

Department Application Ireland

Bronze and Silver Award



Department application	Recommended A Silver word count	Actual word count
Word limit	13,500	13,486
Recommended word count		
1.Letter of endorsement	500	507
2.Description of the department	500	472
3. Self-assessment process	1,000	1,071
4. Picture of the department	3,000	2,951
5. Supporting and advancing women's careers	6,500	7,218
6. Case studies	1,000	1,001
7. Further information	500	266
Additional word count relating to impact of Covid-19 pandemic (across all sections)	500	0

Abbreviations

%F	Percentage Female
A/B	Above the Bar
AS	Athena SWAN
AWDM	Academic Workload Distribution Model
BAME	Black, Asian and Minority Ethnic
B/B	Below the Bar
CDI	Career Development Initiative
CFS	B.Sc. Chemistry of Forensic Science
CID	Contract of Indefinite Duration
CHE	B.Sc. Chemistry
СМ	Chemistry Module
СРС	B.Sc. Chemistry of Pharmaceutical Compounds
CPD	Continuing Professional Development
СРҮ	B.Sc. Chemical Physics
СТО	Chief Technical Officer
DEWG	Digital Estate Working Group (UCC)
DO	Departmental Operative
EA	Executive Assistant
EC	Early Career
EAT	Executive Advisory Team
EDI	Equality Diversity and Inclusion
F	Female
FT	Full Time
HA	House Assistant
HEA	Higher Education Authority
HESA	Higher Education Statistics Agency
HoS	Head of School
HoD	Head of Academic Discipline (Analytical Chemistry, Inorganic Chemistry, Organic
	Chemistry, Pharmaceutical Chemistry, Physical Chemistry)
L A/B	Lecturer Above the Bar
L B/B	Lecturer Below the Bar
LEAD	Living Equality And Diversity training

Μ	Male
NUIG	National University of Ireland Galway
NUIM	National University of Ireland Maynooth
OPRA	Outreach Public Relations and Admissions
OQ R	Open Questionnaire Research staff
OQ PMSS	Open Questionnaire PMSS staff
PDP	Personal Development Plan
PDR	Postdoctoral Researcher
PDRS	Performance Development Review System
PG	Postgraduate
PGR	Postgraduate Research
PGT	Postgraduate Taught
PI	Principal Investigator
PMSS	Professional Managerial and Support Staff
РТ	Part Time
RA	Research Assistant
RF	Research Fellow
RGSC	Research and Graduate Studies Committee
RIA	Royal Irish Academy
RSC	Royal Society of Chemistry
RSS	Research Support Services
SAC	Safety Advisory Committee
SALI	Senior Academic Leadership Initiative
SAT	Self-Assessment Team
SEA	Senior Executive Assistant
SFI	Science Foundation Ireland
SL	Senior Lecturer
SOP	Standard Operating Protocol
SPDR	Senior Postdoctoral Researcher
SRF	Senior Research Fellow
SSC	Staff Student Committee
STO	Senior Technical Officer
TASC	Technical, Administrative and Support Committee
TLC	Teaching and Learning Committee

- TO Technical Officer
- UCC University College Cork
- **UG** Undergraduate
- UL University of Limerick
- WG Working Group
- **WiSTEM** Women in Science, Technology, Engineering and Mathematics

Name of institution	University College Cork				
Department	School of Chemistry				
Focus of department	STEMM				
Date of application	June 2021 (April 2021 submission round)				
Award Level	Silver				
Institution Athena SWAN award	Date: Nov 2019	Level: Bronze			
Contact for application Must be based in the department	Dr. Florence McCarthy				
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UCC SCHOOL OF CHEMISTRY HAS CHOSEN TO OPT IN TO THE PROFESSIONAL, MANAGERIAL AND SUPPORT STAFF: INTERIM PROCESS. THE ADDITIONAL DATA, ANALYSIS AND ACTIONS RELATING TO PROFESSIONAL, MANAGERIAL AND SUPPORT STAFF SHOULD BE CONSIDERED AS PART OF THE AWARD PANEL'S ASSESSMENT OF WHETHER THE APPLICATION MEETS THE CRITERIA FOR A BRONZE/SILVER AWARD.

1. LETTER OF ENDORSEMENT FROM THE HEAD OF SCHOOL

2. DESCRIPTION OF THE DEPARTMENT

Key Actions Implemented

- Increased gender balance in Staff %F.
- * New School Rules on Headship implemented.
- EDI Advocates throughout School structure.

The School of Chemistry at UCC is a research-led centre of excellence, delivering Royal Society of Chemistry accredited undergraduate and postgraduate degree programmes with significant industry interface. The School is directly responsible for >600 UG and PG students and occupies part of the Kane Building on UCC campus, containing teaching and research laboratories, offices, lecture theatres, meeting rooms and technicians' workshops. We have additional research laboratories in three of UCC's flagship research institutes - Tyndall National Institute, Environmental Research Institute and Analytical and Biological Chemistry Research Facility. The split-site arrangements are managed to ensure that staff, researchers and students are integrated. As a whole, the School benefits from newer facilities and interdisciplinary research environments.

Female representation among School staff has increased from 25% to 30% over the past four years since our Bronze award *(Table 2.1, Figure 2.1 & 2.2)*. As a snapshot, in September 2020 the School had 25 academic staff (five female, 20%), 17 administrative, support and technical staff (six female, 35%), and 15 research staff (six female, 40%). The gender balance among our student population is excellent, with 55% female at UG level (264 out of 485 students) and 59% female at PG level (69 out of 118 students) in 2019. In total, across all of our staff and students the balance is 53%F (total of 660).

		F	м	%F	Total
Staff	Academic	5	20	20%	25
	Research	6	9	40%	15
	PMSS	6	11	35%	17
	Total	17	40	30%	57
Students	UG	264	221	54%	485
	PGT	19	12	61%	31
	PGR	50	37	57%	87
	Total	333	270	55%	603
Grand	Total	350	310	53%	660

Table 2.1	School of Chemistry Staff and Student Headcount by Gender (2019 Census
Point for all cate	gories.





Figure 2.1 Gender Breakdown of Staff Roles within the School of Chemistry.

On becoming a School in 2017, new rules were adopted providing a more inclusive framework for staff and students to engage effectively and proactively and Athena Swan has been immensely helpful in this. The Head of School (HoS) is now appointed through a selection process, which extends the eligibility pool to Senior Lecturers and Professors (Scale 2), opening up the opportunity for more staff (previously open to full Professors only). An organogram of the School is shown in *Figure 2.3*.

The HoS is responsible for all academic and administrative functions within the School. The EAT includes the five academic Heads of Discipline (HoD) *(Table 2.2)* and meets monthly to advise and assist the HoS on management and leadership of the School. The EAT reports to the School Board, which consists of all academic staff, the School Manager, Chief Technical Officer and representatives from research staff, UG and PG students. The School Board meets monthly to make decisions on academic and administrative matters. Seven standing committees, each focussing on specific aspects of our operations, also meet regularly and report to the School Board with recommendations for action.







The School Assembly is an annual meeting of all staff and research students with a focus on activities and initiatives, achievements, strategic planning and finances. The Assembly promotes an atmosphere of co-operation and ownership within the School, an indicator of our inclusive culture.



3. THE SELF-ASSESSMENT PROCESS

Key Actions Implemented

*	Athena SWAN SAT converted to Equality, Diversity and Inclusion Committee.
*	All staff and all students surveyed to identify gender discrepancies.
*	Increase in influence, dissemination and publicity of gender awareness.
*	Evidence of Inclusive Culture.

(i) A description of the self-assessment team

Our SAT (EDI Committee) comprises academic, technical, administrative and research staff, as well as PhD and UG students **(Table 3.1, 3.2)**. The team represents diverse career grades, gender balance (7 males, 7 females) and has wide-ranging experience (8/14 of the SAT remain from previous application).

Selection of SAT members was through consultation with HoS and line managers based on workload, diversity of perspective, expertise and gender balance. Eleven (79%) of the SAT members have children and/or childcare responsibilities, are in dual career partnerships, and/or have taken maternity or paternity leave. Three (21%) of the members also have other carer responsibilities. Each member has committed to be an advocate for equality across their activities and this is publicly stated on our webpages (*Figure 3.1*).

Roles within the committee were allocated to be inclusive and avail of expertise: the new introduction of Co-Leads of different staff grades and genders for each of the application Working Groups (*Table 3.1*) with the Chair and Deputy Chair taking responsibility for other sections led to a collaborative approach and a full scope of perspectives. Committee workload was overseen by line managers and forms part of staff workload discussions with specific accommodation for the Chair in respect of teaching duties.

WG	4.1 Student Data	4.2-4.3 Staff data	5.1-5.4 Career Development	5.5 Flexible Working	5.6 Culture
Role	Gender	Gender	Gender	Gender	Gender
	F	F	F	F	Μ
Co-Leads	(Admin)	(Admin)	(Academic)	(Admin)	(Academic)

Table 3.1Composition of Working Groups by Gender and Category.

	F	М	М	М	М
	(Technical)	(Research)	(Academic)	(Academic)	(Technical)
	М	F	F	F	F
Members	(Academic)	(Academic)	(Academic)	(Technical)	(PGR)
	F		F	М	F
	(PGR)	—	(Admin)	(Technical)	(UG)
	F		М		М
	(UG)	—	(Research)	—	(Academic)
			М		
	—	—	(Technical)	—	—

(ii) An account of the self-assessment process

Our SAT was established in 2016 and the focus since Bronze award has been on delivery of the Action Plan through our equality advocates across the School Committees, training and upskilling on latest practices and preparing our current application. The SAT was renamed as an Athena SWAN Committee in 2018 and again in 2020 as an Equality, Diversity and Inclusion Committee with an enhanced remit and, in conjunction, a planned change of Chair of the committee to Dr. McCarthy (with Prof. Wenger appointed as Deputy Chair ensuring continuity).

Minutes of all EDI meetings are reported at School Board as a standing item on the agenda with redacted minutes published on our website. The Committee reports directly to the SEFS AS Steering Group, which in turn reports to the Institutional Steering Group.

Data collection continued in 2019-2020, focussing on the period 2016-2019, to represent the most recent and complete dataset available from School and University records (COVID-19 situation has resulted in some more recent data being included). Each WG met regularly to review and interpret the relevant data. Reports from WGs were discussed at EDI committee meetings, used to shape this application and formulate our Action Plan.

Staff and students in the School were consulted via a combination of surveys, individual discussions and open questionnaires (Focus Groups were deemed inappropriate in 2020-2021 due to COVID-19 restrictions). The EDI committee designed and conducted online staff, PGT, PGR and UG student surveys between April 2020 and April 2021 with excellent response rates (*Figure 3.2*).



Figure 3.2 Response rate for each of the data collection points used in this application.

Surveys commonly used Likert scales for answers to specific questions and rather than tables of data, the answers are represented as radar plots where sufficient responses allowed (>10). *Figure 3.3* shows an example where opinion is divided.



Figure 3.3 Example of a radar plot to help explain our findings and showing a clear distinction between the genders from just 13 responses (female PMSS staff are split whereas male PMSS predominantly agree).

Responses from these surveys identified two staff groups for further consultation. Open questionnaires were initiated to answer two key questions:

- How might we improve career development for our Research Staff? (*Actions 4.2-3, 4.2-4, 5.5-3*)
- 2. How might we identify the specific needs of PMSS staff and tailor our actions appropriately? (*Actions 3-3, 4.3-1, 5.2-1a and b, 5.4.1, 5.6-4b*)

Feedback from open questionnaires and individual staff interviews were used, along with results from the surveys, to inform our Action Plan and address the key challenges above.

Draft versions of the application and Action Plan were circulated to all staff for feedback and approval in June 2021. Feedback on the application was also received from colleagues in SEFS and University AS Steering Groups.

