Athena SWAN Bronze and Silver Department award application

Name of institution: University College London Date of application: 27th April 2011

Department: Biochemical Engineering

Contact for application: Dr Martina Micheletti

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Departmental website address: Torrington Place WC1J 7JE

Date of university Bronze award (renewal): 2009

Level of award applied for: Silver

Athena SWAN Bronze and Silver Department awards recognise that in addition to university-wide policies the department is working to promote gender equality and to address challenges particular to the discipline.

Not all institutions use the term ‘department’ and there are many equivalent academic groupings with different names, sizes and compositions. The definition of a ‘department’ for SWAN purposes can be found on the Athena SWAN website. If in doubt, contact the Athena SWAN Charter Coordinator well in advance to check eligibility.

It is essential that the contact person for the application is based in the department.

At the end of each section state the number of words used.

Click here for additional guidance on completing this template.

1. Letter of endorsement from the Head of Department – maximum 500 words

It gives me great personal pleasure to write this endorsement for the application made by the Department of Biochemical Engineering for an Athena SWAN Silver award.

As a relatively new department, created in 1997, we have ensured that a key priority of the way we plan and operate is such that all staff are encouraged and enabled to have the fullest possible sense of participation and responsibility within the full range of our activities, irrespective of any issues
such as race, religion, gender or sexual orientation. Such a positive approach of course pays dividends in promoting and nurturing the human capital behind the creation of our advances in research and teaching. Furthermore it pervades the whole departmental ethos that in turn improves the lives of students and staff throughout their time at UCL and onwards into satisfying and worthwhile careers. I firmly believe that such an approach is crucial to ensuring each individual has the opportunities, the environment and the support and engagement to fulfil their own potential to the full. In this way we can make our strongest possible contribution to the truly global issues which we address.

Our student cohorts enjoy contact with a vibrant range of academic staff and demonstrators who provide a fully international breadth of vision and cultural diversity. This is beautifully demonstrated by spontaneous events such as our ‘International Cook-in” event where staff and research students all work together to share their national heritages through cuisine!

In terms of straight demographics female staff are well represented and the degree programmes are all well aligned to match with the outputs of the state tertiary education system. Hence our intake of women is well above average for an engineering discipline, mainly resulting from adoption of fair policies and establishment of an open culture. Intakes and awareness are all bolstered via our active promotion of campaigns such as WISE, in which one of our senior female staff was an initiator.

As a new head of department I have recognised that with a significant proportion of academic staff below 40 years of age that more should be done to encourage a family-friendly and accepting culture. New modes of working have been adopted and the benefits for all are becoming very clear. There is more to do but the most striking message is that staff feels empowered to make the changes and are supported to achieve a diversity of working arrangements with the flexibility so necessary in a modern society.

My vision is to work with staff as a team in the creation of a department in which each feels capable and supported in making their full contribution towards the whole endeavour. This relies upon ensuring that women in particular are fully involved in all of the departmental processes essential for our future health and development. They are an integral and vital resource and crucial to the attainment of this goal. (482)

2. The self-assessment process – maximum 1000 words

Describe the Self-Assessment Process. This should include:

a) A description of the self assessment team: members’ roles (both within the department and as part of the team) and their experiences of work-life balance;

b) an account of the self assessment process: details of the self assessment team meetings, including any consultation with staff or
c) Plans for the future of the self assessment team, such as how often the team will continue to meet, any reporting mechanisms and in particular how the self assessment team intends to monitor implementation of the action plan.

The department’s gender equality initiative officially started in September 2008 when the newly appointed Head of department showed an interest in a college-wide scheme led by Professor Janette Atkinson and organized an initial meeting with the Head of Equalities and Diversity at UCL Ms Sarah Guise. The first meeting was held in October 2008 when Sarah described the various College-wide activities stemming from the SWAN UCL Bronze Award achievement. An enthusiastic response from different members of staff led to initial discussions on the self-assessment team composition and the intention to apply for a Silver SWAN Award was shared with the department at the next Staff Meeting.

The SAT is currently formed by:

Prof Nigel Titchener-Hooker, Head of Department  
Prof Eli Keshavarz-Moore  
Dr Martina Micheletti, Lecturer  
Dr Dan Bracewell, Senior Lecturer  
Ms Tracy Davies, Departmental Administrator (currently on maternity leave)  
Ms Paula Thomas, DEOLO

The team members’ selection was based on the need for diversity in gender, academic level, parenthood responsibilities as well as previous gender equalities experience via involvement in the Women’s International Studies Europe (WISE) programme. Dr Martina Micheletti has been the main department coordinator of the SWAN process. She attended SWAN workshops and, helped by the current departmental DEOLO Ms Thomas, collected up to-date information on the current activities aiming at promoting women in science and engineering disciplines. She has also been responsible for the statistical data analysis and has chaired all SAT meetings. She joined the department in 2004 as a research associate and was subsequently appointed as a Lecturer in September 2007. During her first three years of probation she took a maternity leave period to have her first child, now 2 years old, which was followed by a period of flexible working hours that she requested and obtained in order to carry on breastfeeding. Prof Eli Keshavarz-Moore has been responsible for many years for the UG teaching activities in the department and worked, in collaboration with Ms Tracy Davies, collecting the relevant data relating to UG students. She also liaised with the departmental UG recruitment team to check the feasibility of our recruitment-related action plans. She has perused an active international academic career as a single parent. She was promoted to become the Dept first female chair in 2010. Dr Dan Bracewell is responsible for our MSc in Biochemical Engineering recruitment activities and was in charge of liaising
with the department of Chemical Engineering on their current practice post-
Silver award achievement. Dan shares his workload with bringing up a young 
family and benefits from the flexibility in working practices the Dept supports. 
**Prof Nigel Titchener-Hooker** has contributed extensively to the application 
narrative with his knowledge of department history but he also took a personal 
interest in suggesting ideas to help women staff promotions. Nigel believes 
strongly that an appropriate work-life balance is crucial for personal success 
and has made it his role to lead by example here. The team benefited from 
the support of the departmental administrative staff and in particular that of Mr 
Nick Cameron, IDTC Departmental Administrator, who provided the PGR 
students data.

