

Departmental Programmes of Teaching, Learning and Assessment (DPTLA)

Review of Department of Mathematics: Thursday 12 and Friday 13 February 2009

Report Summary

The following is a brief summary of the full report of the review carried out in the Department of Mathematics. Reviews of *Departmental Programmes of Teaching, Learning and Assessment* (DPTLA) are internal subject reviews focused on the quality of provision as experienced by students. The review looks at the range of programmes, course content, the teaching methods employed, assessment, facilities and much more.

The full report of the review is available publicly at:

http://www.gla.ac.uk/media/media_126508_en.pdf

Further information about the *DPTLA* process can be found at:

<http://www.gla.ac.uk/services/senateoffice/qae/dptla/>

Italicised words are explained in a glossary below.

Conclusions

The Review Panel commends the Department on the overall scope and quality of its provision, and for its conscientious approach to student support and its efforts to encourage students in their enjoyment of mathematics and to improve retention of students in their early years. Despite the number of recommendations, the Panel was impressed with the level of commitment displayed by staff and students.

Key Strengths

- Provision of high quality teaching at all levels, by staff who are committed to their students and enthusiastic in their teaching
- Alignment of departmental research interests with undergraduate teaching
- Excellent support initiatives for students aimed at enhancing the students' learning experience and encouraging retention of students less well prepared to study mathematics
- Highly motivated, supportive *Graduate Teaching Assistants* (GTAs) willing to contribute expertise and enthusiasm to the Department
- The 6-day turn-around period on homework for First Year students
- On-line examination preparation system
- Dedicated accommodation in respect of the departmental library, study space and common room
- Shadowing of senior staff by more junior staff

Areas to be improved or enhanced¹

1. Aims and Intended Learning Outcomes

- a) Make individual programme *aims* and *Intended Learning Outcomes* (ILOs) more explicit in demonstrating progression to enable students to make informed choices of degree programmes. [Paragraphs 4.1 and 4.2]

2. Design, Development and Content

- a) Undertake an overview survey of the department's entire provision of courses and programmes with a view to streamlining and where possible reducing the number, in order to target resources and reduce staff workload, especially at Levels 1 and 4. The third year non-honours courses should also be critically reviewed. In addition, a rolling timetable for regular and systematic course and programme review should be established. [Paragraph 4.4.1]
- b) Monitor student demand and close consistently unpopular Level 3 and 4 courses. [Paragraph 4.4.2]

3. Assessment, Feedback and Achievement

- a) The Department to:
 - Fully adopt the *Code of Assessment* for non-numerical forms of assessment;
 - Give explicit information to students and staff about the University *Code of Assessment* and the departmental marking and scaling system;
 - Make clear to students and staff the method of assessment to be applied to each piece of assessed work. [Paragraph 4.3.2]
- b) Continue to investigate possible alternatives for the assessment of student learning, particularly in tutorial, seminar and project activities, allowing for *formative* as well as *summative* scrutiny of and feedback on student ability, including *Transferable Generic Skills*, in the belief that the benefits of such enhancements to the student learning experience will offset the additional burden on staff. [Paragraph 4.3.1]

4. Student Progression, Retention and Support

- a) Revert to small group tutorials at Levels 1 and 2 (as per Level 3 and 4 tutorials), with one tutor per group per semester in Session 2009-10. [Paragraph 4.6.9]
- b) Make renewed efforts to make new students aware of the necessary set of study skills that require to be developed during the transition from school to university and that these can only be achieved if disciplined daily study habits are developed early on. [Paragraph 4.6.2]

¹ Numbers refer to the paragraphs in the full report that contain the relevant discussion.