The Committee has been active in championing the principles of AS within the School, College and University. To highlight our progress and to raise awareness we have created a new website, dedicated email address for dissemination and promotion of EDI activities and recorded short films highlighting key actions (*Figure 3.3* and *3.4*).

i outle	ookoffice.com/mail/deeplink?poputv2=18version=20210614002.08
∱ Rej	pły 🖂 💼 Delete 🛇 Junk Block …
Bysta	nder Intervention Week
CE	Chemistry EDI Constraints EDI
	Deer Studient, The start of Senester II coincides with the UCC Bystander Intervention Week (25th - 25th)anuary). This is a good opportunity to highlight the UCC Bystander Intervention Programme, which aims to build a culture of zero tolerance towards sexual violance and harassment, by providing participants with the capacity to identify unacceptable behaviour and enable their development of effective intervention skills.
	In the School of Chemistry we promote a culture of support and respect and to strengthen this we strongly encourage our students to complete the Bystander Intervention Programme. To learn more about what the programme entails, and to sign up, please click https://www.wcclie/en/bystander/about/
	Sexual Harssment and Violence has been identified as a serious and toxic issue across all Irish Higher Education institutions. UCC has developed this programme to support all UCC students to play their part in demanding behavioural change. Please take this opportunity to play your role and be a part of this change.
	Best winnes, Florence
	Dr Florence McCarthy Chair, School of Chemistry Equality, Diversity and Inclusion Committee
	Dr. Florence McCarthy, School of Chemistry and ABCRF, Cavanagh Building, University College Cork, Cork, Treland.
	Phone: +332.21.4001495 Email: (Inscarthy/Backie Web: server search.ucc.ie/roofles/D004/fmcoarthy
	Reply Reply all Forward

Figure 3.3 Screenshot of the School of Chemistry email promoting student involvement in Bystander Intervention Week (February 2021).

Flexibility on previous actions and application timelines was continually acknowledged through the committee due to workload changes and especially COVID-19 resulting in a complete rethinking of working practices. A number of previous actions were not achievable in the timeframe primarily due to external factors. Reassessment of our past goals has fed into the Action Plan now proposed where we use a Gantt chart to identify responsibility and delivery.



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

The School's EDI Committee has an extended remit and much to do. Meetings are scheduled monthly between September and June to ensure continual output. Committee membership will change in 2022 (new HoS) and long-term members who choose to, will rotate out, with new members already identified. The School will ensure that all staff grades and students continue to be represented on this committee and where possible maintain gender parity.



Figure 3.4 Screenshot of the School of Chemistry webpages promoting our Athena SWAN involvement.

Implementation of the Action Plan will be managed by the Chair, with support from the HoS and School Manager. WG Co-Leaders are responsible for monitoring and reporting progress in those areas. In 2022/2023, the Committee will discuss upcoming issues, review progress and targets, and offer guidance to the WG Co-Leaders. The Committee will continue to collect and analyse data and conduct annual UG student surveys and biennial staff surveys to measure progress (*Action 3-1*).

The Committee will communicate Action Plan progress by posting regular public updates (*Action 3-2, 5.6-6, 5.6-7 and 6-2*) and reports to the School Board, SEFS AS Steering Group and School Assembly (*Action 3-3; Figure 3.5*). To ensure consistent input from EDI in School management we propose *Action 3-4*.



Figure 3.5 Sample of School Assembly Presentation from EDI Committee 2020 highlighting continual activity.

Impact – Extensive integration of EDI committee exists in each of the policy and decision-making committees at School and College level (*Figure 2.3*).



Impact – New activities relate to dialogue, dissemination and promotion of the equality work in the School (*Figure 3.5*).

Action 3-1 [Capacity Building]

Collect and analyse all relevant staff/student data and conduct UG/PGT/PGR student and staff surveys.

Action 3-2 [Change of Culture]

Promote Athena SWAN and EDI principles and activities.

Action 3-3 [Change of Culture]

Open application for School committee membership promoted through School Assembly.

Action 3.4 [Change of Culture]

Inclusion of the Chair of the EDI committee on our Executive Advisory Team.



4. A PICTURE OF THE DEPARTMENT

4.1 Student data

Key Actions Implemented

- Comprehensive review and RSC accreditation of the CFS programme completed.
- All funded MSc and PhD research positions are advertised and data on offers and acceptances monitored.
- (i) Numbers of men and women on access or foundation courses

N/A

(ii) Numbers of undergraduate students by gender

The School offers four full-time undergraduate degree programmes. In first year, students enrol through entry stream Chemical Sciences (CK406) or Biological and Chemical Sciences (CK402). On progression to second year, students select their degree programme (*Figure 4.1.1*).



Figure 4.1.1 The BSc degree programmes offered by the School of Chemistry and their associated entry points.

A summary of female and male students across $2^{nd} - 4^{th}$ Year of our UG programmes is shown in *Figure 4.1.2*. There is a clear increase in female participation from 51% to 56% over the reporting period 2016 - 2019. This trend is more evident when we include our previous reporting period, which shows that female representation has increased from 46% to 56% in the last 7 years. The detailed gender breakdown of student numbers in all years is provided in *Table 4.1.1*. A non-binary option was added for gender in 2019.



Table 4.1.1Gender distribution of female (F) and male (M) UG students across all BSc Chemistry degree programmes, 2016-2019.

		2016 - 2017		20	17 - 2018		20	18 - 2019		2019 - 2020				
		F	м	%F	F	м	%F	F	м	%F	F	м	Non- binary	%F
	Biological and Chemical Sciences (CK402)	138	77	64%	120	81	60%	109	82	57%	130	60	1	68%
Year 1	Chemical Sciences (CK406)	14	10	58%	20	12	63%	15	13	54%	15	14	0	52%
	Total	152	87	64%	140	93	60%	124	95	57%	145	74	1	66%
	Chemistry with Forensic Science (CFS)	9	4	69%	6	3	67%	7	2	78%	8	1	0	89%
	Chemistry (CHE)	32	30	52%	26	25	51%	30	25	55%	22	25	0	47%
Year 2	Chemistry of Pharmaceutical Compounds (CPC)	6	14	30%	12	9	57%	14	7	67%	11	9	0	55%
	Chemical Physics (CPY)	0	4	0%	3	6	33%	1	9	10%	3	5	0	38%
	Total	47	52	47%	47	43	52%	52	43	55%	44	40	0	52%
	Chemistry with Forensic Science (CFS)	9	6	60%	5	5	50%	4	2	67%	7	1	0	88%
	Chemistry (CHE)	22	26	46%	34	30	53%	26	24	52%	30	22	0	58%
Year 3	Chemistry of Pharmaceutical Compounds (CPC)	13	10	57%	6	14	30%	11	9	55%	13	7	0	65%
	Chemical Physics (CPY)	4	3	57%	0	4	0%	3	1	75%	1	5	0	17%
	Total	48	45	52%	45	53	46%	44	36	55%	51	35	0	59%
	Chemistry with Forensic Science (CFS)	9	2	82%	8	5	62%	5	3	63%	5	2	0	71%
	Chemistry (CHE)	19	15	56%	22	20	52%	33	30	52%	26	22	0	54%
Year 4	Chemistry of Pharmaceutical Compounds (CPC)	9	12	43%	12	9	57%	6	14	30%	11	9	0	55%
	Chemical Physics (CPY)	0	2	0%	4	3	57%	0	4	0%	3	1	0	75%
	Total	37	29	56%	42	34	55%	44	47	48%	42	33	0	56%
Grand		284	213	57%	274	223	55%	264	221	54%	282	182	1	61%
TULA													_	



Figure 4.1.2 Numbers of female and male students from 2nd - 4th Year on all four BSc programmes offered by the School of Chemistry.

In our 2017 School Action Plan, Action 4.4-6 was designed to ensure gender balance among staff delivering outreach activities and the milestone of actively encouraging wider participation in outreach activities was met over the reporting period. Through this action, the School has ensured gender balanced representative role models of staff and PGR students to engage during outreach events in UCC and our regular visits to secondary schools in Munster promoting our programmes. As evidence of this, in our 2020 PGR Survey, 66% F PGR (19F) have reported participating in school visits and outreach in comparison to 48%M PGR (12M).

Between 2018 and 2020 we surveyed our final year UG students on whether outreach events influenced their decision to choose Chemistry programmes at UCC (see *Table 4.1.2*). From 2018 to 2020, there is a steady increase in students reporting the influence of outreach and school visits by the School on the number and profile of students registered on our programmes (especially %F). In 2020, this statistic has increased to twelve or 34% of our female final year UG students reporting school outreach visits (in comparison to five or 25% of all male students). Other actions which have supported this increase include introduction of female role models at the Programme Coordinator level (1 x F for CFS programme, see *Figure 5.3.2*) which again is clearly visible in course promotional material, Open Days, outreach and promotional events.

Table 4.1.2UG student survey data from 2018-20 reporting influence of outreach or school visitfrom School of Chemistry on final year student numbers by gender (% survey respondents; actualnumbers in brackets)

	2018				2019		2020			
	(visited 2013/14)			(visited 2014/15)			(visited 2015/16)			
	Total	F	М	Total	F	Μ	Total	F	М	
School Visit	4%	3%	5%	12%	15%	9%	31%	34%	25%	
		(1)	(1)		(3)	(2)		(12)	(5)	
Outreach	0%	0%	0%	7%	10%	5%	16%	14%	20%	
event		(0)	(0)		(2)	(1)		(5)	(4)	



On average there is equal representation between genders in the CHE and CPC programmes. The lower numbers taking the CFS and CPY programmes means gender balance is more variable. Global monitoring of the gender profile of all courses will continue and specifically in the CFS programme (growing underrepresentation of males) *(Action 3.1)*.

During the period 2016-2019, the level of female representation in our undergraduate chemistry degrees compares favourably with other universities (*Table 4.1.3*).

A picture of degree attainment by gender across all degree programmes is shown in *Figure 4.1.3*. During the period 2016 - 2019, the overall proportion of students obtaining first class honours (1H) is 33% for females and 26% for males. This highlights the improved performance of female students since the last reporting period (2013 – 2016) where 21% of females and 33% of males obtained a 1H.

The proportion of males and females obtaining a Pass grade (40 - 44%) differs annually. However, over the period 2016 – 2019, 14% of males obtained a Pass grade compared to only 1% of females. To address this apparent trend, we will initiate *Action 4.1-1*.

The distribution of final grades by individual degree programme varies from year to year, but there are no consistent trends by gender within degree programmes, *Table 4.1.4.* A detailed breakdown of completion rates by gender is provided in *Table 4.1.5*.

The average % completion rate has increased from 78% in the last reporting period 2013 – 2016 to 89% in this reporting period. From the 2017 School Action Plan, a key action implemented was the review of CFS programme in order to increase completion rates (Action 3.2-2). This review of the programme and installation of a new programme coordinator (F) led to successful accreditation by the Royal Society of Chemistry in 2018. One outcome of the review process was to provide more direct support (such as informal one-to-one consultations as required) which has increased the student performance and the attractiveness of the programme. In the UG survey 2020, all respondents reported that the degree met their expectations and that they would recommend the degree to a friend or relative. In summary, the CFS programme has seen the most pronounced increase in completion rates from 62% to 87% and the increased interest is now in evidence as the programme is oversubscribed on entry.



Impact – Post review, average % degree completion rates in CFS programme have increased from 62% to 87% since the last reporting period.

Action 4.1-1 [Priority Action]

Identify students in 2nd and 3rd year who obtain a Pass grade and intervene to monitor and help improve.



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

The School offers four taught full-time and part-time postgraduate degrees, Table 4.1.6.

During the period, female participation across all full-time programmes averaged 44%, including some variances from year to year. This is comparable to the average of 49% in the last reporting period, showing a stable gender profile. Part-time programmes show much lower enrolment numbers overall, with female participation across all part-time programmes averaging 60%.

Benchmarking MSc Taught data from HEA, *Table 4.1.7*, shows that UCC had 53%F enrolment on average over the period 2016-2019 which compares favourably with the overall HEA average of 51%.

Applications and offers, summary *Table 4.1.8* and full data *Table 4.1.9*, are consistent year on year with little difference in gender. It should be noted that students can apply for many courses in one application and the reasons for declining offers are not collected by the national Postgraduate Applications Centre.

On average across all programmes, gender grade distribution shows that females and males performed equally, *Table 4.1.10* albeit with some variance year on year due to small numbers.

Completion rates shown in *Table 4.1.11*, are excellent (94%-100%) with only some rare cases in which students have delayed graduation (1M), or with a different degree (1F due to non-completion of a thesis, graduated with a certificate). The average female intake and completion is stable at 44%.