The team met for the first time in September 2009 and regular monthly 
meetings were held until January 2010. After this date meetings were held 
more frequently, every two weeks and weekly during the last two months 
before the application submission. At this time The Faculty of Engineering at 
UCL decided to submit a Faculty-wide application and the department’s work 
on SWAN fed into this activity. This year meetings were resumed with the 
same SAT team as we all felt we had implemented a number of changes 
based on the previous year’s work and were enthusiastic to take these 
forward.

Consultations with Dr Eva Sorensen and Dr Tao Chang from UCL Chemical 
Engineering and Civil Engineering departments, respectively, were conducted 
in an effort to share best practise and we welcomed suggestions from 
previous UCL SWAN Awards winners. The SAT team used external sources; 
ECU, UKRC and HEA websites and the SWAN workshop held in February in 
preparing their submission. The Equalities and Diversity Team at UCL also 
proved a source of great advice and suggestions on this application.

Publicity of our SWAN activities was achieved through several means. 
Information on the SWAN Committee was included into the Staff Handbook 
before the start of the term and SWAN meetings minutes were circulated to all 
departmental Staff. This proved particularly useful when discussing any 
actions arising that would need a wider level of or consultation but it also 
provided a rapid means to circulate internal staff surveys. A copy of the 
application has been uploaded to our intranet environment and news related 
to SWAN will be advertised on our departmental plasma screen TV. We have 
also prepared a short article on our activities for publication in our 
departmental newsletter (BioProcess Matters) which will be distributed out in 
September 2011 to our 5,000 contacts worldwide.

Activities and actions stemming from our data analysis and SWAN process 
have been included in the relevant Committee agenda (Teaching, 
Recruitment, Staff, Finance, etc) for discussion with other members of staff 
and for Internal Quality purposes. The actions and SAT propositions will be 
discussed within each Committee and progress on these will be monitored by 
the SAT team at bi-monthly meetings. Discussions within the team led to the 
unanimous decision that our activities and meetings will carry on post-
submission with the same team members in an effort to efficiently implement the action plan and hence apply for the next level of SWAN award. (916)

3. A picture of the department – maximum 2000 words

   a) Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features.

Biochemical Engineering is a young and growing Department. It lies at the junction between process engineering and exciting new life sciences. As a Department our major challenge remains to work with our aspiring women to help them to see academia as a worthwhile career. The mechanisms are all in place and more crucially so is the willingness for us to succeed. SWAN will serve as a further catalyst for change, even in these uncertain times.

The department is relatively small, with only 16 members of academic staff and 120 undergraduate students. We offer a postgraduate taught programme (30 students a year, MSc in Biochemical Engineering), which is one year long and welcomes students with an engineering, as well as a life science, background. We have approximately 90 doctoral students at any one time, and therefore all members of staff are heavily involved in their supervision and in managing their training activities. The department runs an Industrial Doctoral Training Centre with 10 Engineering Doctorate studentships (EngD) per year in addition to PhD studentships. We have around 15 postdoctoral staff members. Because of the unique nature of the discipline we do have strong and numerous industrial links with the bioprocess industry.

Most of the student and staff data presented in this application concerns full time positions. We do have very few students that take the part-time option at postgraduate level but the numbers are very small. We had, for example, a female registered for postgraduate taught studies who graduated in 2010 and one male is currently registered for this option.

The baseline data presented in different sections of the application is provided for the past three to seven years. This is because we started the application process and data collection in 2009 and we think inclusion of such data can be useful to evaluate how things have changed over a longer period of time. Each year on the axis legend indicates data held in our databases as of September in that year. (331)

   b) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

Student data

(i) **Numbers of males and females on access or foundation courses** – comment on the data and describe any initiatives taken to attract women to the courses.
The Department of Biochemical Engineering, in common with UCL policy, does not operate Access or Foundation courses. *(17)*

(ii) **Undergraduate male and female numbers** – full and part-time – comment on the female: male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the impact to date. Comment upon any plans for the future.

<table>
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<th>Male</th>
<th>Total</th>
</tr>
</thead>
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</tr>
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</tr>
<tr>
<td>2010</td>
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</tr>
</tbody>
</table>

**Total UG students Intake**

![Chart showing gender ratio for UG students](chart.png)

Full time UG in UK HE institutions 2007/08
Chemical, process and energy engineering – female 1185, male 3215 [% female = 0.27]
Data source:

Our % female undergraduate student intake for the September 2010 is 45% and it consistently exceeds the national average of 27%. This value has not changed significantly in the last 5 years. We are determined to maintain and to improve our standards towards achieving equivalence and increase the number of female applicants by targeting female-only schools in particular and using women role models extensively in our recruitment activities (O1, A1.1-S). The department has undergone renovation works aimed at refreshing some laboratory areas and portraying a newer image of the engineer profession to the prospective students who visit during summer and at UCAS interviews. We use images of our current female students taken during practical activities and of our female alumni in their workplace to encourage a higher number of female applicants to biochemical engineering (O1, A1.2-M). This material has been used to produce our recruitment leaflets and will be distributed to schools for the next round of applications. *(154)*

