women	No. of women at events for which registration required and gender recorded	Of which number of women pre-A-level	Number of men at events for which registration required and gender recorded	Of which number of men pre A-level	No. of women attending an event with registration who subsequently applied to us	No. of men attending an event with registration who subsequently applied to us	Additional numbers at events without registration (gender unknown)
2012-13	0	131	0	194	0	55	84	780
2013-14	1	415	141	531	28	95	172	2085
2014-15	3	892	463	575	66	104	153	2110
2015-16	6	1247	636	697	61	Not yet known		3385

In 2015-16 the department reached 1,247 women, plus 3,385 attendees at events where gender was not recorded. Events range from Royal Institution Masterclasses to a conference for women run jointly with the national Further Mathematics Support Programme, to summer schools for students from socioeconomically less advantaged backgrounds. Some events are now specifically themed in areas where we know that there is particular interest from female students: for example in applications of mathematics to medicine and health. In addition, we have collaborated with the UK Mathematics Trust (UKMT) to run two annual week-long Summer Schools – one specifically for girls.

Action Plan 1.2: Continue running outreach events and summer schools and explore possibilities of getting more funding for summer schools for girls.

In early 2015 the department hosted 'It All Adds Up: Celebrating Women across the Mathematical Sciences' – the London Mathematical Society's annual Women in Mathematics event, but much larger than any which had been held before, and the first to involve undergraduates and school pupils. We secured University diversity funding for the event

Photo: Jennifer Balakrishnan.

to expand it to four days, with two days for female academics and university students, and two days for female school students.

https://www.lms.ac.uk/it-all-adds-up-2015

We continue to run an annual two day 'It all adds up' event for female school students nationwide.

Currently the department employs three female staff[15] whose remit specifically includes outreach. This has enabled us to develop an extensive outreach programme without increasing the burden on faculty members. Many faculty nevertheless do participate in outreach work, both for the department and for their college, and we will have a better overview of these contributions when we consolidate and review all the data on duties during the coming year.

[Section 5 = 6,735 words]

[15] The Admissions Coordinator/Schools Liaison Officer; the Whitehead Lecturer, and 0.5 of the Statistics Schools Liaison Officer (this post being shared with the Statistics Department).

SILVER APPLICATIONS ONLY

6. CASE STUDIES: IMPACT ON INDIVIDUALS

Recommended word count: Silver 1000 words

Two individuals working in the department should describe how the department's activities have benefitted them.

The subject of one of these case studies should be a member of the self-assessment team.

The second case study should be related to someone else in the department. More information on case studies is available in the awards handbook.

[REDACTED]

[502 words]

[REDACTED]

[496 words]

7. FURTHER INFORMATION

Recommended word count: Bronze: 500 words | Silver: 500 words

Please comment here on any other elements that are relevant to the application.

8. ACTION PLAN

The action plan should present prioritised actions to address the issues identified in this application.

Please present the action plan in the form of a table. For each action define an appropriate success/outcome measure, identify the person/position(s) responsible for the action, and timescales for completion.

The plan should cover current initiatives and your aspirations for the next four years. Actions, and their measures of success, should be Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

See the awards handbook for an example template for an action plan.

Action Plan

See end of table for a key to acronyms.

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
Students					
1. Encourage more students in the UK, particularly girls, to take Maths and Further Maths A-levels.	Since 2012-13 we have introduced six annual outreach events specifically targeted at women. In 2015-16 5,156 students attended our outreach events, including at least 1,074 female students[16] (of whom at least 636 were pre-A-level). We have also collaborated with the UKMT to run an annual summer school for girls.	1.1 We are collaborating with other interested parties to develop online modules that students can use independently or that teachers can use with students, aimed at students in year 10/11 to encourage them to study Further Maths A-level. We will engage with schools to promote the new online modules.	Online material implemented, and being used by students/schools. Evidence of impact on A-level choices by those students/in those schools: e.g. testimonials from students or teachers that the online material encouraged particular students to take Further Maths.	2017-18 2018-19	ACSLO / WL
		1.2 Continue running outreach events and summer schools for girls and explore possibilities of getting more funding for such summer schools.	Continued/increased attendance of women at outreach events and summer schools.	Summer 2017 onwards	ACSLO / WL
		1.3 Lobby at a national level with the aim of ensuring that government education policy supports uptake of Maths/Further Maths A-level by women: HOD to lobby government directly; Chair of GPC to lobby via Royal Society Education Committee.	Contacts with government and others. There may be some changes in government policy	2016-17 2018 and beyond	HOD / Chair GPC