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

The School has a low proportion of female full-time MSc research students (36%F), but numbers are low and variable *Table 4.1.12*. The vast majority of our postgraduate researchers are PhDs and our female proportion is consistently higher (57%F), and shows a steady pipeline from undergraduate levels (*Table 4.1.1*).

		2016 - 2017		2017 - 2018			2018 - 2019			2019 - 2020				
		F	м	%F	F	М	%F	F	М	%F	F	м	%F	AVE %F
Full-Time	MSc	0	7	0%	2	1	67%	5	3	63%	1	5	17%	36%
Full-Time	DhD	40	34	54%	47	36	57%	44	33	57%	50	33	60%	57%
Part-Time	PND		1	0%		1	0%	1	1	50%	2	1	67%	29%
Total		40	42	49%	49	38	56%	50	37	57%	53	39	58%	55%

Table 4.1.12	Postgraduate research student headcounts by gender, 2016-2019
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In the 2017 School Action Plan, Action 3.2-4 centred around the rationale *to widen the pool of potential students and establish a more transparent process for student recruitment*. Prior to this, data did not exist on the candidate pool or recruitment process of PGR students in the School. Systematic online advertisement of all PGR posts was implemented in 2017 via the School and University websites, and gendered data of all applications, shortlisting, and appointments were recorded giving the School the first-ever database of PGR applicants, shortlisting and success rates by gender. Though the vast majority of MSc research and PhD positions arise from individual student scholarships, in total 8 studentships (6 for PhD and 2 for MSc research) were advertised between 2017 and January 2021. *Figure 4.1.4* shows the success rate of applicants: of 132 applications (F=54%), 28 were shortlisted (68%F) and 7 females were selected (87%F). Thus, this data has identified gender balance in our PGR applications and in conjunction with data on staff %F representation on selection committees (15%F) highlights that the existing PGR recruitment process in the School is balanced but can be improved.

The following comment from the Staff Survey 2020 highlights an example of the influence of our 2017 Bronze award on attracting and recruiting students:

"As an attractor of undergraduate and postgraduate students to the School, the award has definitely played its role in promoting fairness, equality and balance and equal opportunities for all within the School."

Male, Staff Survey





We now propose to initiate longitudinal monitoring of applications (*Action 4.1-2 a*) to confirm this finding. In addition, selection committees consisted of 2-4 members of academic and research staff (only 15%F). While close to representative of the School's academic staff members (20%F), it is not of the research staff (40%F). *Action 4.1-2 b* aims to address this imbalance.



Impact – Introduction of a local database in the School has increased awareness and transparency of PGR recruitment and identified a record of gender balance in our PGR recruitment process

Action 4.1-2a [Capacity Building]
Collect longitudinal data on all PGR advertised posts to monitor emerging trends.
Action 4.1-2b [Priority Action]
Prepare an SOP for all PIs outlining the application and selection process for PGR posts with special emphasis on securing a more gender-balanced review and selection stage.

Table 4.1.13 outlines PGR degree attainment by programme since the last reporting period: the data shows high %F completion rates for the MRESS and MSc cohorts. In addition, 56% of MSc research students between 2016/17 and 2019/20 subsequently registered for a structured PhD (7 females, 54%).

Table 4.1.13Postgraduate research student graduation figures.

		2017			2018			2019			2020		
		F	М	%F	F	м	%F	F	м	%F	F	М	%F
Full-Time	MRESS	0	0	0%	0	0	0%	1	0	100%	0	0	0%
Full-Time	MSc	4	0	100%	2	0	100%	3	1	75%	0	2	0%
Full-Time	PhD	3	4	43%	10	7	59%	7	3	70%	8	3	73%
Part-Time	(Science)	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Total		7	4	64%	12	7	63%	11	4	73%	8	5	62%

Structured PhDs typically last four years and most students complete the degree within five years. Due to an open admission-graduation cycle, progression rates were calculated by monitoring numbers of registered students in the last 7.5 academic years *(Table 4.1.14)*. In summary:

- 72% of all students finish within 5 years of study, 64.5% of whom are females.
- 95% of all students entering the PhD programme in 2012-2017 graduated by AY 2019-2020, of which 92% were females.

We propose **Action 4.1-3** to fill this gap in knowledge.

Action 4.1-3 [Capacity Building]

Gather longitudinal data on PGR progression rates with special emphasis on students taking more than 5 years to complete.

(v) Progression pipeline between undergraduate and postgraduate student levels

The average female student participation is 53% (UG), 54% (PGR) and 51% (PGT). This shows the strength of our pipeline and reflects well on our promotion of further study. Our survey of final year undergraduate students **(Fig. 4.1.5 – Fig. 4.1.8)** indicated that the majority reflect positively on their degree; that they were informed about postgraduate study and considered the same with little gender disparity.

Career destinations show that more males (58%) than females (32%) are considering postgraduate research degrees while more females (21%) than males (8%) consider postgraduate taught degrees. Of PGT and PGR students surveyed in 2020-2021 *(Fig. 4.1.9)*, 16% of male PGT considered a PhD (versus 22% females), and 21% of male PGR students considered an academic career (versus 52% of females).























Recently, postgraduate representatives on the School's EDI committee organised an online career workshop with the RSC for undergraduate students *(Figure 4.1.10, Section 5.6(v))*. The talk outlined diverse career paths and opportunities for chemistry graduates and a focus on preparing undergraduates for their future career. The event was very well attended (25 students, 57%F) and received excellent feedback.



Figure 4.1.10 'Careers from Chemistry' event organised by PG Representatives on EDI Committee.



4.2 Academic and research staff data

Key Actions Implemented

- Implementation of Leavers Questionnaire recording reasons for leaving and staff destinations.
- Implementation of PhD Exit Questionnaire to gather feedback, track destinations and create alumni network.
- Career Planning Fora introduced for researchers.
- (i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only.

UCC's research and academic grade structure is set out in *Figure 4.2.1*. Movement from research to academic grades is possible through open competition for academic positions.



Figure 4.2.1 UCC Academic and Researcher Grades.

In May 2020, five of 25 academics in the School are female. The female Professor is a joint appointment with Pharmacy. One part-time female Lecturer (B/B) is shared 50:50 with Pharmacy, along with two male lecturers (A/B).

Table 4.2.1 shows that our gender profile improved in the last three years (from 3:20 to 5:20). The ratio is equivalent to that at other Irish University Chemistry departments, which averaged 3.5:20 in 2015 (HEA, 2016). The increase in female staff is at Lecturer B/B level (1 x CID and 1 x Fixed Term).



One of Chemistry's four full Professors is female (25%); across UCC, women comprise 25% of full Professors (2018), and 11% across the Irish university sector (HESA, 2018).

At the end of the reporting period (2019), six of 15 research staff in the School were female (40%F of all research staff, *Table 4.2.3*) and compares favourably on benchmarking (*Table 4.2.4*).

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Impact – Increase in %F researchers (28% in 2016; 40% in 2019) and more senior research staff are predominantly female (Table 4.2.3).

Figure 4.2.3 shows that through our actions we have overseen an increase in UG, PGR, researcher and lecturer %F and a relatively more linear career pipeline in 2019 compared to 2016. At UG and PGR levels we have identified an increase in %F in parallel with increased female role models at outreach and school visits and the monitoring of recruitment for research posts to promote gender balance.

At the levels which hiring normally takes place, post-doctoral and academic appointments, there is an evident increase in %F. Actions implemented since 2017 to introduce a structured and transparent procedure for research recruitment, with gender monitoring at each stage, have contributed to improving the research staff average %F (School Action Plan 2017: Action 4.1-1 Update and gender proof the School's recruitment documents, Action 4.1-8 Increase female representation on selection committees for research posts). A direct result of our actions for example, research recruitment data shows that research selection committees from 2017-2021 averaged 28%F, achieving the targets of 2017 Action 4.1-8.

In tandem, core academic appointments were made in 2016 and took possession in early 2017 (3 x Lecturer B/B; 1 F, 2 M; 33%F) and so are not recorded in the current reporting period. However, the recruitment of these staff members incorporated actions from our 2017 application to improve gender balance in recruitment panels and panels undergoing compulsory unconscious bias training.

Looking closely at *Figure 4.2.3* it is evident that small changes can have an impact given our modest staff numbers and can rationally explain the slight increases in %F evident.

Unfortunately, this has not led to an improvement in the professorial grade and given the lack of opportunities, we are therefore initiating *Actions 4.2-1* and *4.2-2* to improve the upper end of the pipeline.

Since the census data in 2019, there are now two SRF (one female) in the School who have progressed from PDR which is a significant progression in research pipeline as SRFs are independent researchers. This is the focus of a specific action (*Action 4.2-3*).







Figure 4.2.3. Career pipeline in the School of Chemistry as %F (a. September 2016; b September 2019). Student and staff numbers are given in the respective tables in the text. The Researcher category includes postdoctoral researchers (PDR), senior postdoctoral researchers (SPDR) and Research Fellows (RF); the Lecturer category includes Lecturers (BB and AB) and Senior Lecturers; the Professor category includes Associate Professor and Professor. Numbers in brackets are staff numbers.

Impact – Athena SWAN activities have supported an increase in %F at all levels aside from Professor and has led to a minor improvement in career pipeline.

Action 4.2-1 [Capacity Building] Recruitment of a female Adjunct Professor, Lecturer or Researcher. Action 4.2-2 [Capacity Building] Build on our previous SALI applications for female Professorial staff. Action 4.2-3 [Priority Action] Work with SEFS HR Manager, Research Manager and PIs to provide enhanced support for CID Researchers.

A snapshot of next destinations for PhD graduates over the last 5 years shows that the majority go on to careers in industry (*Figure 4.2.4*).





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This is not surprising given the strength of local industry, the placements through UG, PGT and PGR courses and our heavily integrated industry research focus. All of those who went into academia were female though numbers are small. Survey of our PhD students (2021) found various reasons why students are less inclined to pursue careers in research and academia (*Figure 4.2.5*): lack of funding and employment opportunities, job insecurity, short postdoctoral contracts, low pay and

work/life balance. There are some gender differences which will be the subject of a future focus group through *Action 5.3-1*.



Figure 4.2.5 Factors influencing choice to pursue academic career.

Comment on the transition of technical staff to academic roles

Application for academic positions is possible through open competition. There have been no applications of this nature in the reporting period.

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

See Table 4.2.9 for Data on Leavers between 2017-2019.

As part of our 2016 Action Plan, a Leaver Questionnaire was designed in conjunction with the College of SEFS. Response level was low (only 1 response) and the respondent chose not to share information. We will continue to collect this data for subsequent leavers to record their feedback and next destinations (*Action 3-1*).

4.3 Professional, managerial and support staff data

(i) PMSS staff by grade, contract function and gender

PMSS staff in the School are broadly divided into administrative and technical teams and the overall female representation is 35%. A majority (61%) of the PMSS team has been working in the School for more than 10 years, 22% for more than 5 years, and 17% are newly employed (in the last 2 years). All administrative staff are female, and technical and support staff are more mixed but predominantly male (3 F and 11 M; 22%F).

Table 4.3.1 shows PMSS staff by gender over the period. There is a clear increase in %F from 2016-2018 which is sustained to date. The gender profile of this category has improved slightly over the four-year period from 36% to 39% and is approaching gender balance.

		F	М	%F	Total
PMSS	2016	5	9	36%	14
	2017	7	11	39%	18
	2018	8	11	42%	19
	2019	6	11	35%*	17

Table 4.3.1 PMSS Staff by Category and Gender.

Comparing to benchmark data from HESA, the School is below the global average for %F PMSS staff (2018), see *Table 4.3.2*.

Despite the overall %F of the PMSS group it is obvious that there are gender differences within the administrative, support and technical roles and indeed career development is different. Survey of this group for the first time as part of this application, combined with responses from the open questionnaire for PMSS staff, show that there is a tangible need for career training, and we intend to address this via *Action 4.3-1*.

2 PMSS Benchmarking HESA, UCC 2018.

	F	%F	М	%M	Total
HESA	800	53%	700	47%	1500
UCC	8	42%	11	58%	19



Action 4.3-1 [Priority Action]

Adopt a competency-based approach for a new regular Career Development Initiative (CDI) for PMSS staff.