- c) Thoroughly review and revise all departmental information and instructional literature and web-based materials for student and staff use (especially Advisers) to ensure clarity and user-friendliness, especially in respect of course choice and career pathways. [*Paragraph 4.8.10*]
- d) Review the present uptake by students of open office hours and other advisory and support mechanisms with a view to streamlining the opportunities for students to consult staff in order to maximise potential benefit to students and economy of staff time. [*Paragraph 4.6.8*]
- e) Engage more closely with the Faculty development of *Employability* and *Personal Development Planning* (PDP) initiatives and that relevant information is given to students together with departmental endorsement of the importance of *Employability* and *PDP*. [*Paragraph 6.2*]
- f) Liaise with *Recruitment, Admissions and Participation Service* (RAPS) and the Faculty to accurately monitor figures for the recruitment, admission and *retention* of students within the Department, particularly in respect of their mathematical ability on entry and subsequent performance at Levels 1 and 2. This will assist in more meaningfully assessing the success of the support initiatives developed by the Department (*MathsBase* and *PAL*) and also the University-wide initiative (*NUMBER*). [*Paragraph 4.6.4*]
- g) Establish guidelines for the Level 4 project, with recommendations about average workload, information on procedure, the role of the supervisor and what level of supervision and feedback may be expected, and that this information be included in the relevant course/programme handbook. [*Paragraph 4.3.4*]

5. Student Recruitment

- a) Appoint academic members of the Department to actively participate in postgraduate student recruitment in cooperation with the *Recruitment, Admissions and Participation Service* (RAPS) and the *International and Postgraduate Service* (IPS), in order to identify viable student markets and foster applicant interest. [*Paragraph 4.4.3*]

6. Resources for Learning and Teaching

Staffing

- a) Achieve continuity of practice by ensuring junior staff shadow experienced colleagues in the areas of administration of learning and teaching and in supervising student support mechanisms. [*Paragraph 4.8.5*]
- b) Demonstrate commitment to probationary staff by their representative inclusion on departmental committees, especially the Learning and Teaching Committee, Information Technology and Research Committees. [*Paragraph 4.8.6*]
- c) Maximise the teaching potential within the Department by providing holders of advanced research fellowships with the opportunity to contribute to the teaching and thereby gain valuable career-building experience. [*Paragraph 4.8.7*]

- d) Monitor lecturing styles through peer review or perhaps videoing in order to provide staff with feedback on their technique and any recommendations for change. [*Paragraph 4.7.1*]
- e) Organise *Moodle* training for staff and that it is increasingly used for administrative communication and for uploading of supporting material for lectures and tutorial classes, with care taken to ensure accuracy of detail. [*Paragraph 4.7.2*]
- f) Offer *GTAs* a staff review with feedback on their teaching performance and more specific feedback from their students. In addition, possibly in conjunction with the Faculty, consider founding a *GTA* forum to assist in their training and development as teachers. [*Paragraph 4.3.6*]

Physical resources

- a) Initiate a more robust system of regular board cleaning and removal of chalk dust to minimise its detrimental effects, and that additional protection of electronic equipment be provided, where the latter is close to frequently used chalk boards. [*Paragraph 4.8.3*]

7. Assuring and Enhancing the Quality of the Student Learning Experience

- a) Engage more fully with the quality enhancement agenda at institutional and national levels for the enhancement of the student experience, including assessment, student support, internationalisation, *employability*, *Personal Development Planning (PDP)* and *Moodle* and at the departmental level, consult with students in order to offer and encourage greater student participation and partnership in learning and teaching management and planning. [*Paragraph 6.4*]
- b) Adopt a more robust approach to the recommendations from the present Review in order to demonstrate objectively how the Department has responded to them and can reflect on how changes and developments have benefited or otherwise influenced the well-being of the Department, its staff and its students. [*Paragraph 6.5*]

Glossary of terms/acronyms used

Aims

Programme or course aims describe what the University/Department aims to provide to students through the delivery of the programme or course overall.

Code of Assessment

The University's Code of Assessment (implemented 2002-03) is designed to provide a fair and rational means of assessing students' performance. It provides instructions to staff on how assessment should be designed and carried out. It sets out verbal descriptions of each of the eight grades from A to H. Students' work is judged against these descriptions in terms of how well they have met the stated intended learning outcomes of the course or other assessed component and the corresponding grade is awarded. A guide to the Code of Assessment for students is available from the Senate Office website.