[16] We only have a record of gender at events where registration is required – see Table 40 .

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
2. Ensure that admissions processes are as fair as possible.	Better analysis of data has given us a better understanding of factors at play within the admissions process. Introduction of unconscious bias training for interviewers and information circulated on unconscious bias.	2.1 Admissions Committee to continue to research the individual elements of the admissions process to identify any potential areas of bias.		Ongoing	AC
3. More of our female students to progress to fourth year of undergraduate degree/to graduate research.	2013: Annual departmental event established to provide all students with more information about the fourth year. Focus groups with female students revealed that they would benefit from information on funding and information about what life as a graduate research student involves. 2015-16 Mirzakhani Society ran an event to provide female students with more information about options after the third year – including the fourth year, Masters and doctoral study, and funding for these: faculty members attended to speak and answer questions. 2015-16: We achieved a higher proportion of women in the fourth year. We have centrally coordinated the advertisement of summer research projects for undergraduate students, to make them available as early as possible to all, and contributed £15k to funding such projects. This has led to a greater number of students (50), and a good proportion of women (30%), undertaking such projects.	3.1 Encourage the Mirzakhani Society to continue to run their event annually, and support it. 3.2 Put information on our website about graduate research (including clear and accessible information about funding) 3.3 In addition to the annual graduate open day, hold an annual event specifically designed to allow undergraduates to meet with graduates to learn more about what life as a research student involves. Ensure that there are female and male graduates participating in the event. 3.4 Continue to fund and coordinate summer research projects and introduce week-long summer 'Collaborative Undergraduate Research Experiences'.	Feedback in surveys/focus groups indicating positive effect of events/information on student knowledge/choices. Continued/further increased proportions of women continuing to fourth year. Increased proportions of women continuing into graduate study. Increased numbers of students having experience of research via a summer project (more than the 50 in 2016).	2017-18 2017-18 and beyond 2017-18 and beyond Summer 2018	DUS APO DUS HOD / WL

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
4. Reduce the gender attainment gap in undergraduate assessment	A much more detailed analysis of the data has revealed that women improve more on average than men while they are here, and so may experience particular difficulties with the initial adjustment to university mathematics. We have introduced better 'scaffolded' problem sheets in the first year, held a seminar for tutors on supporting students in the transition to university, and have developed material for tutors based on research findings and focus group feedback about how to best support students, with a particular focus on issues which may affect female students disproportionately. This work is ongoing.	4.1 Increase the time permitted in written examinations in the third and fourth years from 1.5 to 1.75 hours to better ensure that students are not unduly affected by time pressure.	Increased time permitted in exams. 2017 exam results showing evidence of improvement in female performance	July 2017 Aug 2017	DUS / AA
		4.2 A Working Group will further investigate the data and issues which may contribute to differential performance by women and men. The Group will also seek to learn from any findings of the University Working Group, and implement appropriate actions.	Working group to report on findings Implement further strategies for addressing apparent underperformance by women.	2016-17 2017-18	FTA / WL / ACSLO
5. To increase the number of women on PGT courses, in particular to understand and mitigate if necessary a low success rate for female overseas students applying to the MSc in Mathematical & Computational Finance (MSc MCF)	Better analysis of admissions data has revealed more nuanced information on admissions: in general the low numbers of women on the programmes reflect a low number of applicants, but women from overseas are particularly unsuccessful in applying to the MSc MCF. Pre-interview meetings were introduced to brief all staff involved with interviews on the potential effects of unconscious bias, and a Chinese female research student now sits on every interview panel.	5.1 Undertake analysis of each stage of the admissions processes for MScs, as has been done at undergraduate level. We will review admissions practices; drawing on good practice from elsewhere, with particular attention to MSc MCF, and introduce actions in response to the findings.	Report to GSC Implement changes to admissions practices Increased numbers of women being admitted.	2016-17 2017-18 2018-19	APO GSC