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

Nearly all of our eighteen PMSS staff are on permanent contracts, with only 1 female staff member on fixed term (*Table 4.3.4*). Permanent contracts include 5 females (31%) and 11 males (69%). All administrative and technical staff are permanent, and we have no staff member on a zero-hour contract.

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

Over the period assessed there has been one staff leaver, a SEA (F) left the School between 2017 - 2019 to take up a post in another department in the University. This is normal practice within the University whereby progression at administrative level generally requires movement to another department/school through an open competition for other posts.

"Chemistry was my first appointment as a member of PMSS in UCC. As I worked on a specific-purpose contract I had to leave after my contract came to an end. As soon as a suitable position came up in the School, I applied and was successful in securing a permanent contract. The School's inclusive and positive atmosphere, as well as its evident commitment to the Athena SWAN Action Plan were some of the main reasons, I considered re-joining the team. With the Athena SWAN's principles underpinning planning and behaviours in the School I felt empowered to explore and develop my skills as a female staff member coming from a minority background."

SEA, Female

One EA member left as she was on a fixed-term contract covering Maternity Leave but returned a few years later when she applied for and was successful for a vacant SEA role within the School.



5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

5.1. Key career transition points: academic staff

Key Actions Implemented

- ***** Recruitment documents are free from gender bias.
- * Researcher recruitment by PIs is gender monitored.
- School of Chemistry Induction Booklet introduced.

(i) Recruitment

Core recruitment is managed by HR with research recruitment managed locally, arranging shortlisting and interview panels with representation from both genders. The School appoints the selection committee, approved by HR. All selection committee members have undertaken Recruitment and Selection Committee Training and are provided with documentation on unconscious bias and recruitment by HR (specific training session for School staff completed in 2017). A Candidate Information Pack, including a description of the School, job description and selection criteria is drafted with some input from the School. *Tables 5.1.1* and *5.1.2* summarise recruitment data in 2017-2019. There was no core academic recruitment in the period but our current staff numbers include three Lecturer B/B posts (1F, 2M; 33%F) recruited in 2016 and taking up the post in 2017 so not recorded here but relevant to our Athena SWAN activity. Research staff (which have undergone recruitment in this period) averages 33%F. Another target achieved from the 2017 School Action Plan, Action 3.3-2 (Increase of female research staff to 40% by 2019 (35% in 2016)) with our current ratio of 40%F (*Table 4.2.8*)

Building on a previous action to monitor PDR recruitment by gender, over the period 2018-2021, 11 positions were advertised with 200 applicants. *Figure 5.1.1* illustrates the gender breakdown of applicant, shortlisted and offered. The success rate for female applicants is lower than for PGR positions (2%F versus 7%M from application) so this must be tracked further (aligned to *Action 4.1-2b*). Selection panels over the period averaged 28%F.


Figure 5.1.1 Postdoctoral recruitment monitoring by gender.

To gauge the level of satisfaction with the recruitment, we surveyed recently employed staff; 12 males and 4 females replied (*Figure 5.1.2*).





Figure 5.1.2 Sample survey feedback from recently recruited staff.

It is clear that our process is robust, but we have scope to improve the gender balance of panels (majority neither agree or disagree; *Action 5.1-1*). Additionally, the wording of job advertisements can be improved to reflect a more welcoming, inclusive and family friendly environment and show

the School as an attractive and supportive place to work. Members of the EDI Committee spearheaded a meeting with the HR Manager to implement this (*Action 5.1-2*).

Action 5.1-1 [Change of Culture] Improve the gender balance of selection panels. Action 5.1-2 [Change of Culture] Develop improved Candidate Information Packs, to include wording in job advertisements to reflect a more welcoming, inclusive and family friendly working environment within the School of Chemistry.

(ii) Induction

UCC Staff Orientation covers payroll, benefits, supports, HR procedures, EDI and University structure and governance. HR run targeted sessions for Research staff covering motivation skills, presentation skills, project budgeting, grant writing, professional effectiveness, career development, team building, data management and research integrity. Additionally, all new appointments are assigned a mentor who helps with integration in the School.

New recruits since 2016 responded in our staff survey and 75% were aware of HR orientation (88%M but only 50%F, N=12). Of those aware, 78% took part and 66% found it useful.



Figure 5.1.3 Staff Induction Booklet, Front Page, Table of contents and a screenshot of a section.

New staff are issued with a newly developed School "Staff Induction Booklet". This comprehensive tool outlines in detail the main local University procedures, contacts, services, and supports *(Figure 5.1.3).* Since its introduction in 2018, 74% of female and 50% of male new staff were aware of the booklet while being appointed (Staff survey 2020-21; new hires 2016-2019). Many other schools in the University requested the booklet and have subsequently adapted it to their local needs.









Figure 5.1.4 Sample survey feedback on induction from staff appointed in the last three years.

The feedback data suggests good knowledge of and participation in the orientation programme but with scope for improvement. We commit to increasing the awareness of the induction booklet and orientation programmes for all new staff (*Action 5.1-3*).

Action 5.1-3 [Change of Culture]

Improve School induction arrangements for new staff and in particular the experience across genders and identities.

(iii) Promotion

The stages of the academic promotions in UCC are Lecturer 'Below the bar' (B/B) to Lecturer 'Above the bar' (A/B) to Senior Lecturer and to Professor Scale 2. The process for promotions is currently

under review by UCC. Promotions to Senior Lecturer and Professor Scale 2 are following specific calls in which applicants are invited to apply from initial eligibility screen.

Applicants are required to submit substantial portfolios on their teaching, research and contribution to the academic life of the University which are evaluated by University level panels.

During the review period, there were promotions calls for Lecturer A/B to Senior Lecturer and for Senior Lecturer to Professor Scale 2. The promotions processes are highly competitive and involve considerable workload with criteria spanning research, teaching and other contributions. These were outlined in university documentation including likely minimum levels of achievement in each. Applicants are supported in preparing applications by their mentors, line managers and HoDs. The following is data for the School for 2016-2019 (*Table 5.1.4-5*).

Action 5.1-4 [Priority Action]

HoDs to instigate Early Career academic (Lecturer B/B and A/B) Career Development Initiative to encourage and support in the promotion process.

Action 5.1-5 [Change of Culture] Engagement with the University to encourage review of promotion processes for all staff.



5.2. Key career transition points: professional, managerial and support staff

PMSS staff in the School are broadly divided into administrative and technical teams as described in Section 4.3. Our surveys of this cohort represent the first time a comprehensive assessment of working practices was undertaken and represents a good baseline for our Action Plan.

(i) Induction

All new PMSS staff undergo the same induction process as academic and research staff. Firstly, they are introduced to the School informally and, after a tour of the building and facilities, they are given an informal point of contact, usually a more experienced peer.

All newly appointed staff can take orientation sessions formally through HR. Since 2017 there is a complete (100%) take-up of these sessions (one male and one female PMSS). While the perceived effectiveness of these sessions is mixed, the majority of new staff are satisfied with local induction arrangements and with training provided by more experienced colleagues (75% for males and females). Our induction process will be improved further as part of *Action 5.1-3*.

(ii) Promotion

PMSS are eligible to apply for promotion in a number of ways as follows:

Role review to a higher grade: open only to administrative staff with a minimum service of 2 years in their current grade who can demonstrate a list of competencies relative to the promotional grade. Eligible applicants must be successful by interview to secure the post. This scheme is highly competitive with only a limited number of posts available.

Taking up vacancies: all PMSS vacancies are advertised on HR website and successful applicants are shortlisted and interviewed.

Natural Progression: Progression from TO to STO is dependent on the candidate having completed 3 years in the role with a minimum of one year at the top point of the TO salary scale. STO promotion to CTO is through competency-based interview and post vacancy.

PMSS survey responses show that less females than males believe UCC promotion criteria are 'free of gender bias' (F=29%:M=50%), less males (all TOs) reported satisfaction with access to local support (M=34%:F=57%) and access to local opportunities (M=17%:F=43% e.g. *Figure 5.2.1, Action 5.2-1b*). Male and female PMSS report low agreement with a statement that 'All work activities are taken into account' when applying for promotions (average of 15%), and that they have

satisfactory access to training and mentoring which would allow them to be promotion-ready (*Figure 5.2.2*, average of 23%). *Actions 4.3-1* and *5.2-1a* aim to address this.











We subsequently ran an open questionnaire (in place of a focus group) with PMSS staff to identify how they would like to be supported in preparing for promotion opportunities – quotes below.

"Clear promotion guidelines for technical staff to be made available. Defined career pathways & more career enhancing opportunities for technical staff."

Male, PMSS

"Be given duties that would be suitable for the competencies that are required for promotion."

Male, PMSS

Further inspection of the staff survey and open questionnaire by disaggregation yielded similar insights from the qualitative fields. Given the context that this is the first time the PMSS group have been surveyed meaningfully, the barriers to promotion will be comprehensively identified through *Actions 5.2-1a* and *5.2-1b* (and *Action 4.3.1*).

Action 5.2-1a [Capacity Building] Establish a locally-managed anonymous database of promotion figures for PMSS staff. Action 5.2-1b [Change of Culture] Collect qualitative data (via interviews or surveys) on barriers to promotion for PMSS staff.



5.3. Career development: academic staff

Key Actions Implemented

- ***** Two research staff undertook the Aurora women-only Leadership Development Programme 2016-2020.
- Introduced monitoring of PDRs with a Professional Development Plan (PDP).

(i) Training

The University's HR Department provides training opportunities for staff at all levels, focussing on management and leadership, personal and professional effectiveness and wellbeing. Uptake of academic and research staff in training categories from 2017 to 2019 are in *Table 5.3.1* and *Table 5.3.2* respectively.

From the 2017 School Action Plan, the targets for Action 4.2-5 (All staff to complete training in Unconscious Bias Awareness and Living Equality and Diversity (LEAD)) have been achieved and this has resulted in a change of culture within the School. The effect of LEAD training completion is seen by direct quotes from our staff survey on the culture within the School.

"There is a definite effort to improve gender equality within the School. Rather than talking about things or making plans, you can see change is occurring on the ground."

Female Academic, Staff Survey

"The impact of the award and associated training has been to recognize and promote opportunities for gender balance - a real and tangible dialogue has been instigated by the push to constantly improve."

Male, Staff Survey

"It has given visibility to the importance of inclusivity and work life balance in all our actions. It has given confidence to staff members to demand more equality and compassion."

Male, Staff Survey





Impact – Focus and completion of training for School staff in Unconscious Bias and LEAD training has supported increased confidence and dialogue requesting more equality and gender balance.

Female academic participation in Leadership and Management programmes is low, reflecting the number of female staff in management. An action from our Bronze award was to encourage all eligible female staff to apply for the Aurora women-only Leadership Development Programme. To date, 4 staff completed the programme between 2016-2020, no academic staff. This will be addressed in *Action 5.1-4* with a specific focus on Lecturer B/B and A/B.

Impact – Four female staff (2 Research, 2 PMSS) have completed the Aurora Leadership Development programme between 2016-2020.

"The Aurora program provides a platform to engage with other women working in higher education. It enabled us to discuss and explore gender-based issues that impacted both our daily and more global working life. Almost two years later I am still in touch with my active learning group where we update and support each other regularly."

Female, Research Staff

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Participation of Chemistry academic staff in selected training categories, 2017 – 2019.

Course Category	F	%F	М	%M	Total
Management & Leadership	0	0%	4	100%	4
Personal & Professional Effectiveness	7	25%	21	75%	28
Staff Wellbeing	1	50%	1	50%	2
Training for Research	2	100%	0	0%	2



Course Category	F	%F	м	%M	Total
Management & Leadership	0	0%	1	100%	1
Personal & Professional Effectiveness	0	0%	1	100%	1
Training for Research	13	48%	14	52%	27

Table 5.3.2Participation of Chemistry research staff in selected training categories, 2017 – 2019.

In responses from the staff survey, 59% are satisfied with the training opportunities available (67%F, 53%M), and 78% feel their participation in training courses is supported (87%F, 72%M). There is broad agreement that support for training is strong within the School (*Figure 5.3.1*).







The specific courses taken by academic and research staff are in *Table 5.3.3* and *5.3.4*.