(iii) **Postgraduate male and female numbers completing taught courses** – full and part-time – comment on the female: male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.
Our current proportion of female registered for taught MSc programme is 46% and has been 47% on average in the past 7 years. A few years ago we introduced a new system according to which the PG Administrator reports gender split applications data to the PGT Admission Tutor who can act, if necessary, to ensure a fair balance of offers are made. Our numbers are well above the national proportion of PGT females (HESA, 2009) but we seek to maintain our position by continuing to raise awareness of the discipline among female applicants. The department’s policy, aimed at encouraging and supporting final year UG and PGT female students to apply for our doctoral programme, has been particularly appreciated by prospective PGT female applicants visiting the department.
The percentage of PGT students completing the MSc in Biochemical Engineering is good for both sexes but females have outperformed males in the last few years. With the exception of 2008 data, the completion rates for our students on PGT courses approach 100% for females while they are around 85%-90% for males. \((178)\)

(iv) **Postgraduate male and female numbers on research degrees** – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

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**PG students on research degrees - Intake**

Full time PG in UK HE institutions 2007/08
Chemical, process and energy engineering – female 470, male 1190 [% female = 0.28]
Cheltenham, HESA.

**Total PhD students Intake**
The Department has about 90 postgraduate research (PGR) students at any one time. The trend in the PGR students over the past five years has been one of steady growth in the proportion of women with an average of 37% in the last 7 years, which exceeds considerably the national average (28%). This is the result of some changes made to our recruitment approach since 2006, including a more targeted attention to our final year female UG and PGT students. Our recruitment policy has always been based on merit and relevance to the project but we encouraged UG/PGT personal tutors to proactively discuss every research project opportunity with their female tutees as we noticed a low number of applications from this cohort. We informally gathered some of these students’ opinions and they felt “delighted to be given the opportunity”, “encouraged to consider an academic career” and “privileged and supported”. In addition we made an effort to provide our applicants with a wider range of research topics and this resulted in the expected greater appeal to the female applicants.

Our current EngD programme is a relatively new doctorate qualification now becoming much sought after due to extensive contact with industry. We decided to analyse data on the % female currently registered on the two doctorate programmes we offer (PhD and EngD) separately. While the % female in our PhD programme intake has steadily increased over the past 5 years with peaks above 50%, our current EngD programme ratios are around 30%. We decided to monitor more closely the EngD recruitment and ensure we properly advertise the programme to female applicants. The Director of the IDTC has been informed and a few actions have been agreed to resolve this issue (O3, Action A3.2-M, A3.4-M). In addition we intend to disseminate to the widest possible audience the opportunities in the field at doctoral level and draw out the relevance of doctoral studies for those students wishing to pursue an academic career. (318)

(v) *Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees* – comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect to date. Comment upon any plans for the future.
The % female in the applications received in the last 5 years has always exceeded 40% with the exception of the 2007 applications (36.3%). We recently revised our entry criteria and, since September 2010, the department’s A-levels grades requirements have been set at AAA from the previous AAB. We strongly expect an increase in the number of female applicants following this change as it was observed in other UCL departments recently. The success of our female applicants is demonstrated by the % female in the offers which exceeds the % female in applications in most cases. During the process we came across a lack of departmental data being
collected on student acceptances, which might differ from our data on final intake, and we plan to rectify this (O2).

With the exception of data for 2008 the overall trends in PGR and PGT % female show no discernable differences between the spread of individuals who apply and those who are recruited. We believe this is due to our deliberate action to demonstrate the relevance of the discipline across the sexes and the use of both male and female staff and students in the recruitment and interview stages. The use of our female alumni success stories and quotes within our departmental overview presentation is an example of such activities. It is noteworthy that in the past few years the success rates of female applicants for both PGT and PGR programmes have approached 100% (% female in acceptances to applications ratio is higher than 1). (252)

(vi) **Degree classification by gender** – comment on any differences in degree attainment between males and females and describe what actions are being taken to address any imbalance.
Our female undergraduate students consistently outperform their male counterparts as higher % female students than male graduate with an upper class or first class degree. This is also evident in the proportion of first or 2:1 degree classifications obtained by our female and male cohorts in the last 5 years showing that females are better represented and less likely to achieve lower grade degrees. We believe this difference is due to the fact that women work more consistently than males, who sometimes find the elements of continuous assessment in a degree more problematic (information gathered from staff-student consultation Committee meetings). In agreement with our UG students we have recently introduced a student-to-student mentoring scheme which has proven to be really successful. This was a deliberate attempt to increase our female students’ confidence and leadership skills while mentoring younger male peers. A few years ago we realized our own undergraduate female cohort potential and started encouraging final year students to consider applying for our doctoral programme. The impact of our internal efforts is demonstrated by the higher number of female students who have recently graduated with a BEng and MEng in Biochemical Engineering degree programmes, historically more suited to, and suggested for, students interested in doctoral studies (either at UCL or elsewhere). On average 50% of our PGR students intake come from our own UG or PGT programme cohort with a near 80% success rates for the female cohort. (238)

**Staff data**

(vii) **Female: male ratio of academic staff and research staff** – researcher, lecturer, senior lecturer, reader, professor (or equivalent). comment on any differences in numbers between males and females and say what action is being taken to address any underrepresentation at particular grades/levels
In 2009 the % female at research assistant (41.2%), lecturer (28.6%), senior lecturer/reader (40%) grades were well above the UK HE institutions (engineering-related disciplines) figures for 2007-08 (18.7, 20.3 and 13.5%, respectively) while our professorial level was lower (0% as compared to 7.1% national average). Under new headship the Department has established an active and open policy for promotion and, as a result, 2/3rds of those put forward for promotion in 2009/10 were female (the first one achieved Readership and the second was a successful professorial appointment). Currently the % females have increased at almost all academic grades (44% research assistant; 33% lecturer; 20% senior lecturer/reader; 20% professor) and our professorial grade level is consistently higher than the national average (7.1% in 2007-08, HESA 2009). The apparent decrease in the %
female at senior lecturer/reader grade can be explained by the fact that a female member has been promoted from Reader to Professor. (153)

(viii) Turnover by grade and gender – comment on any differences between men and women in turnover and say what is being done to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left.