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
6. Reduce gender gap in performance on PGT courses.		6.1 Analyse performance by gender on the MScs – for example across different types of assessment (e.g. written examinations, dissertations).	Report to GSC and make recommendations for course structure changes based on findings.	2017	APO
		6.2 Produce guidance for MSc tutors on the basis of educational research findings and feedback from student focus groups (as has been produced for undergraduate tutors).	Guidance to be sent to tutors. Tutors to demonstrate awareness of advice in surveys.	2017 2018	APO
		6.3 Design teaching methods for new MSc in Mathematical Sciences informed by findings of educational research and feedback from female students.	New class structure to be implemented for new MSc. Deliver classes for current parallel courses in line with the new plans, and review.	2019-20 2017-18/ 2018-19	AHOD (Career Development) / DUS
7. Encourage female applications for graduate research study.	Graduate Admissions webpages have been revamped to be much more attractive and welcoming and to include a page on 'Women at Oxford'.	7.1 Develop a 'virtual open day' to explain about life as a graduate research student at Oxford. 7.2 Explore possibilities for obtaining funding for graduate scholarships specifically for female students.	First Virtual Open Day to run. Evidence from applicant feedback that the Virtual Open Day has contributed to the decision to apply here. Female students funded from such a source. Increased number of graduate research applications from	1 Dec 2016 2017 2018-19 2017-18	DGS / GSA

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
			women.		
8. Increase the likelihood of women accepting offers for graduate research study	2015: instituted an online survey for all those who withdraw their application: funding is clearly a major factor (see 10 below).	8.1 Analyse the results of the surveys in more detail as 2016 survey data becomes available, and consider what further changes might be made to retain offer holders.	Analyse further results and consider changes. A reduced 'drop-out' rate amongst applicants – especially women.	2017 2018-19	GSC
	Worked toward providing a better interview experience by clustering interviews on the same day and inviting applicants to attend lunch and other events with current students – female interviewees to meet with current female students where possible. Implementation has been patchy across research groups.	8.2 Continue to develop this, providing consistency of experience to interviewees across all research groups, and seek feedback from them on this.	All interviewees to have this experience. Positive feedback from interviewees on their interview visit.	2017-18	GSA, Research Groups
9. Ensure graduate research admissions processes are as effective, fair and transparent as possible	Streamlined timetable in order to make offers (and in particular funded offers) as early as possible.	9.1 Review and revise guidance given to those selecting students for admission, to make it as clear as possible, so that they are best supported through the process.	Revise guidance Feedback from faculty to indicate that this has supported good decision-making	2016-17	GSA
10. Support a vibrant community of female mathematics students	Oct 2014 supported students in establishing the 'Mirzakhani Society' for women in mathematics (the society now also welcomes students identifying as non-binary). Ongoing support via provision of funding, facilities, publicity and faculty contributing to events.	10.1 Continue to support society with funds, provision of rooms, and faculty members contributing to events.	Society ongoing; good/increased attendance at events	2017-18	DUS / AA
11. Support wellbeing of graduate	2015: Graduate 'buddying' scheme established for doctoral students. All	11.1 Continue to run 'buddy' scheme.	Continued buddy scheme.	Ongoing	WL