Staff and research students in the School have undertaken Epigeum Research Integrity training with a high level of completion 96% with good gender balance (*Table 5.3.5*)

Pilot Epigeum Training	All Areas	All Gender	Male	Female	%F	Not identified
All Areas						
UCC Tokens allocated	1732	1732	763	920	53%	49
Passed	1602	1602	689	880	55%	33
Not passed	130	130	74	40	2%	16
School of Chemistry*						
Tokens allocated	123	123	64	59	48%	0
Passed	114	114	60	54	47%	0
Not passed	9	9	4	5	4%	0

Table 5.3.5Research Integrity Training for the Pilot Epigeum Programme (2018-20).

(ii) Appraisal/development review

All full-time academic staff take part in the University's Performance and Development Review System (PDRS). This is biennial and allows discussion of career progression and performance management with line managers including topics such as work-life balance, personal and professional goals and training requirements.

From the 2017 School Action plan, implementation of Action 4.1-5 (Ensure that all staff are trained prior to participation in PDRS and promote PDRS as a platform for discussing a wide range of topics, including work-life balance and career progression) has led to more genuine focus on the PDRS in the School.

From the staff survey, there is an improvement in female satisfaction of the PDRS process between 2016 and 2020, with the number of females reporting they did not benefit decreasing (43% to 25%). In addition, 87%F in the School report feeling supported undertaking training opportunities for career development; 88%F comfortable discussing work-life balance issues with my line manager/PDR reviewer; and agreement that the review process gave an opportunity to discuss work objectives (88%F), career progression (75%F) and workload (63%F).

Qualitative feedback from the staff survey includes comments on the lack of opportunity to record workload on the PDRS formally and its value to discuss promotion. *(Actions 5.1-4, 5.6-4a)*



Impact – There is increased satisfaction that the PDRS gives an opportunity to discuss career progression, particularly with female staff.

Rather than PDRS, postdoctoral researchers undertake professional development plans (PDPs), addressed in **5.3 (iii)**. While appropriate at starting levels, these are insufficient for independent senior research staff (*Action 4.2-3*). As seen in the next section, there has been an increase in both uptake and satisfaction on the PDP process within the School.

(iii) Support given to academic staff for career progression

Academic staff are mentored on their career through discussion with line managers (HoDs) in the PDRS process. HR and other university services and centres run career development training sessions (circulated in advance by email) and these are well subscribed (*Table 5.3.3*). We will initiate *Action 5.1-4* to address early career and gender imbalances which will in time improve our pipeline profile.

Tailored career development for research staff is provided by the Post Doc Development Hub which offers training and support in topics including grant-writing, supervision and project management. There were 27 registrations between 2017-2019 with good gender balance (*Table 5.3.4*).

Research staff work with their mentors/supervisors to prepare a Personal Development Plan (PDP) based on an analysis of training needs and identification of the key career and transferable skills required. In 2016, only 33% PDRs had a formal meeting with their PI/mentor for this and >60% did not have a PDP leading to an action to address this. From our current data, 67% of PDRs now have a PDP and 50% have arranged a formal meeting. In the staff survey, 8 of 13 researcher respondents (62%) expressed satisfaction with opportunities to discuss their career progression (2 females (67%) and 6 males (60%)).

Qualitative comments from research staff survey and open questionnaire are somewhat polarised and include feeling very supported by their mentor/supervisor about career progress/goals to feeling there is little to no support for PDRs especially those looking to transition to independent research. This may be due to individual mentors and the varied levels within this staff category (PD to SRF) and thus will be addressed by *Action 4.2-3* and *4.2-4*.

Between 2016 and 2020, 15 staff members (Academic, TOs and PDRs) from the School registered to participate in programmes in Learning and Teaching (5F 42%, 7M 58%) shown in *Table 5.3.6*.

Table 5.3.6Participation of Chemistry staff in Learning and Teaching programmes, 2016 – 2020.

Year	Postgraduate Certificate	Postgraduate Diploma	Masters
2016-17	3	_	_
2017-18	3	_	1
2018-19	5	_	_
2019-20	2	1	_

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

First year students are assigned an academic mentor and Year/Programme coordinators are the primary point of contact for all 2nd-4th year UG and PGT students (*Figure 5.3.2*). In addition, during the reporting period an academic member of staff (F) has been identified as our Student Experience Officer which is a vital and multifaceted role especially during COVID-19.



Figure 5.3.2 Screenshot of Points of Contacts for our taught programmes.

Our degree programmes provide training in transferable skills e.g. report writing and presentations, work placement. Students are also encouraged to apply for summer research

bursaries with several of these students going on to PhD (4F, 2M) or MRes (1M), *Table 5.3.7*. This further highlights our support for student career development.

Year	F	М	%F
2017/18	3	2	60%
2018/19	1	2	33%
2019/20	1	2	33%
2020/21	2	1	67%

Table 5.3.7Undergraduate Summer Research Bursaries 2017 – 2020.

In our 2020 UG student survey 87% felt they were informed of further study (both PGT and PGR) with 71% of respondents (56%F) specifying further study as their next step.

In the PGT student survey, there were 39 responses (19F 49%, 18 M 46%, 1 non-binary, 1 prefer not to say). When asked about career destinations, 16F (84%), 17M (94%) would opt for industry with the 6-month work placement (normally in industry) one of the biggest motivations.

With respect to our PGR students, the majority undertake a structured programme with modules in relevant training and skills run through Chemistry and SEFS. Our survey (54 responses, 29F 54%, 25M 46%) indicated that 26F (90%), 18M (72%) have undertaken training with only 1 F and 1 M not finding it useful. On the question of future career destinations, 15F (52%), 11M (44%) would continue in academia whereas, 23F (79%), 23M (92%) would opt for industry. This has led to *Action 5.3-1*.

PGR students themselves have been empowered to organise several career development workshops in 2020. This displays a high-level interaction and ownership of career training which has been aided by the culture within the School (*Figure 4.1.10*).

Action 5.3-1 [Change of Culture] Further exposure for PGR students to Career Fora and information on career pathways.

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

University support for research grant applications is through Research Support Services (RSS). This includes online resources, emails with funding opportunities, designated contacts for funding calls and training. RSS offer the "Research Skills Training Programme", a series of 12 workshops recognised as CPD covering the identification, capture and management of research funding aimed at all disciplines and all career levels.

For academics, the support of RSS application support is vital to write competitive proposals and win grant funding. For research staff access will depend on their contract which impacts eligibility for a number of funding calls. For EC researchers, most local School support is individual in nature and depends on researchers and mentor(s) (will be further formalised by *Action 4.2-3*). For students applying for funding, again the support is individual and dependent on the supervisor who has access to RSS.

Depending on the applicant, any who are unsuccessful have access to resources and mentorship formally through University-wide mentoring schemes and informally through individuals within the School. *Action 4.2-4* and *Action 5.1-4* are designed to improve our EC research applicant success.



5.4. Career development: professional and support staff

(i) Training

During 2017-2019, 51% of female and 49% of male PMSS engaged in training courses (*Figure 5.4.1*).

All PMSS staff can avail of training opportunities offered by UCC HR subject to eligibility requirements, e.g. "Management and Leadership Development" courses are offered only to PMSS staff in Grade 6 and above (*Figure 5.4.2*).



Figure 5.4.2 Percentage of PMSS staff participating in leadership courses, 2017-2019.

From the survey responses of this group, an open questionnaire was undertaken to further probe aspects related to career support, integration and promotion. The findings from this give rationale for *Actions 5.2-1b* and *4.3-1* while *Action 5.4-1* will seek to identify the specific training needs.

Action 5.4-1 [Priority Action]

Run a focus group to investigate PMSS staff specific training needs and attitudes towards career development.

(ii) Appraisal/development review

All PMSS staff take part in biennial PDRS. Training for reviewers and reviewees is provided by HR and the reviews are carried out with the line manager. As has been highlighted from the staff survey and subsequent open questionnaire of PMSS, PDRS is not designed for discussion of workload and training towards promotion in its current format. We propose to fill the gap in knowledge and identify uptake and satisfaction of PDRS through a focus group (*Action 5.4-1* in

addition to *Action 5.2-1b*). These actions on training needs and barriers to promotion will feed into the design and development of the competence-based Career Development Initiative which will require flexibility given the different staff sub-categories (*Action 4.3-1*).

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

A range of supports are offered to PMSS staff of all levels: support for career development is discussed and agreed on during the PDRS process; online learning programmes and targeted training sessions are promoted and facilitated; as well as mentoring offered locally and centrally via University Mentoring Schemes. Between 2017-2019 three female staff (100%F) took part in programmes offered (*Table 5.4.2*). However, the key underlying issues of availability of promotion opportunities continues to be a structural a gap in supporting staff. *Actions 5.1-5, 5.4-1, 5.2-1 and 4.3-1* are designed to help address these issues.

"I took part in the Aurora Women's Leadership Programme in 2018 and found it very valuable for my career development. As an aside to this, HR organised The Aurora's Mentoring course for all participants in UCC. It was very effective in making me aware of what I need in a mentor but also what was expected of me as a mentee. As a result of this, I sought a mentor who was aligned to my personal and professional goals who really helped me to reflect, understand and decide what I want from my career development and the best ways to achieve my goals."

Female, PMSS



5.5. Flexible working and managing career breaks

Key Actions Implemented

- Lobbied funding agencies with University Research Office to review their family leave policies.
- Chair of SAT consulted externally on best practice in dealing with procedures for work in laboratories during pregnancy.
- Location of breastfeeding facilities on campus communicated to staff in the induction booklet and on School website.

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

Six people took maternity leave between 2016 – 2019, see **Table 5.5.1**. All staff returned to work and remained in post more than 18 months later.

The School is committed to implementing and improving the support measures introduced at the institutional level. Line Managers (HoS, School Manager and CTO) have all participated in one-toone coaching on managing maternity and paternity leave and have briefed staff on the range of enhanced supports available.

Line managers meet with staff before they go on family leave to ensure that staff understand and engage with university support. Topics discussed include: (i) the appropriate level of contact during leave; (ii) "keep in touch" days; (iii) required level of cover during the leave period. The HR Maternity Checklist (*Figure 5.5.1*) will be used as a framework for this meeting to ensure consistency across line managers. This covers all actions which should be taken before, during and after maternity leave. (*Action 5.5-1*)



Figure 5.5.1 Maternity leave checklist.

Feedback from the staff survey (*Table 5.5.2*) indicated that no staff disagreed with the statement *"I was supported by the School before my family leave"*.

Female staff can also avail of the Parental Transition Coaching which includes planning and preparation (before); returning with confidence (during); and working parents (within 6 months of returning) or following "the empty nest". The School will ensure that all women taking maternity leave will be made aware of the Parental Transition Coaching (*Action 5.5-1*).

"HR have been proactive in meeting with staff to discuss options before they start maternity leave."

Female, Staff Survey

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

The School works with staff to ensure adequate cover is in place for maternity and adoptive leave. Support is requested from SEFS to cover any extra costs that may be required, e.g. teaching cover and laboratory supervision. The level of cover and maternity leave support for externally funded research staff is variable and subject to the policy of their funding body.

The decision to avail of Keep in Touch (KIT days) on maternity leave is a personal choice and will depend on the nature of the role. Feedback shown below indicates that the option of more days would be an advantage for some female staff. The School will request that the number of KIT days for academic and research staff is increased from 3 to 5 days, *Action 5.5-2*.

Feedback from the staff survey (*Table 5.5.2*) indicated that no female staff member disagreed that arrangements were available to them to keep in touch during their family leave. Other findings include that 40% disagree that part-time or temporary staff were hired to cover some/all of their responsibilities, while 60% agree that they covered some of their responsibilities themselves while 20% 'strongly disagree'. Feedback was mixed on the question of colleagues taking on work while on leave (80% 'somewhat agree' and 20% 'somewhat disagree'). This may point to the different roles of staff on leave in the period, but the enactment of *Action 5.5-1* will ensure that cover requirements are individually resolved prior to going on leave.



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

A support package (€5,000 grant) is available for academics returning from maternity/adoptive leave. The purpose of the grant is to 'provide the opportunity for women returners to focus on reestablishing their research career which in turn improves the retention and career progression of women working in STEM.'