The population size is so small that trends are quite difficult to establish. The overall turnover is low. In 2006 one male professor moved abroad and one female lecturer decided to go back home to South America for personal reasons. Since then the Department number of academics has been increasing by recruiting early career academics (3 male, 1 female). As opportunities for expansion of the Department arise we intend to make special efforts to play to our strengths in the creation of fulfilling careers for women. This is driven by the successes and impact of our policies on the current female staff members careers (examples detailed in the Case study Section 10) who undoubtedly constitute an excellent role model for the future generations in the discipline. (126)

(Total number of words Section 3 = 1767)

Supporting and advancing women’s careers – maximum 5000 words

4. Key career transition points

a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(i) Job application and success rates by gender and grade – comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

According to College Policy the department job application data are returned to the Human Resources department as part of the recruitment process and the information is kept for six months only. For this reason job application data and gender information has not been recorded internally. A new online recruitment system (Rome) has been introduced and, will provide statistical reporting tools that will enhance equal opportunities monitoring and facilitate the collection and analysis of job applications data at departmental level. An action has been planned to resolve this issue (A5.1-S).

Based on our internal database two early career women have been appointed from our own student and research assistant cohort in 2002 and in 2007, respectively. The former achieved Readership in 2010 and confirmation of a precedence Fellowship (FIChemE) in 2011. Three early career males have been appointed in 2006, 2008 and 2009, respectively, two of them from our own research assistant cohort. Recently we have also advertised two Research Associate positions. The first one had in total 17 applicants (11...
male, 65% and 6 female, 35%). Among these one female and one male were selected for interviews (success rates: 16.6% female, 9% male), and the male applicant was offered the position. The second Research Associate post had 4 applicants (2 male, 50% and 2 female, 50%) and a female was appointed.

Once our database with job applications by gender and grade is up to date we plan to accurately review our numbers to identify any imbalances. We are committed to ensuring job titles and descriptions are totally free of bias, implied or stated and to review the gender balance on recruitment committees (O5). (274)

(ii) **Applications for promotion and success rates by gender and grade** – comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific examples of where women have been through the promotion process. Explain how potential candidates are identified.

The Department has a 100% promotions success rate for both female and male academic staff members. The specific case of Dr Farid (detailed in the Case study Section 10) demonstrates the Departmental commitment to the appropriate promotion of women based on merit. This individual has been selected by senior department management Committee for accelerated career progression and she achieved Readership in 2010. Her rate of promotion (Lecturer to Reader within 10 years) exceeds that of the department male counterpart. The Department (HoD) is committed to take into account a range of factors affecting women in their pursuit of academic promotion, including parent responsibilities and the impact these may have on the capacity for international travel and networking activities for example. Such factors are taken into consideration when looking at the achievements of staff members at the yearly appraisal process with HoD when progress towards promotion is discussed. (147)

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Recruitment of staff** – comment on how the department’s recruitment processes ensure that female candidates are attracted to apply, and how the department ensures its short listing, selection processes and criteria comply with the university’s equal opportunities policies

Changing the way in which positions are described so that they are more attractive to women applicants is an important element of the approach (as it is for the undergraduate student recruitment) (A5.3-M). By opening the areas of interest, titles and job descriptions for posts it has been our intention to make them more attractive to people who have not necessarily followed the mainstream academic route and thus this helps to encourage a broad range of applicants, including women where otherwise they might have felt that they
were not suitable for the post. The HoD and the deputy HoD have organized a focus group on this issue and they met for a few times with the Departmental Administrator to review the post description and recruitment methods. All recruitment processes follow the university regulations on monitoring through all stages of the process. Appointment panels are as gender-balanced as possible given the spread of expertise amongst the staff but this has not been formally monitored and we are acting on this (A5.2-S). Applicants are made aware during their first interview with us of our family friendly policies, of our working hours, meeting times and internal procedures. *(194)*

(ii) **Support for staff at key career transition points** – having identified key areas of attrition of female staff in the department, comment on any interventions, programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training. Identify which have been found to work best at the different career stages.

The main transition points of relevance for staff are Research Associate to Lecturer and Senior Lecturer/Reader to Professor. In both cases the progress towards appointment and promotion, respectively, is discussed at the appraisal stage so that due attention is paid to the UCL Promotion Policy in terms of understanding of which activities/achievements would fit into the promotion criteria and/or how this might be achieved. Early career academics and postdoctoral researchers can also rely on their mentor for support and advice. In the Research Associate to Lecturer case there is an issue of availability of posts. Our aim is to ensure that postdoctoral researchers, and especially those declaring an interest in an academic career during the appraisal, are prepared in terms of teaching skills and publications rates to be able to apply for full academic post, whether this is at UCL or elsewhere. The Research Associate’s supervisor usually provides advice and support on these key issues on a daily basis. As an example in the past two years we have selected an applicant among our current postdocs cohort to put forward for application to the L’Oreal UK Fellowship for Women in Science. The relatively small number of staff members in the department significantly contributes to creating an efficient and informative support system for these individuals who are aware they can rely on male, as well as female, academic staff member for advice if needed. *(233)*

5. **Career development**

a) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Promotion and career development** – comment on the appraisal and career development process, and promotion criteria and whether these take into consideration responsibilities for teaching, research,
administration, pastoral work and outreach work; is quality of work emphasised over quantity of work?

