

Higher Education Chemistry Conference Scottish Subcommittee

Notes of a meeting held at the University of Edinburgh on 13 February 2001.

Present:	Professor R A Pethrick	University of Strathclyde (Convenor)
	Professor C J Gilmore	University of Glasgow
	Professor M D Ingram	University of Aberdeen
	Professor D J Cole-Hamilton	University of St Andrews
	Professor D A Ross	University of Abertay
	Dr J Thomson	University of Dundee
	Dr A Morrison	The Robert Gordon University
	Professor P D Bailey	Heriot-Watt University
	Professor S K Chapman	University of Edinburgh
	Mrs L Steele	RSC
Apologies:	Dr J McDonald	Napier University
	Professor V Vaughan	University of Paisley

1. Changes in RSC Accreditation

Professor Pethrick reminded members that the RSC is planning to implement a new membership structure. This includes the Chartered Chemist designation being awarded separately from membership. In future it is proposed that the Society will recognise degree courses as satisfying the entry requirements for Associate Member (AMRSC) and accredit appropriate courses as satisfying the academic requirements for the award of CChem. New Accreditation criteria have been proposed. These criteria are set at a standard such that it is likely only an enhanced first degree course (e.g. MChem/MSci) in chemistry and/or one which is of longer duration than three academic years of full time study (or the equivalent in other modes) will satisfy the academic requirements for the award of CChem. Other degrees that meet the chemical science requirements for AMRSC would be recognised by virtue of an individual's transcript.

Mrs Steele informed the Subcommittee that the membership changes were due to be implemented from 1 August 2001, provided matters progress smoothly through the Privy Council. She explained how the new membership structure would work and how the CChem designation had been changed. An outline of the changes is attached. The normal route to CChem would require an RSC accredited degree.

There was a wide ranging discussion on the implications of the changes. Concern was expressed regarding how those with non-accredited degrees who went on to do a PhD would be viewed with regard to the academic requirements for CChem. Professor Chapman expressed particular concern about those graduates who had a recognised degree that went on to do a PhD, in what might be classed as an interface area ie proteomics. Mrs Steele explained that in these circumstances the application would be referred to the Applications Committee. She explained that if there was any doubt or concern about the content of chemistry a Professional Interview could be carried out as under the current regime. The Subcommittee felt it was important that appropriate information and guidance should be made available to students and academics. It was agreed that a simple flow chart available on the web might be the best option.

Higher Still

Professor Pethrick explained that he had contacted SQA and had been informed that performance in Chemistry Higher Still was likely to be down on previous years but not by a significant amount. However, it is likely that mathematics will be down on previous years by slightly more.

Professor Cole-Hamilton asked for clarification on whether this showed poorer performance or a poorer grading scheme. Professor Pethrick explained that due to the problems experienced at SQA in 2000 it was difficult to be sure of this as some coursework had been lost or not recorded properly. Therefore the coursework and the exam results did not always correlate. He also reiterated that students were now able to achieve a grade C with coursework and one examination. Dr J Thomson raised concerns over the level and quality of mathematics in school. He raised the possibility of having mathematics for chemistry as a subset of the mathematics curriculum and urged the RSC to lobby on this issue. Following a wide-ranging discussion on this issue it was agreed that although desirable, time constraints would probably prevent mathematics for scientists being incorporated. The RSC were urged to discuss this with the appropriate bodies as it was a serious concern within the HE sector.

EPSRC Postgraduate Students

Professor Chapman raised concerns over the introduction of the new EPSRC funding regime for postgraduate students. His university had recently received the proposed allocation of budgets for EPSRC students which showed that subjects such as architecture had an allocation of £761. There was concern that this type of allocation may result in the funding being wasted on travel or other such areas. Professor Chapman explained that over 49% of a students funding needs to be from EPSRC before they can be called an EPSRC student.

EPSRC have set a minimum stipend of £7800. There was widespread concern about the possibility of a bidding war on stipends. The general view was that within two years the stipend was likely to be £9000.