The School has committed to work with the SEFS HR Manager to include senior researchers (Research Fellows & Senior Research Fellows) in the scheme, *Action 5.5-3*.

The quality and location of breastfeeding facilities have again been highlighted during staff consultation. A new Infrastructure Taskforce for refurbishment of the Kane building has been established, the School will ensure refurbishment of the Kane building is a priority for this group, *Action 5.5-4*.

Responses from the staff survey indicated that 60% 'neither agree nor disagree' that they felt supported by the School after they returned from family leave, while 20% 'somewhat agree' and 20% 'strongly agree' that they felt supported (*Table 5.5.2*). Looking positively on this, no staff disagree with the statement but we can improve the clarity on supports available. The enactment of *Action 5.5-1* will ensure that a structured conversation takes places on return.

Action 5.5-1 [Priority Action]

Adopt HR Maternity Leave Checklist as a structure for meetings with line manager at three-time intervals – before, during and after maternity leave.

Action 5.5-2 [Change of Culture]
Canvas for increase of Keep in Touch (KIT) days to 5 days for academic and research staff.
Action 5.5-3 [Change of Culture]
Advocate for inclusion of senior researchers in the return-to-work grant scheme.
Action 5.5-4 [Priority Action]
Identify and oversee refurbishment of a room in the Kane building for the purpose of providing a clean, calm and private space for breastfeeding.

"I think the school do give breathing space to staff returning after family leave but would like to see this formalised in a meeting with line manager/HOS."

Female. Staff Survev

"My return was well supported except for breastfeeding. The university facilities are poor e.g. I was often unable to access the rooms as they were on swipe card access corridors, or the room was locked. Locations had other uses."

Female, Quote via Email



(iv) Maternity return rate

All six staff who took maternity leave in the School between 2016-2019 returned to work and remained in post more than 18 months later. It is of interest to note that no research staff took unpaid leave whereas 100% of PMSS took unpaid leave after maternity leave.

(v) Paternity, adoption, and parental leave uptake

A total of 4 paternity leave applications were processed in 2016-2019. There was one Academic staff member that did not take the opportunity to apply for paternity leave due to difficulty covering specialist work.

The appointment of Family Leave Champions, *Figure 5.5.2*, will provide local support to those taking family leave. These Champions have previously availed of maternity, paternity and parental leave and will act as a point of contact for staff wishing to avail of family leave. They will advise on policies, procedures and supports available. *(Action 5.5-5)*





Comments from the staff survey were mixed regarding Paternity leave:

"Colleagues willing to help out and fill in where needed; informal support through discussions with line managers; a community of support available to discuss the changing circumstances."

Male, Staff Survey



"Most of my workload simply built up in my absence, so my return to work was extremely stressful."

Male, Staff Survey

The School has committed to introduce a leave checklist, where structured conversations will deal with cover and reduction of workload well in advance of leave. *Actions 5.5-6 and 5.5-7* are designed to make the process consistent and reduce stress on return.

Action 5.5-5 [Change of Culture]

Family Leave Champions identified and advertised on our School Website and other forums. **Action 5.5-6 [Capacity Building]** Work in conjunction with the HR Manager in SEFS to update the current Paternity Leave Policy in the University to facilitate backfill arrangements.

Action 5.5-7 [Priority Action]

Implement a Paternity Leave Checklist for each stage (before, during, after) to be completed by the Line Manager and the staff member taking leave.

(vi) Flexible working

Before COVID-19, the Flexible Options available to staff were career break, reduced working week, shorter working year, reduced hours, unpaid leave, or Flexible Working Hours. Staff Survey results (December 2020) showed that awareness around the flexible leave options is good. Administrative staff can avail of the formal Flexible Working Hours Policy. Technical staff operate a local agreement, whereby time-in-lieu is recorded and submitted periodically to the Line Manager.

From the School Action Plan 2017, implementation of Action 4.3-4 (Raise greater awareness of flexible working options available via recruitment material (Action 4.1-1) induction booklet (Action 4.1-4) and via PDRS (Action 4.1-5)) has noticeably changed the culture within the School as evidenced by qualitative staff survey feedback. The measurables of 4.3-4 were achieved in the timeframe: Improved staff awareness of, and perception of School support for, flexible work arrangements, measured by staff survey.

This improvement is underpinned by the output of our 2017 Action 4.3-4, to disseminate information on and encourage uptake of flexible working options. Examples of this action in practice include: flexible working options included in induction booklet; emails circulated to all staff from HoS stating that the PDRS is an opportunity to discuss work/life balance; emails circulated by HoS advising all staff there is no obligation to answer emails/calls outside of their working hours; School directive that meetings are only be held between 10am-4pm to allow flexibility for staff

with caring responsibilities; Bite-Sized Information Sessions developed with SEFS HR Manager around Family leave options; Well Being Initiatives organised within School (see Section 5.6 (i) and (vi)).



Staff survey results show that 47% (F) and 34% (M) 'somewhat agree' and 13% (F) and 41% (M) 'strongly agree' that flexible working is supported in the School (60%F and 75%M), whereas 20% (F) 'somewhat disagree' (see *Figure 5.5.3*).



On the impact of COVID-19, female respondents found working flexibly more accessible during the pandemic. Pre-COVID-19 21%F strongly agreed that they could work flexible hours if needed, and during COVID-19, this increased to 40%F. This increase was less apparent for male staff.





Figure 5.5.3 Summary of Staff Survey responses to questions on Flexible Working.

In the staff survey we asked staff what impact the Athena SWAN Award has had on the School and below are some of the replies in relation to work-life balance and flexibility. Overall, the staff survey responses to the impact of Athena SWAN in the School demonstrate an openness and support to flexible working within the School but a gender dimension in PMSS staff (*Figure 5.5.4; Action 5.4-1, 5.6-1*).

"It has made a hugely positive difference in normalising discussions around work/life balance, mental health, caring responsibilities, inclusivity etc."

Female, Staff Survey

"Flexible working hours are now more acceptable."

Male, Staff Survey

The detrimental effect of the pandemic on female researchers has been highlighted by a number of studies with working from home and increased caring responsibilities. The School will endeavour to work with any future guidelines to provide more flexible work solutions when staff return to campus (*Action 7-1*).



Figure 5.5.4 PMSS Staff Survey responses to question on Flexible Working.

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

No staff have transitioned from part-time to full-time work after career breaks and there is no formal policy in the University on staff transitioning from part-time back to full-time work. However, if someone comes back from a career break or family leave, they may request to return on a part-time basis by reducing their contract on a temporary basis and every effort would be made to support it.



5.6. Organisation and culture

Key Actions Implemented

- ✤ All School committee meetings are held between 10am 4pm.
- ✤ School website redesign incorporated gender balance and diversity in images.
- **Sender balance achieved for staff and postgraduate outreach events.**
- School Newsletter includes update on Athena SWAN and EDI related activities.
- Developed information sessions with the College on workplace related topics.

(i) Culture

The School works hard to create an environment that is friendly, supportive and inclusive for all staff, students, and visitors. Staff interact daily in the School tearoom and socially during events (*Figure 5.6.1*). In addition to the School Assembly, these provide important opportunities for all staff to meet informally.



Impact – Staff agreement that the prevailing culture and atmosphere of the School is female-friendly and inclusive increased from 53% to 78% in the period 2017 – 2020. (Staff Survey, 88% response, *Figure 5.6.2*)

Our social culture is directly evidenced by work-related initiatives led by EDI members:

- Dedicated staff/student wellbeing section on website.
- Initiated and developed bite-size work practice information sessions.
- Regular online staff social meetups during COVID-19.
- Organised staff and PGR student wellbeing events throughout the period: Healthy Recipes OneDrive folder; Gratitude Wall; Loving Kindness Art Class session; campus birdwatching tour led by staff member; University fitness competitions such as Walktober and Marchathon.



Impact – Wellbeing at work: School of Chemistry awarded 1st place in the 2018 University National Workplace Wellbeing Day 'Over to You' competition.



"Some of the small and easy-to-do things have made a difference, making the school more inclusive and helping to create a more enjoyable working environment."

Male, Staff



Figure 5.6.1. Photos from School of Chemistry wellbeing and cultural events. Clockwise from top left: School of Chemistry staff awarded first place in the University National Workplace Wellbeing Day 'Over to You' competition in 2018; Wellbeing art class; School of Chemistry staff 3rd place in the 2019 UCC Marchathon; Annual Christmas coffee morning in aid of a local cancer hospice. Both events are organised and led by female staff and students.







The School works equally hard to create a friendly and inclusive atmosphere for our students (*Figure 5.6.3*). Aside from induction and mentoring, staff and students interact socially at numerous events (e.g. the Annual John Tobin Memorial Quiz, the Chemistry Ball, Careers/PhD perspective evening) organised by the student-run and staff-assisted ChemSoc society.



Figure 5.6.3 Survey responses from PGR students on the culture of inclusion in the School.

Our students engage socially and academically through our annual Research Days. Work from UG projects is presented at our UG Research Day, and successfully doubles up as a social and School awards event enjoyed by all. A separate PG research day sees PGRs presenting their work interspersed with social interaction.

Evidence of our student-led social activity include the following:

- Annual coffee morning as part of the 'Green Ribbon' campaign for mental health (*Figure 5.6.4*).
- Festive Christmas jumper day in aid of the Cork Simon Community.
- New PGR students organise annual Christmas social event to aid integration.





Figure 5.6.4 Student-led Initiatives. Left: Christmas jumper day charity fundraiser. Right: Annual coffee morning as part of the nationwide See Change 'Green Ribbon' campaign to encourage people to talk openly about their mental health.



Impact – Welcoming environment: Survey confirms that PGR agree the School is welcoming and inclusive (<10% of PG students disagree).

(ii) HR policies

Not only is the School committed to implementing University policies on equality, dignity at work, bullying and harassment, we raise awareness at a local level through email dissemination and advocacy. Staff are encouraged to attend all relevant information sessions through dedicated Chemistry EDI email (*Figure 3.3*).

Incoming HoS completes HR orientation, covering key areas such as staffing and recruitment, performance management, handling conflict, staff wellbeing and support. Line managers for PMSS consult with the College of SEFS HR Manager at regular manager forum meetings for policy updates. Grievances or issues are initially dealt with locally by the HoS and/or line manager. If the situation cannot be resolved locally, the School follows the disciplinary process through HR.

Our staff survey indicated an improvement from the previous period with respect to discrimination and comfort in reporting unfair treatment: 83%F and 76%M report being treated fairly; 55%F and 59%M would be comfortable reporting unfair treatment; 9% and 12% increases on our previous staff survey (*Figure 5.6.5*). However, there is a slight gender disparity with the confidence in seeing difficult situations at work addressed effectively. This will be addressed in *Action 5.6.1*.



Figure 5.6.5 Staff Survey responses to questions on (a) discrimination, (b) reporting unfair treatment, and (c) confidence in difficult situations being addressed.



"The school operates in an open, friendly fashion. I do not believe that any kind of gender bias, or indeed any other types of bias, conscious or otherwise, influence the opportunities available to the members of the school."

Male, Staff Survey

From analysis of the recent PGR survey (54 respondents), as many as 68% female and 41% male respondents would not know how to report unfair treatment, should they encounter it. Therefore, despite progress since the last period, this is obviously an area for improvement *Action 5.6.1*.

Action 5.6-1 [Priority Action] Continue to raise awareness about HR policies and reporting procedures available for staff and students.

(iii) Representation of men and women on committees

School committees consist of academic, technical, administrative and research staff with UG and PG students represented in selected committees (School Board, RGSC, Staff-Student Committee, OPRA). Potential members are identified by Chairs and appointments are subsequently made by the HoS following consultation with the individuals, EAT and the School Board.

The issue of access to committee work and acknowledgement of workload arises in the Open Questionnaire of both Research and PMSS staff so it is critical that we address this going forward (*Action 3-3; Action 5.4-1*).

Representation by gender on School committees is summarised in *Figure 5.6.6*. The School Board is the decision-making body of the School: all female academic staff are members of the SB, along with the School Manager. Female representation across all our committees is 35% (School average of 30%F staff). Affirmative action from the School has ensured that EDI committee members are now firmly integrated and identified in all school committees. As shown in *Figure 2.3*, EDI committee members currently hold 20 positions across all committees in the school management structure. This advocacy ensures that EDI is a standing item on the agenda for our School Board and that the profile of gender in committees is highlighted within the school.