We believe the appraisal and promotion processes currently in place in the Department are transparent and without bias. The HoD and senior staff use appraisal as one element in identifying areas for future development of staff with the express aim of achieving appropriate recognition of skills and experience gained and responsibility taken via promotion. The identification of individuals for promotion progress is via “sponsorship” from the line manager and by election from the HoD. It has always been possible for an individual, however, to informally put her/himself up for promotion. From last year we decided to include, as part of the appraisal process, a section summarising the candidate self-evaluation towards promotion and his/her thoughts on this matter. We believe the introduction of this more formal procedure might encourage female staff, for example, to consider whether they are ready for it and which actions can be taken to support them in the process. The HoD operates an active succession plan, which is renewed annually on full consultation with senior academic, technical and administration staff. Staff are all reminded at the regular Staff Meeting of the college timetable for promotions and that the departmental policy is to encourage individuals to achieve their best. (201)

(ii) Induction and training – describe the support provided to new staff at all levels, as well as details of any gender equality training. To what extent are good employment practices in the institution, such as opportunities for networking, the flexible working policy, and professional and personal development opportunities promoted to staff from the outset?

All staff are assigned an experienced mentor on appointment. The help and support provided extends from providing a personal reflective role to formal help in delivery of tasks and, if necessary, a level of mediating with the department senior management Committee. We pride ourselves on the very personal nature of this internal mentoring and development scheme. Female staff appointments all have a choice between female and male mentors and this is a critical factor in helping women to fit in fast and to be made aware of College as well as Departmental opportunities and practices. We make good use of College-wide training and development opportunities. A crucial feature is being able to approach and consult role models and we believe our senior female academic staff members are extremely good examples. (130)

(iii) Support for female students – describe the support (formal and informal) provided for female students to enable them to make the transition to a sustainable academic career, particularly from postgraduate to researcher, such as mentoring, seminars and pastoral support and the right to request a female personal tutor. Comment on whether these activities are run by female staff and how this work is formally recognised by the department.
Locating good academic staff is in everyone’s interests and the Department has a very active policy of identifying the best women suited for academic careers. We use strong role models of successful females to help convince women of the relevance of an academic career and of the progressive and supportive Departmental environment. We work hard with our strongest female researchers to demonstrate how an academic career can provide excellent and stimulating challenges. We do this in an informal way by engineering really close integration of our staff and students. We make opportunities for career progression and recognition a key part of the postgraduate development. These are formally noted and discussed during the researcher’s yearly appraisal with the HoD. Notable successes have been in the very high proportion of women winning prizes for their international-level presentations and for the recognition they receive. The HoD is responsible for the identification and recognition of postgraduate students who are set on and/or suited for an academic career and he strongly supports those individuals. Postgraduate students may also ask for advice to the postgraduate tutor and to their supervisor/advisor. Although a formal mentoring scheme exist, this is not specific academic career aspirations and we decided to focus on this in the future (A4.2-S). The department is happy to support the provision and assignment of a female tutor but in our experience students never formally asked specifically for female support and were satisfied with the departmental support system (either female/male). At a lower level, but not less important, is our effort to support undergraduate students and help them decide whether they are interested in pursuing doctoral studies. The department has applied every year to the Vacation Bursary Scheme run by the Engineering Faculty and funded by EPSRC, promoting the best students for a summer 10-weeks research period in their preferred area of research within the department. We realized we do not formally monitor gender information on these activities (A3.3-L) but our data for the past 2 years shows that three applications were made and all were won by female students. (334)
6. Organisation and culture

a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(i) **Male and female representation on committees** – provide a breakdown by committee and explain any differences between male and female representation. Explain how potential members are identified.

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<th>Departmental</th>
<th>Number of male members</th>
<th>Number of female members</th>
</tr>
</thead>
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<td>Finance Committee</td>
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<td>0</td>
</tr>
<tr>
<td>Senior Management Team</td>
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<tr>
<td>Faculty UG Teaching Sub-committee</td>
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</tr>
<tr>
<td>Faculty PG Teaching Sub-committee</td>
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<tr>
<td>Faculty Board</td>
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<tr>
<td>Faculty Admissions</td>
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<tr>
<td>Faculty Research</td>
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<tr>
<td><strong>UCL</strong></td>
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<tr>
<td>Promotions Committee</td>
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</tr>
<tr>
<td>Academic Board</td>
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</tr>
</tbody>
</table>

Table 1.

Table 1 shows a list of the main committees at Departmental, Faculty and College level and the female/male representation. Two women members of staff have been selected to represent the Department on important Faculty level committees but an otherwise male-predominant representation can be observed. The Department is committed to increase women representation on high level committees (O7, A7.1-M and A7.2-S). In addition, we have noted that there is lack of representation from our strong female RA cohort on committees. This will be addressed to allow researchers with aspirations of academic career to see the workings of a department first hand. (98)

(ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts** – comment on any differences between male and female staff representation on fixed-term contracts and say what is being done to address them.

**Research Associate staff.** All staff currently appointed as Research Associate (female and male) are all on fixed term contracts.

**Academic staff.** During the period 2006-2010 there was one male professor appointed on a fixed term contract (he has since died). All other academic staff members are on permanent contracts. (49)
b) For each of the areas below, explain what the key issues are in the
department, what steps have been taken to address any imbalances,
what success/impact has been achieved so far and what additional
steps may be needed.