<http://www.gla.ac.uk/services/senateoffice/academic/assessmentpolicies/codeofassessmentguidance/>

Departmental Programmes of Teaching, Learning and Assessment or DPTLA

The University has a six yearly cycle of review of the departments within it. The DPTLA is one of the main ways by which the University assures itself of the quality of the provision delivered by departments.

Employability

Employability is about more than being able to get a job after University. It is about acknowledging and being able to demonstrate achievements, understanding and personal attributes that will contribute to success both during, and after, University.

Formative assessment

Formative assessment refers to assessed work where feedback is given to help the student improve their learning and their performance. The work may or may not contribute to the student's final grade for the course.

Grade Descriptor

Grade descriptors are verbal descriptions against which a student's work is judged. The marker decides which descriptor matches the work most closely and awards the corresponding grade. University-wide grade descriptors are set out in the *Code of Assessment* but may be customized to apply to a particular subject area or Department.

Graduate Teaching Assistant or GTAs

Graduate Teaching Assistants, Tutors and Laboratory Demonstrators are students, usually research students, who assist with teaching in the form of tutorials, labs and other activities that are part of undergraduate programmes in the department. They are paid an hourly rate by the University.

International and Postgraduate Service

The International and Postgraduate Service provides applicants, parents and teachers with a single point of contact for information and advice on the range of programmes available at the University of Glasgow. Nb The Recruitment, Admissions & Participation Service (RAPS) and IPS were brought together to create one overarching team in December 2008; the Recruitment and International Office (RIO) is situated in the Fraser Building.

Intended Learning Outcomes or ILOs

Intended Learning Outcomes or ILOs describe what all students should be able to do or demonstrate, in terms of particular knowledge and understanding, qualities, skills and other attributes when they successfully complete the course or programme that the ILOs relate to.

MathsBase

MathsBase is a weekly drop-in mathematical support centre which is run on an informal drop-in basis and is staffed by a mixture of senior students, postgraduate students and academics. MathsBase offers assistance on all aspects of the first-year Mathematics programme.

Moodle

Moodle is the University's supported virtual learning environment (VLE).

NUMBER

NUMBER Student Mathematical Support offers advice and support to undergraduate students studying school and first year university syllabuses in numeracy, mathematics and statistics.

Peer Assisted Learning or PAL

PAL is a weekly group meeting for students on a given course, attended voluntarily but officially recommended by the department, and led by a "facilitator" who is a student who has done the course previously. The content discussed may be anything that seems relevant and important to the groups, from administrative details through deeper implications of the course material to study skills and any aspect of how to be a successful student.

Personal Development Planning or PDP

Personal Development Planning or PDP is a way to promote reflection on learning, performance and achievements and to plan for personal, educational and career development. Each Faculty at the University offers different types of PDP activities.

Recruitment and Participation Service or RAPS

The Recruitment, Admissions & Participation Service provides applicants, parents and teachers with information and advice on the range of undergraduate courses available at the University of Glasgow. RAPS also develops, implements, co-ordinates and monitors *widening participation* initiatives within the University and with other partners. Nb The International Postgraduate Service (IPS) and RAPS were brought together to create one overarching team in December 2008; the Recruitment and International Office (RIO) is situated in the Fraser Building.

Summative assessment

Summative assessment refers to assessed work that contributes to the final grade for the course/programme. Summative assessments may include an element of formative assessment.

Transferable Generic Skills

Skills which can be applied in a variety of different contexts: e.g. Communication (oral, written and the ability to summarise); Self-motivation (time management), self-regulation and self-assurance; Team-working; etc.

Widening Access or Widening Participation

The objective of widening participation is to develop, implement, co-ordinate and monitor initiatives which further: the increased recruitment of students to Higher Education from those areas and groups where there is low participation; the provision of educational support for all students once they have entered the University in order to improve student retention and to facilitate the successful completion of students' programmes of study; and the flexible provision of learning opportunities. More information can be found at the Widening Participation at Glasgow website. <http://www.gla.ac.uk/wideningparticipation/>