From the 2017 School Action Plan, completed Action 2.1-2 (Promote Athena SWAN principles and activities and deliver an annual report on progress of the Action Plan to the School Board, School Assembly and SEFS AS Steering Group) and Action 4.4-3 (Regular Athena SWAN feature in the new School quarterly newsletter) capture this activity within the School.

Impact – Female representation on School of Chemistry committees has increased from 25% to 35% in the period 2017 – 2020.



Figure 5.6.6 Membership of School Committees by Gender 2017-2019.

The gender balance for committee Chairs is a concern as only one committee had a female Chair during the reporting period – TASC, which was chaired by the School Manager (*Action 5.6-2 and 5.6-3*).

Action 5.6-2 [Change of Culture] Create a centralised database of all School committees containing information on their structure, composition, terms of reference and rotation planning for committee members. Action 5.6-3 [Change of Culture]

Conduct a review on staff participation in School committees.

(iv) Participation on influential external committees

All staff are actively encouraged to participate in external committees in the College of SEFS, UCC and outside the university (*Table 5.6.1*).

Female staff in the School are members of several external committees which have significant EDI influence. Our School Manager is a member of the UCC Mná (Women) Committee and the University Equality Data Sub Group; two PMSS staff are in the College of SEFS Athena SWAN Steering Group; and a female professor is currently Chair of the Royal Irish Academy Diversity Committee and leading an independent review of the Academy's membership processes in order to promote greater diversity. Two academics (M) are members of different SFI Research Centre Gender Equality Councils.

Further expansion of our staff on external committees is envisaged through *Actions 3.3, 5.6-2 and 5.6-3.*

(v) Workload model

The Schools working practice relies on management by the HoS and line managers and as such workload is tailored to individual needs where possible and appropriate. Teaching responsibilities are allocated by HoD following consultation. Newly appointed academics are provided with a reduced teaching and administrative load for the first 3 years to support career development (in addition to establishment funding). Workload is considered for individuals changing roles e.g. a lower UG project student allocation and reduced module coordination responsibilities were granted on taking up the Chair of EDI committee.

The University operates an Academic Workload Distribution Model (AWDM), a self-assessment to capture academic workload. The model is unpopular with academic staff in Chemistry (and across UCC), as is evident from our staff survey with 60% respondents (40%F) disagreeing that the model enhances transparency and fairness.

The University biennial Professional Development Review System (PDRS) is overseen by School staff with managerial responsibilities. The University has committed to broadening the PDRS guidelines and templates to explicitly address workload and work/life balance (UCC Institutional Athena SWAN Action Plan: 5.6.8). Only 28% of staff (3 females, 5 males, 29 respondents) agree that they benefit from PDRS in its current form. *Actions 5.6-4a* and *5.6-4b* are designed to address these issues.

Action 5.6-4a [Change of Culture] Canvas for and call for input of all staff (particularly academic) in revised AWDM and PDRS models in the University. Action 5.6-4b [Capacity Building]
Develop a local workload model for all research and PMSS staff through the use of Career Development Initiative (CDI)

(vi) Timing of departmental meetings and social gatherings

School Committee meetings are scheduled months in advance to ensure ease of attendance by the maximum number of participants. Meetings are held between 10am and 4pm and continued online throughout the pandemic. In the staff survey, 88% of staff (15 female, 29 male, 50 respondents) agree that this policy is observed and allow those with caring and parental responsibilities to attend. Meetings are commonly scheduled by Doodle polling to ensure maximum attendance (*Action 5.6-5*).



Work social gatherings are organised generally within the core hours of 10am to 4pm. Participation of staff with family and caring responsibilities is fully considered months in advance of scheduling.

Action 5.6-5 [Capacity Building]

Post COVID-19, when in-person committee meetings can resume safely, the School will endeavour to provide an in-person/online hybrid meeting set up to facilitate on campus desk-based staff, staff working from home and staff with caring and parental responsibilities.

(vii) Visibility of role models

The School has a proactive approach to enhancing the visibility of women as role models. In 2019, our website was redesigned with gender balance throughout, *Figure 5.6.7* and has a balanced visitor profile (47%F and 53%M) *Table 5.6.2*.



Impact – Gender balance in images and words on our website and promotional material. (Staff Survey: 0% of staff disagree)

Members of our EDI committee lead our OPRA committee, ensuring equality on publicity. Activities and achievements of our female staff, students and alumni are promoted through website (*Figure 5.6.8*), social media outlets and School newsletter (which include a regular section on Athena SWAN/EDI) (*Actions 5.6-6 and 5.6-7*).

Table 5.6.2School of Chemistry website visitor statistics, 2019-2021.

Calendar Year	%F	%M	Website Visitors
2021*	47%	53%	4,824
2020	46%	54%	19,281
2019	47%	53%	24,005

*January 1st to May 31st, 2021.



Figure 5.6.7 Website screenshots from news items posted on the School website and social media outlets, awards received by female undergraduate and postgraduate students.





Figure 5.6.8 Upper: Gender balanced images used on the School of Chemistry website homepage. Lower: Outreach events webpage.

Results from our PGR survey indicate that our female PGR identified strongly with female academics, PhD students and researchers (*Figure 5.6.9, Actions 5.6-8, 6-1 and 6-2*).

Action 5.6-6 [Change of Culture]

Commit to further visual improvements to the School website with the addition of images which show diversity in the School, e.g. BAME demographic.

Action 5.6-7 [Change of Culture]

Promote ownership of equality and culture of advocacy within the School through enhanced publicity on website and social media.

Action 5.6-8 [Change of Culture]

Develop a physical Women in Chemistry visual presence in the School.

Female role models are highly visible at all levels within the School. As Vice President for Research and Innovation for over 8 years, Prof. Maguire has been a strong advocate for Women in Chemistry and EDI. Female staff are identified by female UG and PGR students as role models. During 2016-2019, 80% of our UG prizes were awarded to females.





"Within the school, I identified female staff members as my role models – Prof. Anita Maguire, Dr. Lorraine Bateman and Dr. Orla Ní Dhubhghaill."

Female, Postgraduate Survey

The Schools research seminar series issues >50% of the invitations to female speakers and has achieved gender balance (*Figure 5.6.10*). Our four External Examiners are fully gender balanced (2F/2M). In the staff survey, 74% of staff (12 female, 22 male, 46 respondents) agree that the School considers gender balance in events, workshops and symposia.





Figure 5.6.10 Numbers and percentages of female and male speakers at the School of Chemistry Research Seminar Series over the period 2017-2020. 2019-2020 speaker numbers were impacted by the COVID-19 pandemic.

Impact – Seminar speakers are now planned in a completely gender balanced way.

Outside of chemistry, our female staff and postgraduate students are highlighted as role models in the University (*Figure 5.6.11,* examples show sporting achievements). These images are used by the School and University to promote achievements by our female colleagues.



Figure 5.6.11 Postgraduate sporting role models (left) Katrina and Pamela Mackey (10 All-Ireland Senior Camogie titles for Cork), and (right) Anya Curran (2 gold medals 2018 Taekwondo European Championships), successful at the elite level of their sports, nationally and internationally.

"Female postgraduate students in the school seem empowered to participate in the Athena SWAN committee and to organise events. This in itself is a credit to the school's inclusive nature."

Female, Staff Survey

PGR students (including two from the EDI committee) created the inaugural national Chemistry Le Chéile conference, to improve the visibility of women in chemistry research and industry, by showcasing postgraduate, academic, research, and several industry speakers (*Figure 5.6.12*). This has directly influenced *Action 5.6-9*.



Figure 5.6.12 Promotional graphic used for the inaugural Chemistry Le Chéile conference.

A female PGR student was recently awarded RSC funding for a podcast titled "People of the Periodic Table". Supported and promoted by the School, this will be dedicated to diversity in chemistry, interviewing leading women working in different fields of chemistry with speakers from industry, academia, the public sector and research. The podcast will have a global reach to students aspiring to a career in chemistry (*Action 5.6-10*).

Action 5.6-9 [Capacity Building]

Launch an annual Equality, Diversity and Inclusion symposium for all Irish Schools of Chemistry Action 5.6-10 [Capacity Building] Support the launch, promotion and assist with any on-going needs for the successful planning and production of the People of the Periodic Table Podcast.

(viii) Outreach activities

The School is extensively involved in outreach activities (*Table 5.6.3* and *Figure 5.6.13*). OPRA manages the organisation and delivery by active selection where in our control (*Table 5.6.3*). In the staff survey, only 6% disagree that the School considers the gender profile of presenters in planning outreach events. Our outreach is inclusive of diverse students in the Irish educational system – private, public, Irish speaking and DEIS (disadvantaged) schools and also older members of the public (*Figure 5.6.14, Action 5.6-11*).

Action 5.6-11 [Capacity Building]

Undertake pilot study to review and diversify curriculum by gender and race.

Table 5.6.3	School of Chemistry outreach activities, including partial information on female and male
staff and postgra	duate participation for 2016-2019.

Event	Target Audience		м	%F
Undergraduate Open Day	Schools, General Public	9	9	50%
Postgraduate Open Day	UG Students, General Public	_	_	_
Careers Options Cork	Schools, General Public	_	_	_
Careers Day	UG Students, General Public	_	_	_
Transition Year Week	Secondary School Students	_	_	_
Salters Festival of Chemistry	Secondary School Students	24	24	50%
Schools Analyst Competition	Secondary School Students	12	12	50%
UCC Plus+ Easter Camp	Secondary School Students	9	9	50%
SEFS Summer Camps	Secondary School Students	9	9	50%
Spectroscopy in a Suitcase	Secondary School Students	27	12	69%
Chemistry Magic Show	School Students, General Public	_	_	_
Forensic Chemistry Disability Workshop	Disability Supported Students	_	_	_
Outreach Module	Postgraduate Students	_	_	_
Cork Science Festival	General Public	7	8	47%
Cork Discovers Week	General Public	6	5	55%

Most successful of all our activities is the RSC and SFI sponsored Spectroscopy in a Suitcase (SIAS), bringing chemical analysis to students aged 16-18. In visits to mixed gender and all female gender schools, female postgraduate students were chosen to represent the School (*Table 5.6.4*). Teacher evaluation data measured independently by the RSC indicates that the SIAS scheme significantly increased the secondary level student's awareness of real-world applications of chemistry and associated careers. Of the 27 responses 96% said the programme significantly increased awareness and 4% said it increased awareness somewhat.

In tandem with this activity, we have seen an increase in total student numbers, as well as an increase (from 46% to 56%) in female representation on Chemistry degree programmes over the 6 years that SIAS was running (2014-2020).

Qualitative feedback from individual teachers at mixed gender schools below is testament to the impact this has had on the promotion of chemistry in general and of chemistry programmes at UCC.



Impact – Our SIAS team completed 278 school visits in the period 2014-2020, reaching almost 6,000 students (55%F), with female PG students as role models promoting careers in chemistry and female students undertaking chemistry programmes at UCC.

Recognition of outreach participation is reported to the School Board and all participating staff highlighted on the School website/social media. In future, this will be formally recognised in annual College of SEFS awards.

Table 5	.6.4
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4 School of Chemistry Spectroscopy in a Suitcase student reach, 2016-2019.

Academic Year	F	м	Total	%F
2018-2019	546	442	988	55%
2017-2108	464	394	860	54%
2016-2017	552	418	972	57%





Figure 5.6.13 Photographs from School of Chemistry outreach activities. Clockwise from top left: Forensics Chemistry Disability Workshop, Cork Carnival of Science, SEFS Summer Camp Chemistry Day, Spectroscopy in a Suitcase, Cork Discovers Night, UCC Plus+ Easter Camp.

6. CASE STUDIES: IMPACT ON INDIVIDUALS

Key Actions Implemented

Case Studies recorded and publicised.

(i) Case Study 1

Name: Gillian Collins

Role in School: Lecturer in Physical Chemistry (0.8 FTE)

Member of Self-Assessment Team (SAT): No

I began work as a researcher within the School in 2011 in a highly productive research environment with balanced representation of both male and female researchers. Personally, I never felt that gender would be a barrier to career progression, although this perspective changed at the juncture where career and parenthood met. In 2017 after returning from maternity leave, I was appointed to a lectureship position in Physical Chemistry, which provided greater opportunities for career advancement. **Returning to**



work after maternity leave, establishing a new work-life dynamic and taking up a new role were all well supported.

