



## Augmented Annual Monitoring Report (May 2009)

### Undergraduate programmes in Computer Science:

**BSc Computer Science**

**MEng (MSci) Computer Science**

**MEng (MSci) Computer Science (International Programme)**

Director of Studies	Dr Graham Roberts
Programme Specification (link)	<a href="http://www.cs.ucl.ac.uk/documents/bsc_msci_meng_computerscience_progspec_08.pdf">http://www.cs.ucl.ac.uk/documents/bsc_msci_meng_computerscience_progspec_08.pdf</a> (BSc, MSci and MEng Computer Science)  <a href="http://www.cs.ucl.ac.uk/documents/msci_meng_internationalprogramme_progspec_08.pdf">http://www.cs.ucl.ac.uk/documents/msci_meng_internationalprogramme_progspec_08.pdf</a> (MSci/MEng Computer Science International Programme)
Programme information (link)	<a href="http://www.cs.ucl.ac.uk/students.html">http://www.cs.ucl.ac.uk/students.html</a>
Annual Monitoring reports (link)	<a href="http://www.cs.ucl.ac.uk/Qualityassuranceandannualmonitoring.htm">http://www.cs.ucl.ac.uk/Qualityassuranceandannualmonitoring.htm</a>
External Examiners reports (link)	<a href="http://www.cs.ucl.ac.uk/teaching/ug/sscc/EEReports_0708.htm">http://www.cs.ucl.ac.uk/teaching/ug/sscc/EEReports_0708.htm</a>
Chairs of Boards of Examiners reports (link)	<a href="http://www.cs.ucl.ac.uk/teaching/ug/sscc/EEReports_0708.htm">http://www.cs.ucl.ac.uk/teaching/ug/sscc/EEReports_0708.htm</a>

This report covers the period 2006/07 – 2007/08 and should be read in conjunction with the 06/07 report at [http://www.cs.ucl.ac.uk/documents/Annual\\_Monitoring\\_Undergraduate\\_0607.pdf](http://www.cs.ucl.ac.uk/documents/Annual_Monitoring_Undergraduate_0607.pdf)

## **1. Programme structures. Any changes made to the programme and reasons for these changes.**

The programmes have now been running successfully for a number of years in their current form. The overall programme structures have not changed significantly during the period in question, though modules have undergone updating in line with technical advances and to take advantage of staff expertise. This has allowed the teaching to be delivered in a reliable and consistent way, while maintaining good quality and avoiding the content getting stale. The programmes have been monitored and reviewed via various mechanisms, such as exam results and student feedback forms, and regular reports and discussions at the Teaching Committee. Over the last two years these processes have been used to move forward several major developments that will take place over the next few years (see section 7).

The last cohorts of students registered on our MSci programmes have now graduated. All students taking 4-year undergraduate programmes in Computer Science now graduate with the MEng award. This qualification is more appropriate for the curriculum offered, is consistent with the other departments in the Engineering Sciences Faculty, and also better understood in the UK and abroad.

Staff have been encouraged to continually update the modules they teach, to try new teaching methods and to incorporate advances in the subject area. Syllabus and assessment updates have been made through the required departmental, Faculty and Registry processes. The general assessment trend has been to reduce the value of coursework as a proportion of a modules overall mark in favour of an increased exam component. This has been found as the best way of balancing fair and accurate assessment with providing timely feedback and a reasonable marking load.

The Moodle system is now being used for around twenty modules and increasing use is being made of online coursework submission.

Where appropriate new modules have been introduced. A sample of those introduced during 2006/7 and 2007/08 includes:

COMP2003 Mathematics and Statistics, which replaced a module taught by Mathematics MATHB046 as the latter was felt not to meet our students' needs (from 2006/07)

COMPM061 People and Security, COMPM053 Medical Scientific Computing, COMPM078 Optimisation, COMPM056 Graphical Models. These are good examples of the department being able to extend the breadth of taught material available to our 4<sup>th</sup> year MSci/MEng students, building on the research expertise of staff.

Changes to regulations:

The programmes now operate under the college's harmonised degree regulations and very closely follow the harmonised scheme of award for the Faculty of Engineering Sciences. Capping of resit marks was abandoned as soon as use of the harmonised scheme began. Local rules are kept to a minimum but we have removed the requirement for students to obtain at least 40% in coursework. This reduced unnecessary complexity in our assessment processes. The pass mark for all 4<sup>th</sup> year M-level modules is now 50%.

Further changes will take effect from 2009/10 and these are detailed in section 7.

## **2. Achievement of aims and learning outcomes.**

The programmes are felt to be meeting their stated aims and learning outcomes, as detailed in the Programme Specification at

[http://www.cs.ucl.ac.uk/documents/bsc\\_msci\\_meng\\_computerscience\\_progspec\\_08.pdf](http://www.cs.ucl.ac.uk/documents/bsc_msci_meng_computerscience_progspec_08.pdf)

and

[http://www.cs.ucl.ac.uk/documents/msci\\_meng\\_internationalprogramme\\_progspec\\_08.pdf](http://www.cs.ucl.ac.uk/documents/msci_meng_internationalprogramme_progspec_08.pdf)

### **3. External examiner comments and actions taken**

Our External Examiners are very supportive and enthusiastic about the programmes. Their comments have been taken on board, and items actioned where necessary.

The department has been using the Portico system since its introduction. The external examiners have noted that this has led to the loss of some information at the exam board meetings, in particular in the analysis of module results and presentation of statistics. As experience with Portico has increased the admin team have been able to implement improved reporting mechanisms that have addressed most of these issues, and this is an ongoing process.