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
students	new doctoral students had a 'buddy' (peer) to support them prior to and upon arrival in Oxford. Feedback was very positive. Graduate mentoring scheme launched, but uptake was low (only 7 students).	11.2 Support allocation of mentors by involving Research Groups, and by providing more guidance for potential mentors and mentees. 11.3 Explore ways to encourage 'good citizenship' amongst graduate students – for example some could specifically take responsibility for encouraging uptake of mentoring amongst their peers.	Each Research Group to have a faculty member responsible for support for graduate students within the group, and a graduate student with responsibility for assisting them. Higher uptake of mentoring Positive feedback on mentoring from participants Guidance to be drafted for mentors/mentees	2017-18 2017-18 2017-18 2016-17	AHOD (Career Development) GSC, GPC APO
		11.4 Arrange for the University Counselling Service to run a session on student wellbeing for academic staff – to equip them with tools and knowledge to support students who are in distress/experiencing difficulties such as mental health difficulties.	Course to run for academic staff	Summer 2017	AHOD (Career Development)
12. Graduate research students to receive maternity pay	We negotiated with funding bodies in order to be able to award maternity pay to two graduate students on stipends.	12.1 We will underwrite other sources of funding to ensure that *all* graduate research students can be provided with six months' full 'maternity pay' at RCUK stipend rates.	Develop detailed policy for implementation. All graduate students taking maternity leave to receive funding	Dec 2016 2017	APO / PA / AA
		12.2 Lobby nationally to make the case that funders should improve the provision for maternity pay for graduate students.	Contact made with ministry/government. There may be a change in funders' policy.	2016-17 2017-18	HOD

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
Academic and research staff					
13. Provide more opportunities for career progression within the early research career	2013: offered eight 'Hooke' and 'Titchmarsh' career development fellowships from departmental funds – two of those appointed were women: initial postholders have had excellent success in furthering their academic careers.	13.1 Continue to offer the Hooke and Titchmarsh fellowships, and pursue other opportunities to offer fellowships via philanthropy (including one for female mathematicians), in partnership with colleges, and via fee income from a new taught programme. 13.2 Advertise all such fellowships as being potentially available on a part-time or job-share basis. 13.3 Email European Women in Mathematics mailing list asking members to encourage junior female colleagues to apply (EWM mailing list tends to have relatively senior members who would not be applying themselves).	To have at least six Hooke/ Titchmarsh Fellows in steady state. To offer more fellowships from philanthropic funding, including one specifically for women. To fund four-five additional career development fellowships on an ongoing basis from fee income from a new MSc. All to be advertised as potentially part-time/job-share. A higher proportion of female applicants than currently for research posts in general (17%).	Ongoing 2017-18 2019-20 Ongoing 2017-18+	HOD
14. Embed Career Development Review for early career researchers	In 2015, after consultation with research staff, the post of 'Advisor to Early Career Researchers' was established. The Advisor has since met individually with all early career researchers each year. 2016: annual Career Development Review introduced for postdoctoral research assistants and fellows, with near-universal uptake.	14.1 New Early Career Researchers Committee to seek feedback on Career Development Review scheme and refine/develop as necessary.	At least as high or higher uptake of Career Development Review, and positive feedback on it.	2016-17 onwards	ECRC