The School facilitated a flexible return to work and I benefited from specific actions implemented through Athena SWAN. The Academic Returners Scheme allowed me to employ a research assistant to conduct laboratory experiments, which was helpful to regain lost research output. I found practical policies such as 'keep-in-touch days' useful as they appreciate the realistic necessity to do some aspects of work while on maternity leave but this time could be recouped and added to my maternity leave. Senior staff were very supportive both in terms of providing advice and guidance in my new role as a lecturer and accommodating to childcare commitments. Athena SWAN has created a more concrete framework around how to encourage positive working practices, for example ensuring that meetings are scheduled within core working hours. The School is supported within the wider University, in particular I benefit from the convenience of the on-campus crèche facility. Returning to work from my second maternity leave in 2020 was a very different experience against the backdrop of the pandemic. It was clear to me that the ongoing activities of the Athena SWAN initiative fed into greater awareness of our home and work responsibilities, which at times became intertwined and severely hindered my ability to work productively. I received excellent support from the School such as the absolute necessity for flexible working.

An important aspect of seeing the implementation of Athena SWAN is to create a balanced workplace culture. This is relevant to our School as the academic staff is predominantly male. Athena SWAN has made an impact on cultivating long term positive change within the School over the years. There is continual dialogue from the committee to staff regarding activities, upcoming events etc. reinforcing not just gender-based issues but diversity in the wider sense, and this contributes towards achieving a more inclusive work environment which values varied perspectives.

(ii) Case Study 2

Name: Kasia Pyrz

Role: Senior Executive Assistant

Member of (SAT): Yes

I am a graduate of Polish Philology from Jagiellonian University in Krakow, Poland and emigrated to Ireland in 2002. In 2010 I graduated as BA Honours of Fine Art and Design (CIT Crawford College of Art). In 2013 I achieved a Higher Diploma in Applied Psychology (UCC) and won a PhD scholarship funded by the School of Medicine (2013-2017). In 2017, I started to work as a member of PMSS; my current role is that of a Senior Executive Assistant. With the support of the School, in 2020 I reregistered to finalise my PhD studies. Outside of work, I parent two children. In 2010 my son was diagnosed with Asperger's Syndrome; I have been attending to his additional educational needs and advocating for him since.

The Athena SWAN Charter has given me the language and opportunities to voice ideas and concerns around topics such as workload, well-being, flexible working hours, inclusion, and much more. Beyond conversations, my participation in the School's SAT empowered me with insightful data and actionable goals. The Charter enables me to expect, and to influence the impact and implementation of policies and actions. As a full-time employee, a single parent, a carer and a mature student, my flexibility needs tend to exceed the policy measures currently available within this Institution. As a member of PMSS, I cannot avail of the informal time management autonomy available to other colleagues so the benefit of a higher degree of flexibility and support within my working environment is of paramount significance to me.

I recognize the existence of systemic structural challenges; in the face of such impediments, I applaud the School for its critical self-evaluation. While still at an early stage, its sustained focus on obtaining tangible improvements in terms of equality and gender balance has brought benefits to my career.

The School's prevailing culture of inclusivity and openness was evident when I joined in 2017. Belonging to a minority (one of two PMSS having English as a second language), no occasion left me feeling as *different*. On the contrary, **my diverse talents and pursuits were cherished and supported by my colleagues and line manager**. In 2018, I **led the School to a win in an all-University** *Well-being in the Workplace* **competition**, during the National Workplace Wellbeing Day, for the promotion of a positive and supportive working environment. In 2021, during the pandemic and while working remotely, I developed and facilitated a series of online art classes that highlighted challenges of students and staff with disabilities. For this initiative I was awarded first place in Staff Category in the *EDI Creative Narratives* at the *UCC* 4th *Annual Athena SWAN President's Symposium*. Once again, I gained confidence and drive from a culture that believed in the talent and importance of my actions regardless of origin, gender, or employment seniority/status. Furthermore, having identified leadership as my growth need, I was actively supported in achieving a digital badge in the *First Steps to Management* programme, and in becoming a Lead Worker in the School's COVID-19 Management Team (2020).

The School's informal policies of flexible working hours, and of holding all meetings in core hours help address real-life issues as experienced by parents and carers, especially in unprecedented times during the pandemic. I look forward to further use of the Charter's remit and the SAT's action plan as forces for genuine change.



Figure 6.1 Photograph from the UCC 4th Annual Athena SWAN President's Symposium Award Ceremony.

Action 6-1 [Capacity Building]
Disseminate Case Studies to wider audience through website and social media.
Action 6-2 [Change of Culture]
Accumulate diverse Case Studies of all stakeholders on their interaction with the School.



7. FURTHER INFORMATION

COVID-19 had an enormous effect on working practices and environment since March 2020. All of our surveys were modified with tailored questions to gain insight into the effect of this from a gender perspective with specific sections to identify the new landscape of working (or studying) from home, the increased pressures of home-schooling and childcare while studying/working. Interestingly in the staff survey, while most questions had little gender difference, below are some examples of survey data/responses received which highlight a gender difference (*Figure 7.1*). For example, 59% felt COVID-19 created barriers to training and career development (73% of F, 53% of M but males more polarised).







Figure 7.1 Effect of COVID-19 as assessed by 26 specific questions on staff survey.

While our survey identified some key differences, it is well established in literature that COVID-19 has impacted negatively the research output of female staff. Looking specifically at research staff and PGR students, the effect on research staff is palpable (*Figure 7.2*).



Figure 7.2 Effect of COVID-19 on research staff.

This analysis further bolsters our actions to track the impact over time. To show our commitment, an EDI committee member was awarded funding under the RSC Inclusion and Diversity Fund (*Figure 7.3*).



Figure 7.3 Awarded RSC Inclusion and Diversity Funding (£3168) for project to measure the effect of COVID-19 on marginalised chemistry students at UCC.



Impact – Funding award for RSC Inclusion and Diversity project on effect of COVID-19 on marginalised students.

It is clearly evident as we write this, that the effect of the pandemic will need specific actions and flexibility to ensure all staff and students are included going forward. The Athena SWAN process has been highly constructive in this regard and provided a framework for issues to be discussed and resolved openly.

As we now emerge from the pandemic, we await new guidelines for future working practice which informs our *Action 7-1*.

Action 7-1 [Priority Action] Ensure the return to campus from COVID-19 pandemic is inclusive and facilitates staff.



ACTION PLAN

Action	Description
3-1	Collect and analyse all relevant staff/student data and conduct UG/PGT/PGR student and staff surveys. [Capacity Building]
3-2	Promote Athena SWAN and EDI principles and activities. [Change of Culture]
3-3	Open application for School committee membership promoted through School Assembly [Change of Culture]
3-4	Inclusion of the Chair of the EDI committee on our Executive Advisory Team [Change of Culture]
<mark>4.1-1</mark>	Identify students in 2 nd and 3 rd year who obtain a Pass grade and intervene to monitor and help improve. [Priority Action]
4.1-2a	Collect longitudinal data on all PGR advertised posts to monitor emerging trends.[Capacity Building]
<mark>4.1-2b</mark>	Prepare an SOP for all PIs outlining the application and selection process for PGR posts with special emphasis on securing a more gender-
	balanced review and selection stage. [Priority Action]
4.1-3	Gather longitudinal data on PGR progression rates with special emphasis on students taking more than 5 years to complete. [Capacity
	Building]
4.2-1	Recruitment of a female Adjunct Professor, Lecturer or Researcher [Capacity Building]
4.2-2	Build on our previous SALI applications for female Professorial staff [Capacity Building]
<mark>4.2-3</mark>	Work with SEFS HR Manager, Research Manager and PIs to provide enhanced support for CID Researchers [Priority Action]
4.2-4	Local mentoring of Early Career researchers to specifically target funding such as IRC Postdoctoral Awards and Marie Sklodowska-Curie
	Fellowships [Change of Culture]
<mark>4.3-1</mark>	Adopt a competency-based approach for a new regular Career Development Initiative (CDI) for PMSS staff [Priority Action]
5.1-1	Improve the gender balance of selection panels [Change of Culture]
5.1-2	Develop improved Candidate Information Packs, to include wording in job advertisements to reflect a more welcoming, inclusive and family
	friendly working environment within the School of Chemistry. [Change of Culture]
5.1-3	Improve School induction arrangements for new staff and in particular the experience across genders and identities [Change of Culture]
<mark>5.1-4</mark>	HoDs to instigate Early Career academic (Lecturer B/B and A/B) Career Development Initiative to encourage and support in the promotion
	process. [Priority Action]
5.1-5	Engagement with the University to encourage review of promotion processes for all staff. [Change of Culture]
5.2-1a	Establish a locally-managed anonymous database of promotion figures for PMSS staff. [Capacity Building]
5.2-1b	Collect qualitative data (via interviews or surveys) on barriers to promotion for PMSS staff [Change of Culture]
5.3-1	Further exposure for PGR students to Career Fora and information on career pathways [Change of Culture]
<mark>5.4-1</mark>	Run a focus group to investigate PMSS staff specific training needs and attitudes towards career development. [Priority Action]
<mark>5.5-1</mark>	Adopt HR Maternity Leave Checklist as a structure for meetings with line manager at three time intervals – before, during and after
	maternity leave [Priority Action]
5.5-2	Canvas for increase of Keep in Touch (KIT) days to 5 days for academic and research staff [Change of Culture]

Action	Description
5.5-3	Advocate for inclusion of senior researchers in the return to work grant scheme [Change of Culture]
<mark>5.5-4</mark>	Identify and oversee refurbishment of a room in the Kane building for the purpose of providing a clean, calm and private space for
	breastfeeding. [Priority Action]
5.5-5	Family Leave Champions identified and advertised on our School Website and other forums. [Change of Culture]
5.5-6	Work in conjunction with the HR Manager in SEFS to update the current Paternity Leave Policy in the University to facilitate backfill
	arrangements [Capacity Action]
<mark>5.5-7</mark>	Implement a Paternity Leave Checklist for each stage (before, during, after) to be completed by the Line Manager and the staff member
	taking leave. [Priority Action]
<mark>5.6-1</mark>	Continue to raise awareness about HR policies and reporting procedures available for staff and students. [Priority Action]
5.6-2	Create a centralised database of all School committees containing information on their structure, composition, terms of reference and
	rotation planning for committee members. [Change of Culture]
5.6-3	Conduct a review on staff participation in School committees. [Change of Culture]
5.6-4a	Canvas for and call for input of all staff (particularly academic) in revised AWDM and PDRS models in the University. [Change of Culture]
5.6-4b	Develop a local workload model for all research and PMSS staff through the use of Career Development Initiative (CDI). [Capacity Building]
5.6-5	Post COVID-19, when in-person committee meetings can resume safely, the School will endeavour to provide in-person/online hybrid
	meeting set up to facilitate on campus desk-based staff, staff working from home and staff with caring and parental responsibilities.
	[Capacity Building]
5.6-6	Commit to further visual improvements to the School website with the addition of images which show diversity in the School, e.g. BAME
	demographic. [Change of Culture]
5.6-7	Promote ownership of equality and culture of advocacy within the School through enhanced publicity on website and social media. [Change
5.6.0	of Culture]
5.6-8	Develop a physical Women in Chemistry visual presence in the School [Change of Culture]
5.6-9	Launch an annual Equality, Diversity and Inclusion symposium for all Irish Schools of Chemistry [Capacity Building]
5.6-10	Support the launch, promotion and assist with any on-going needs for the successful planning and production of the People of the Periodic
5.6.44	Table Podcast. [Capacity Building]
5.6-11	Undertake pilot study to review and diversify curriculum by gender and race [Capacity Building]
6-1	Disseminate Case Studies to wider audience through website and social media [Capacity Building]
6-2	Accumulate diverse Case Studies of all stakeholders on their interaction with the School [Change of Culture]
<mark>7-1</mark>	Ensure the return to campus from COVID-19 pandemic is inclusive and facilitates staff [Priority Action]