The externals have made various comments and recommendations on rules and guidelines for handling borderline results and ensuring that borderline students are dealt with consistently and fairly. These have been reviewed and discussed by the teaching committee, with action taken each year to address the comments. One important consequence of this is that results are now presented anonymously at the main exam board meeting. In addition, clear and straightforward decision making processes for borderline cases are now used.

Improvements have been made to the final year individual project marking process, via an improved marksheet and continued use of the project reading (moderation) meetings.

The externals have noted that there are issues with the combination of subjects delivered in the 2<sup>nd</sup> year module COMP2011 Networks, Database and Graphics. The 2<sup>nd</sup> year curriculum will be a particular focus in the future evolution of the programmes (see section 7).

### **4. Admissions and student demand for the programme**

Undergraduate student numbers have remained reasonably constant, despite fluctuations in volumes of applications. Applications for our undergraduate programmes have gone from a high of 1600 for entry in 2001 to a low of just under 500 in 2004. Applicant numbers are currently hovering around the 600 mark. Given these unpredictable circumstances, we owe a great deal to the departmental, Faculty and UCL admissions staff for keeping admissions at appropriate levels.

As reported in our 06/07 Annual Monitoring Report, the department has paid particular attention to recruitment and publicity initiatives to showcase what we offer and make sure our candidates get the best possible service during the applications process (see [http://www.cs.ucl.ac.uk/documents/computerscience\\_annualmonitoringform\\_public.pdf](http://www.cs.ucl.ac.uk/documents/computerscience_annualmonitoringform_public.pdf))

The department is very aware of the gender imbalance at undergraduate level. By way of example, the 2007/08 intake of 68 comprised just 8 females. This is a situation we have always been aware of and try to address it with initiatives such as visits to girls' schools and so on. However the fact remains that the proportion of females taking Mathematics at A-level is low, and we as a department depend on candidates with this qualification.

### **5. Student feedback and action taken**

The department solicits student feedback in a number of ways, including web-based course questionnaires, end-of-programme questionnaires, the Departmental Staff-Student Consultative Committee, student representatives elected to departmental committees, end-of-year Wrap-up meetings with each undergraduate year group, and via direct contact with staff.

We recognise that our on-line questionnaire process needs to be reviewed as the response rate is low and the overall benefits are therefore diminished.

The great majority of student criticisms and suggestions are handled in a timely manner, either by direct action taken by a member of staff or via the teaching committee. However, timely marking and return of student work has been identified as an area needing particular attention, and this is being given priority.

## 6. Student progression, completion and employment

Student progression and completion rates are judged overall to be entirely satisfactory.

The department demands high standards. Proportions of 1<sup>st</sup> class degrees awarded at undergraduate level, for example, have remained roughly the same for many years. Ironically this affects the department's position in league tables (value-added) so is perhaps a matter for future discussion. It should be noted that it is increasingly the case that first class quality students are completing the MEng programme rather than the BSc, and are able to transfer to the MEng up to the start of their 3<sup>rd</sup> year if they start on the BSc programme. This means that the number of 1<sup>st</sup> class degrees on the BSc looks low but when the MEng cohort is added in, the number of firsts remains very healthy.

Detailed statistics on employment are not currently available for all programmes, however it is felt that our students are in a strong position in the graduate job market. We feel that the departmental careers support we provide for students is also strong. This support includes comprehensive on-line resources at <http://www.cs.ucl.ac.uk/careers.html>

## 7. Future developments

Over the past two years we have identified three issues with the current programmes that we intend to address over the next two years. The first and most important issue is that the research success of the department has led to significant growth in areas including Machine Learning, Bioinformatics and Information Security. All of these require very strong theoretical and mathematical skills and the current programmes while strong in many areas, in particular design and software engineering, are not preparing students to study the more highly mathematical subjects, notably at the post-graduate level. As a result a new undergraduate MEng programme, with the provisional title of Mathematical Computation, has been developed and is due to recruit its first students for the 2010/11 session.

The second issue is the structure and content of the first two years of the existing programmes, especially the second year. The breadth of the general Computer Science subject area and limited space in the curriculum requires some difficult choices in what subjects to include. This has resulted in several modules, including COMP2011 noted earlier, being formed of a combination of subjects. It has been decided to completely review the first two years of the current programme to address this and take the opportunity to restructure the programmes to be fully fit for the next 5-10 years or more.

The third issue is to involve undergraduates more in the research activities of the department, in particular to respond to the success in the recent RAE. Proposals for new research-oriented modules are being discussed and students will be further encouraged and supported to do research-oriented projects (as some MEng students are already doing).

We continue to put on interesting new modules for our undergraduates. In some cases these are additional 4<sup>th</sup> year options created in conjunction with teaching on our masters level programmes. In other cases they arise from collaborations with other HEIs.

From 2009/10, Goldsmiths will be making two modules available as options to our 2nd/ 3<sup>rd</sup> years: Games & Interactive Entertainment Industries (Year 2 or 3), and Advanced Programming in Computer Games and Entertainment (Yr 3, students must have good programming skills).

The main structural change on the horizon is the end of pre-Easter examinations for 4<sup>th</sup> year modules. This change should help the department comply more easily with the Common Timetable requirements.

## 8. Professional accreditation

The BSc, MSc and MEng Computer Science programmes are accredited by the British Computer Society (BCS) and the Institution of Engineering and Technology. The most recent visit took place in February 2006. Intakes up to and including the 2010 intake. The date of the next BCS/IET visit is therefore to be arranged during 2010.

The MSci/MEng Computer Science (International Programme) was not put forward for accreditation.

## 9. Statistical data and comments

Statistics from UCL Registry's Student Data Services has been used in the preparation of this report.