(i) **Representation on decision-making committees** – comment on
evidence of gender equality in the mechanism for selecting
representatives. What evidence is there that women are encouraged to
sit on a range of influential committees inside and outside the
department? How is the issue of ‘committee overload’ addressed
where there are small numbers of female staff?

The Department follows a policy of fairness and gender balance base not only
on the **expertise** but also on the **personal aspiration** of the staff. Two of the
key Departmental committees (Teaching and Recruitment) are chaired by
women in a deliberate move to ensure a female overview of these activities
which are vital to the Department long-term. These appointments have proven
highly effective. For all other committees a review of chair roles is made by
the HoD in line with a succession plan for each individual and designed to
help realise rapid advancement of each individual as experience and track
record permits. *(102)*

(ii) **Workload model** – describe the systems in place to ensure that
workload allocations, including pastoral and administrative
responsibilities (including the responsibility for work on women and
science) are taken into account at appraisal and in promotion criteria.
Comment on the rotation of responsibilities e.g. responsibilities with a
heavy workload and those that are seen as good for an individual’s
career.

The Departmental allocation of responsibilities, duties and loads has been
praised by Faculty managers for its transparency and for its fairness. All staff,
irrespective of grade, are expected to deliver across all functions. This is
crucial for promotion and UCL policy requires performance to be
demonstrated in all aspects. At departmental level a formal record of major
responsibilities for teaching, research, administrative and management
activities is used to monitor individual loads and to plan for changes as staff
assume more demanding roles and as more junior staff join. During the
appraisal process staff are encouraged to comment on the current workload
and openly discuss any change in circumstances that might require a revision
of such responsibilities. *(116)*

(iii) **Timing of departmental meetings and social gatherings** – provide
evidence of consideration for those with family responsibilities, for
example what the department considers to be core hours and whether
there is a more flexible system in place.

It is departmental policy that meetings are scheduled between 10am and
4pm. We asked staff if they wanted these to take place on different days, but
the preference was for consistency so that people knew when meetings would
take place. All meetings are now programmed into an online departmental calendar so that staff know well in advance when such meetings occur and can, if possible, make arrangements to attend or ask for a change in time/date depending on other staff availability. Where possible, teleconference facilities can be arranged so that someone unable to attend a meeting can contribute. The Department holds regular and very popular social gatherings which are family friendly (we try to make it convenient for people with childcare responsibilities to attend). *(124)*

(iv) **Culture** – demonstrate how the department is female-friendly and inclusive. ‘Culture’ refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff and students.

The Department is proud of the mix of staff and in the seniority and respect in which its women staff are held. The professional and personal development of the female members of academic staff is a major element of the Departmental mission. We believe that we have created a friendly working environment and one in which the impact from women is valued fully and equitably.

As an example, all female staff members are research active with our research having been ranked as international standard in the last RAE exercise. They are encouraged to work from home to prepare for research bids and writing up scientific publications if they so desire. The department has provided financial support for lightweight laptops, camera and microphone equipment, etc to allow staff to work from home when in need of quiet time (as during bids preparation) or when this helps with handling childcare responsibilities.

The Department is also proud of its frequent social activities for staff and students. Every year we organize two Team Briefing events when the HoD presents the latest news, successes, leavers and new recruit. These might include a won research bid for example, renovation works recently started or the newborn of the Departmental Administrator. All staff and students usually participate to the event, where prizes and certificate are also handed out. A drinks reception, organized by the Department, follows. The HoD has also encouraged the formation of two UG and PG Societies that organize a number of Departmental events every year. We do have our annual Summer Barbecue in July (in the nearby Tavistock Square Gardens), a Pub Quiz in collaboration with Chemical Engineering students, a number of sports events and the successful Christmas Party (usually at the Hilton near Euston). Staff at all levels, postgraduate and undergraduate students participate actively to these events and activities. *(305)*

(v) **Outreach activities** – comment on the level of participation by female and male staff in outreach activities with schools and colleges and other centres. Describe who the programmes are aimed at, and how this activity is formally recognised as part of the workload model and in appraisal and promotion processes.
The department operates a number of outreach activities to schools and programmes aimed at diffusing knowledge of the discipline and finding enthusiastic students. As an example every year we run a Head-Start programme, designed and organised by one of our female academic staff, and the uptake by female students has been high (around 60%). The department also participates at the Faculty of Engineering “Women in Engineering Day” where approximately 100 female prospective students come to UCL for a day and are given talks and laboratory tours. This was an incredibly successful day last year (July 2010) and we, as a department, had an excellent feedback from the young girls who visited. We also actively participate to the Nuffield Scheme providing Science Bursaries for students in schools and colleges. We usually provide around 8 short science projects for these students who spend a few weeks in our laboratories during summer. Although the Scheme is not aimed at female students in particular we think it is an excellent opportunity for them to approach the discipline. We have not monitored the gender balance on these activities but we plan to put a system in place (A1.3-L). (193)

7. Flexibility and managing career breaks

   a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

   (i) **Maternity return rate** – comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

   The Department’s maternity return rate is 100% since the department was founded in 1996. We are proud of this and we are determined to maintain and improve our open, friendly culture, especially as far as maternity leave policy of our staff is concerned. (43)

   (ii) **Paternity, adoption and parental leave uptake** – comment on the uptake of paternity leave by grade and parental and adoption leave by gender and grade. Has this improved or deteriorated and what plans are there to improve further.