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
15. Support careers and skills development for research students and early career researchers	2015-16 Friday seminar series established for graduate research students, early career researchers, and others, focussing on skills and career development. Well-received with high levels of attendance.	15.1 Continue to run and develop the seminar series. Include: - session on unconscious bias; - session on supporting student wellbeing; - one session per term to be led by new ECR Committee.	Continued events, positive feedback. Evidence in feedback from participants of impact on careers.	2016-17 onwards	Friday seminar organisers
	Summer 2016: piloted a scheme of mock job applications and interviews for graduate research students and postdocs/research fellows. Funded a 'Good Practice Facilitator' to support the scheme. Scheme was well-received.	15.2 Continue the scheme of mock job applications/interviews and expand and refine in future years. Encourage postdocs to sit on panels. Continue to fund Good Practice Facilitator to support the scheme.	Higher numbers annually experiencing mock interviews than in 2016 (i.e. average of 3-4 candidates interviewing for each of more than five 'jobs'). Positive feedback received on the scheme. Participants having good success rate in obtaining jobs	Summer 2017 onwards	AHOD (Career Development)
16. Obtain better data on research staff leavers to understand whether there is anything further we should be doing to support retention.	Data reveals that there does not appear to be a gender differential in research staff turnover.	16.1 The Advisor for Early Career Researchers will routinely explore in more detail with research staff their reasons for leaving. More detailed information about destinations and reasons for leaving will be recorded.	Better data on reasons for leaving and destinations Make recommendations for changes to departmental policy and practice based on data collected.	2016-17 onwards 2017-18	AECR / PA
17. To attract more women to apply	2016+: established a 'Search Committee' for each statutory chair, with the explicit	17.1 Search Committees to operate for all SP appointments.	More women applying for statutory chairs.	2017-2020	HOD

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
for statutory professorships	aim of identifying and reaching out to potential candidates of both sexes, particularly seeking out strong female candidates.	17.2 HoD to report regularly to GPC on operation of search committees.			
18. To provide a good induction	Comprehensive induction programme implemented for all staff categories – feedback from staff surveys and focus groups on induction is positive: all academic staff respondents in 2016 who had experienced an induction and expressed a view had found it useful.	18.1 All material within induction programme to be made accessible on website, for future reference.	Material to be online.	Dec 2016	PA
19. To support academic staff career progression	Associate Head of Department for Career Development – new post created to oversee development of mechanisms for better supporting career development for academic staff.	19.1 Mechanisms likely to include more formalised role for Research Groups – for example in having responsibility for encouraging/supporting staff at an appropriate career stage to apply for Recognition of Distinction, and professorial merit awards; and in providing mentors for junior staff. Good practice in some Research Groups to be more widely shared.	Academic staff having access to more mechanisms to support of career progression; more staff experiencing mentoring/other support as evidenced in feedback.	2017-18	HOD, AHOD (Career Development)
20. To provide more opportunities for academic staff Career Development Review, and increase uptake	Remit of new Associate Head of Department for Career Development also includes reviewing procedures for this.	20.1 Develop different ways of managing the system of career development review for academic staff – for example by having the option of Associate Heads of Department carrying out five-year review meetings for Associate Professors, and Heads of Research Groups or other senior staff could conduct non-compulsory (annual) review meetings.	Higher uptake of non-compulsory (annual) career development review meetings. Positive feedback from academic staff on the changes to career development review.	2017-18 2017-18	HOD, AHOD (Career Development)
21. To relieve pressures on those with family/caring	The Department has resolved that it will accommodate requests from academic staff to work part-time. It will supplement the University policy on	21.1 This policy will be publicised widely. 21.2 Develop a robust mechanism for negotiating with colleges over the duties	Current academic staff may become part-time Feedback in staff	2016-17 onwards	HOD

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
responsibilities and change perceptions/ culture about part-time working for academic staff	flexible working by allowing staff to go part-time for a limited period (and have the right to return to full-time work), as well as allowing staff to become part-time permanently.	owed to the college – when appropriate arranging to cover the college teaching need as would be done for holders of external research fellowships.	surveys indicating that staff see part-time working for academic and research staff as supported/the 'norm'. Reach formal agreement with colleges about a standard mechanism for filling college duties.	2018 2018	
Professional and support staff					
22. To improve understanding of processes for regrading posts	Focus Group feedback indicated that many staff did not see the process of regrading of posts as being transparent/accessible.	22.1 Incorporate clear guidance for staff and managers into new documentation for annual Personal Development Review discussions. (see 24 below).	Incorporate guidance Feedback in staff consultations that processes for regrading posts are seen as being transparent and fair.	2016-17 2017-18	HAF
23. To better support professional and support staff career progression/development	Focus Group feedback indicated that most staff felt that they had good access to appropriate training to support them in undertaking their current role. However, some felt that training was not encouraged.	23.1 Take steps to actively ensure that a positive message is conveyed about training and development: circulate information about training courses in new departmental bulletin, alongside encouragement to attend, and highlight training opportunities at staff meetings.	Incorporate information in bulletin and at staff meetings. Feedback in staff consultations that training is seen as being encouraged. Increase in staff taking training.	2016-17 2017-18 2017-18	HAF