   While parental and adoption leave has not been applicable so far, paternity leave has been taken in all 4 paternity cases over the last 5 years. The leave was applied for staff at grades from Lecturer to Reader. (38)

   (iii) **Numbers of applications and success rates for flexible working by gender and grade** – comment on any disparities. Where the number of women in the department is small applicants may wish to comment on specific examples.
In the past 5 years all academic staff with young children (4 male, 1 female) have applied for and obtained flexible working. 50% of the academic staff members have children under 5 and working from home is fully supported. The Departmental policy on this matter is one of achieving quality of output not quantity of time served at the desk and strongly support flexible working hours. (66)

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Flexible working** – comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.

The HoD recognises the paramount need to achieve flexible work practices and to maintain a healthy work-life balance. The Departmental policy is to support work patterns and practices that meet the individual's needs. The HoD uses regular informal and formal one-to-one staff meetings to promote this policy. Flexible working hours for staff with young children is the norm in the Department rather than the exception and our female staff member are not required to fill in paperwork any time they feel the need for extra flexibility. It is noteworthy that both the HoD and his deputy themselves take advantage of this policy frequently due to their parental responsibilities. (108)

(ii) **Cover for maternity and adoption leave and support on return** – explain what the department does, beyond the university maternity policy package, to support female staff before they go on maternity leave, arrangements for covering work during absence, and to help them achieve a suitable work-life balance on their return.

UCL’s Gender Equality Scheme provides one term of sabbatical leave without teaching commitments for research active staff returning from maternity in order to quickly re-establish their research activity. The Head of Department supports female academics who want to take advantage of this policy as well as of “Keeping in touch days” (up to 10 days during the period of maternity leave when staff members can catch up with work if they wish to do so). It is Departmental policy to encourage and to enable female staff members returning to work to adopt flexible working hours. Provision of departmentally supported home IT facilities is one departmental initiative.

While going through the SWAN process and looking at College and department current maternity leave policy we came across a few issues affecting postdoctoral researchers on a fixed-term contract in cases where their stipend is paid by an external institution (council or industrial sponsor). In such cases a postdoctoral researcher can take a maternity leave period according to UCL policy and benefit for Occupational and Statutory Maternity
Pay similar to all other staff. However the maternity leave period will be deducted from the agreed contract length and the researcher will benefit from a lower number of months on the project. We think this is unfair and we plan to look into this issue in more detail (A8.1-L). (223)

(Total number of words Section 4-7 = 2978)

8. Any other comments – maximum 500 words

Please comment here on any other elements which are relevant to the application, e.g. other SET-specific initiatives of special interest that have not been covered in the previous sections. Include any other relevant data (e.g. results from staff surveys), provide a commentary on it and indicate how it is planned to address any gender disparities identified.

We were the first department in the Faculty of Engineering Science to spearhead a two day (WISE) programme departments to promote engineering across several disciplines amongst 15 year old girls considering higher education options 20 years on. The programme is now core to the Faculty outreach.

The SAT members were really enthusiastic at the start of this process in 2009 and have enjoyed working together on this at the self-assessment meetings. We feel our knowledge of the department has significantly increased and we are eager to drive forward the many creative initiatives stemming from the SWAN process. (97)

9. Action plan

Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.

The Action Plan should be a table or a spreadsheet comprising actions to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The Plan should cover current initiatives and your aspirations for the next three years.

The action plan does not need to cover all areas at Bronze; however the expectation is that the department will have the organisational structure to move forward, including collecting the necessary data.

For Silver Department awards only

10. Case study: impacting on individuals – maximum 1000 words

Describe how the department’s SWAN activities have benefitted two individuals working in the department. One of these case studies should be a member of the self assessment team, the other someone else in the department. More information on case studies is available in the guidance.
Dr. Suzanne Farid is an excellent role model for how SWAN-related activities can deliver. She was recruited to UCL following a visit to a girls-only school where a talented sub-group of women were studying the right ‘A’ level choices for the discipline. During her undergraduate course we identified her potential and used our connections to ensure periods of industrial experience which proved crucial in awakening a desire for research. Hence the second transition point was moved through with ease. As a PhD she worked alongside postdoctoral women and a company where key senior posts were run by women. An academic career was mooted initially mid-way through the PhD and a grant created with her input. At the end of the doctorate a seamless transition was achieved. As a young academic the Department created links for her to enable rapid growth of academic and industrial partnerships. This was facilitated by a senior member of staff who invited potential collaborators in the Department and introduced Dr Farid, her background and research expertise. Promotion was sought early as we could see that her track record, supported by senior staff mentoring and attention to career planning, would support this accelerating progression. Recently we have fast tracked her for Readership and for Fellowship (FIChemE). She will have progressed 50% faster than the departmental average due to this close support and attention to planning for key career transition points.

Dr Martina Micheletti was appointed as a Lecturer in 2007 following a three years postdoctoral position in the Department. As soon as Martina joined as a researcher she was assigned a senior academic staff mentor who realized her potential and encouraged her ambitions to pursue an academic career. Following her mentor’s advice, Martina attended several teaching courses as part of the personal development training required by College and she had a chance to further develop her research and teaching skills. She also had a chance to present her work to several international conferences and national seminars, where she started to develop some important academic links with the leading experts in the field. Her successes, self-driven enthusiasm and skills were noted by the HoD and senior staff Management Committee and she was appointed a Lecturer as soon as such position was available from College. During her first three years of probation at UCL Martina made incredible progress and soon became independent in her research, teaching and enabling roles. During her probation period she had her first child and took a period of maternity leave. On her return, she applied and was granted flexible working hours because of her desire to carry on breastfeeding. She was allowed to work from home on up to 3 days a week and this facilitated enormously her transition to being a full time working mother. With the Department’s support Martina applied for the EPSRC First Grant Scheme, which supports early academic to spend a period of intensive research free from other loads. The HoD at her last appraisal recognized this is the area she has to focus on to be able to achieve promotion and he supported Martina’s application by ensuring he is going to re-align her responsibilities. (527)
## Action Plan (3 years from submission)

<table>
<thead>
<tr>
<th>Expected outcome</th>
<th>Issue identified (from data analysis or policies’ review process)</th>
<th>Action</th>
<th>Person(s) responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>O1</strong></td>
<td>Increase the number of female applicants to the UG degrees offered by the department (Aim 50%)</td>
<td>A1.1-S Search for and include girls-only secondary schools in our current recruitment system (invitation for departmental visits and inclusion in departmental yearly mail shot)</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A1.2-M Advertise the degree to female applicants by including quotes from graduating female students in our UG Biochemical Engineering leaflet, in particular quotes from graduates on less popular programmes and use positive images of a diversity of engineers.</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A1.3-S Monitor gender balance in Nuffield Science Scheme</td>
<td></td>
</tr>
<tr>
<td><strong>O2</strong></td>
<td>Maintain current number of female students acceptances</td>
<td>A2.1-L Create, update and monitor a departmental database of UG data including info on applications, offers, acceptances and intake divided by gender, student group (OS, UK, EU) and A-levels or equivalent classification on entry</td>
<td>Recruitment team/UG Administrator</td>
</tr>
<tr>
<td></td>
<td>Lack of data on gender, entry level and student group of acceptances</td>
<td>A2.2-S Ensure female representation at UG, PG and staff level to act as ambassadors at UCAS interviews, during Q&amp;A sessions, tours and department open days.</td>
<td></td>
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<tr>
<td><strong>O3</strong></td>
<td>Increase transition of female students into PG degrees (key career transition point 1)</td>
<td>A3.1-M Create a departmental database of destination statistics of our UG, PG and postdoctoral students</td>
<td>Departmental Administrator</td>
</tr>
<tr>
<td></td>
<td>Lack of information on retention numbers and destination</td>
<td>A3.2-L Develop a survey for final year undergraduates and MSc students to identify their interests, aspiration, perception of a future academic career, suitable characteristics of their ideal postgraduate degree. (Potential mechanisms identified: via email using web-based survey tool Opinio or by hard copies distribution on Exam Board Day)</td>
<td>Departmental Undergraduate Tutor</td>
</tr>
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<td></td>
<td>Low number of female applications to EngD programme in comparison to PhD</td>
<td>A3.3-M Ensure equal split (F/M) in internal departmental selection of candidates for research bursaries applications (e.g. EPSRC Vacation Bursary Scheme)</td>
<td>Taken.</td>
</tr>
<tr>
<td>O4</td>
<td>Increase our retention of PG female into Lecturer positions (key career transition point 2)</td>
<td>A4.1-S</td>
<td>Raise awareness of opportunities like workshops organized by UCL’s Gender Equality Scheme and UKRC Initiatives via PG Induction talks, departmental team briefing and research seminars.</td>
</tr>
<tr>
<td>O4</td>
<td>Increase our retention of PG female into Lecturer positions (key career transition point 2)</td>
<td>A4.2-L</td>
<td>Develop an academic-career focused mentoring scheme for motivated and skilled female graduates during their postgraduate studies or postdoctoral post. Opportunities such as becoming teaching assistants as well as tailoring their Roberts points training can be discussed on a one to one basis with the Departmental Graduate Tutor. New scheme will be presented and advertised to our students during our Induction Program in Sept 2012.</td>
</tr>
<tr>
<td>O4</td>
<td>Increase our retention of PG female into Lecturer positions (key career transition point 2)</td>
<td>A4.3-L</td>
<td>Ensure academic staff maternity cover posts are offered to current female post-doctoral researchers.</td>
</tr>
<tr>
<td>O5</td>
<td>Increase number of female applicants to staff positions</td>
<td>A5.1-S</td>
<td>Development of departmental database with information on job advertisement, applications, offers and acceptances including gender split, interview panel composition.</td>
</tr>
<tr>
<td>O5</td>
<td>Increase number of female applicants to staff positions</td>
<td>A5.2-S</td>
<td>Develop a transparent formal mechanism to establish gender balance of each interview panel.</td>
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<tr>
<td>O5</td>
<td>Increase number of female applicants to staff positions</td>
<td>A5.3-M</td>
<td>Establish focus group on advert writing</td>
</tr>
<tr>
<td>O6</td>
<td>Support female staff member to develop well-suited international presence</td>
<td>A6.1-S</td>
<td>Raise awareness of the importance of international participation in promotion cases. Work to identify suitable cover and any other support for women wishing to make international trips.</td>
</tr>
<tr>
<td>O7</td>
<td>Increase women representation at high level</td>
<td>A7.1-M</td>
<td>Ensure departmental participation in UCL Women in Leadership and Management project, led by Prof Atkinson, aiming at increasing the number of women with the skills and experience necessary to apply for a</td>
</tr>
<tr>
<td>O8</td>
<td>Ensure maternity leave and support at career breaks</td>
<td>Lack of clarity on maternity leave policy for postdoctoral researchers funded by external sources</td>
<td>A8.1-L</td>
</tr>
<tr>
<td>O9</td>
<td>Ensure transparency and fairness of operation in academic progression (<strong>key career transition point 3</strong>)</td>
<td></td>
<td>A9.1-M</td>
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<tr>
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<td></td>
<td>A9.2-L</td>
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**Key**

O Outcome
A Action
S Short term action, to be completed 6-9 months from SWAN application submission
M Medium term action, to be completed 12-18 months from SWAN application submission
L Long term action, to be completed 24-36 months from SWAN application submission

Example: A7.1-S = first action related to outcome 7, short term action