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
		23.2 Consider mechanisms to support staff who wish to develop the skills and experience to enable them to move beyond their current role, such as offering 'job shadowing' or more opportunities for undertaking different projects/secondments.	Staff to have access to new opportunities. Staff taking up new opportunities.	2017-18 2017-18	HAF
24. To improve Personal development review (PDR) for professional and support staff	Feedback received that Annual Personal Development Review (PDR) is insufficiently structured, with insufficient guidance for participants.	24.1 Review the PDR scheme and devise new documentation for it, providing more guidance to staff and managers.	New guidance to be issued Positive feedback on revised scheme	Summer 2017 2018	HAF
Organisation and Culture					
25. Establish better mechanisms for monitoring, evaluating and managing academic staff workload	Set up a 'Nominations Committee' to support the Head of Department in allocating duties across the department. Set up a Workload database to record more comprehensively all duties undertaken by staff. Obtained feedback from other departments in the Division and other mathematics departments nationally on what forms of workload planning and monitoring they have found helpful.	25.1 The Nominations Committee will: - use the new consolidated dataset to develop a more comprehensive workload planning model, considering both quantitative and qualitative approaches in use elsewhere; - advise the Head of Department on allocation of duties accordingly; - continue to refine and develop the dataset and the workload planning model. The aims will be to ensure that load is equitable, to better formally recognise the full range of burdens on individuals, and to better support them in managing their career.	Data to be consolidated and refined and used to support allocation of duties. Workload allocation model and dataset to be refined. Staff feedback that workload allocation process is fairer/more transparent/has better supported their career development.	Use in 2016-17 to allocate duties for 2017-18. 2017-18 and onwards 2018 / 2020 staff surveys	AHOD (Planning and Resources) and NC
26. To reduce academic staff workload overall		26.1 Identify and implement changes which will reduce/streamline the overall workload on the academic staff – for example changes	Quantifiable reduction in overall workload on academic staff.	2017-18 and beyond	HOD and AHOD (Planning and

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
		to delivery and assessment of programmes.			Resources)
27. To encourage female staff to engage in mutually supportive activities	Department has supported Mathematrix lunches for graduate students and ECRs. Twice-termly lunch run for senior female faculty members. Welcome lunches run for all new female postdocs and graduate students – moved to slightly later in the academic year, following feedback.	27.1 Continue to support /run and seek feedback on these events.	Sustained/increased attendance at these events.	2016-17 and beyond	GPC / AHOD (Career Development)
28. To tackle bullying/ harassment	Increase in those reporting bullying or harassment in the staff survey: have re-publicised information on bullying/harassment and sources of support.	28.1 Harassment Officers to regularly inform department members about University guidance and initiatives on this. 28.2 Connect with other departments within the University to explore approaches taken there to inform practices within our department. 28.3 HOD to urge all staff to raise any concerns with HOs or with HOD personally; HOD to lead activities in anti-bullying week	New initiatives, such as HOD to lead activities in anti-bullying week Significantly reduced numbers reporting having experienced bullying/harassment.	Nov 2017 2018 survey	HOs / GPC / HOD
29. To ensure that gender equality is built into the organisation of seminars and similar events	Research Committee reviews a list of speakers at seminars and other high profile events and data on gender is circulated to all in the department.	29.1 Continue to circulate data on gender of speakers, in particular to draw attention to areas where the gender split is not representative of the population, and to encourage seminar organisers to actively seek out speakers from underrepresented groups.	Proportions of seminar speakers to be representative of the wider mathematical community.	2017 onwards	RC
30. To improve communications within the	2014: Oxford Mathematics Good Practice Facebook page set up – https://www.facebook.com/OxMathsGoodPractice/ - has over 150 followers,	30.1 Start a weekly departmental 'bulletin' to summarise important news, and include information on good practice initiatives and	First bulletin to be circulated and archived on website	Jan 2017	ERM / WL

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
department	and some posts reach up to 1300 people. Briefings held for academic staff and support staff on Athena SWAN and good practice initiatives.	training opportunities for staff.			
31. To raise awareness of the potential impact of unconscious bias.	Ran a bespoke training session on unconscious bias at a meeting for all staff in October 2015. Training for those doing undergraduate admissions interviewing, and for those serving on selection panels includes sections on unconscious bias. Have circulated material from Royal Society on unconscious bias to faculty prior to major admissions rounds and to chairs of selection panels. In the 2016 staff survey 84% of academic staff respondents said that they had been provided with information/training on the potential impact of unconscious/implicit biases on individuals' decision-making.	31.1 Organise session on unconscious bias as part of the Friday skills training/career development seminar series. 31.2 Arrange for one of the University's new Facilitators for race awareness and unconscious bias awareness to run a session specifically for professional and support staff. 31.3 Explore whether further sessions are needed.	**All** staff to be aware of the potential impact of unconscious bias. Potential impact on selection/appointment and other statistics.	2017-18	Friday seminar organisers / APO
32. To ensure that all department members are well-informed on HR policies, support for parents and carers.	Material has been better consolidated on the website – there is a section on HR policies on the webpage for members https://www.maths.ox.ac.uk/members/personnel	32.1 Information will be included regularly in the new weekly bulletin.	Information in bulletin Better awareness demonstrated in staff survey.	Jan 2017 2018	ERM / WL
33. To ensure that managers – both academic and professional/		33.1 Run some courses in-house, led by external providers: courses physically located within the department and tailored to the needs of the department to encourage take-	Courses running: staff attending and giving positive feedback.	2017	APO / HAF

Objective (bold=highest priority)	Progress since 2013 application, including impact, where applicable	Future Plans (next four years)	Success measure	Timescale	Responsibility
support staff – are well-supported in this role		up.			
34. To ensure that all members of the department have input into the running of the department	Staff surveys in 2012, 2014 and 2016; staff and student focus groups introduced in 2015-16. Departmental review involving consultation and online forum run in 2015. Termly Department-Faculty meeting now have a dedicated section for questions for the HOD. Taken steps to ensure that female academic staff are represented on key committees, and that students and postdocs also have representation.	34.1 Continue to run surveys at least every 2-3 years, potentially combining with the University's new 'staff experience' survey, and exploring other ways to involve staff. 34.2 Continue to analyse and act on feedback, and report back to staff about action taken in response to feedback.	Run surveys/consultations Seek to combine with University staff experience survey next time it is run. Evidence of further changes which have been implemented as a result of feedback. Reports back to staff.	2018, 2020, etc. 2018 2018-19 2018-19	ASWG / APO

KEY to abbreviations:

AA	Academic Administrator
AC	Admissions Committee
ACSLO	Admissions Coordinator and Schools Liaison Officer
AECR	Advisor to Early Career Researchers
AHOD	Associate Head of Department
APO	Academic Policy Officer
ASWG	Athena SWAN Working Group
DGS (T/R)	Director of Graduate Studies (Teaching/Research)
DUS	Director of Undergraduate Studies

ECRC	Early Career Researchers' Committee
ERM	External Relations Manager
GPC	Good Practice Committee
GSA	Graduate Studies Assistant
GSC	Graduate Studies Committee
HAF	Head of Administration and Finance
HOD	Head of Department
HOs	Harassment Officers
NC	Nominations Committee
PA	Personnel Assistant
RC	Research Committee
TC	Teaching Committee
WL	Whitehead Lecturer

Note: where a date is given in the format 2017-18 this means the academic year 2017-18.