Professor Chapman explained that a training audit was likely to become normal practice and that the RSC Postgraduate Skills Record may be a way of showing that training had been undertaken. Professor Chapman advised colleagues to check EPSRC allocation of funding as they had found discrepancies and they challenged EPSRC this had resulted in the funding being revised..

It was agreed that although the new funding regime would allow flexibility it would inevitably require more administration from the university. The universities need to be aware of implications on the RAE if it opted for fewer students with higher funding per student. Professor Bailey on behalf of Heriot-Watt asked whether it would be possible to set an average stipend to prevent any bidding war. It was agreed that this would probably not be feasible.

Funding Regime

Professor Cole-Hamilton raised the issue of the new SHEFC funding regime. He explained that although it showed chemistry as having a 4.5% increase this actually resulted in a cut of £20 per student per annum. The perception is an increase but the reality is a decrease and this is causing a problem within departments due to academics and technical staff assuming an increase. SHEFC may withdraw this paper and members were encouraged to write to SHEFC with their concerns. It was agreed that Professor Pethrick would draft a letter to SHEFC which would be circulated to colleagues for comment and then universities to sign before submission to SHEFC. To aid the drafting members were asked to send bullet points of issues to be raised to Professor Pethrick by email as soon as possible.

Equipment Redistribution

Mrs Steele informed the subcommittee that the RSC had received information from a university asking about equipment redistribution between universities. It was agreed that an area on the RSC website should be investigated.

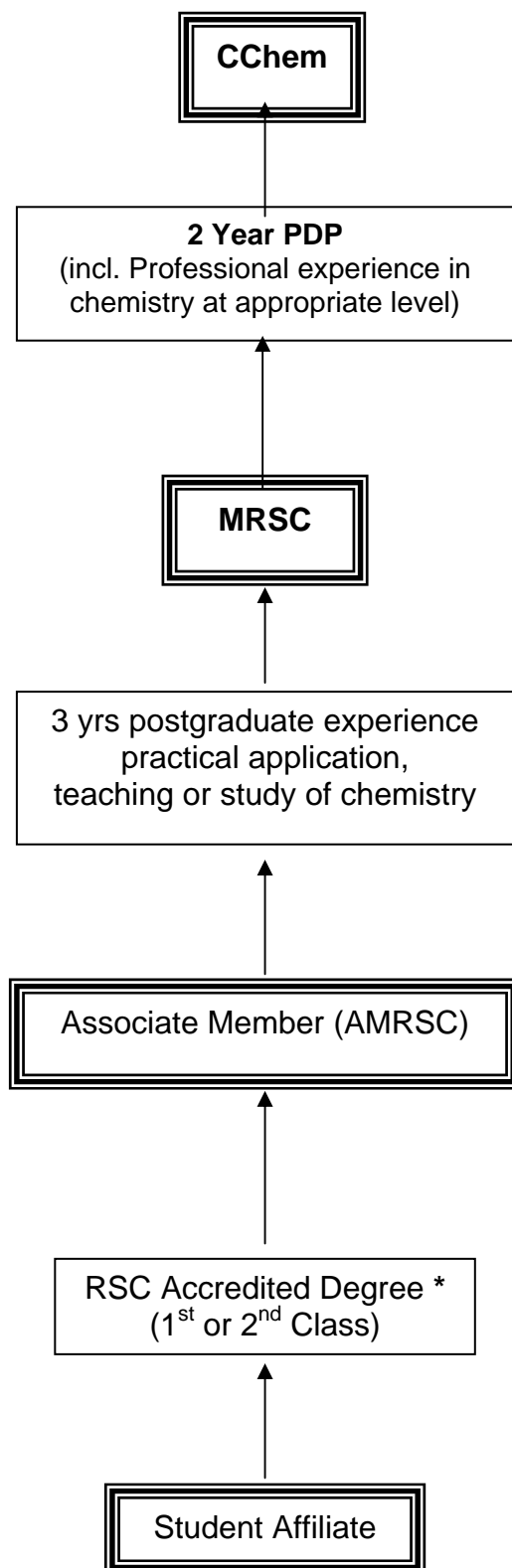
Science Year

Mrs Steele informed Members that in England there would be Science Year running from September 2001 to October 2002. Currently this had not been extended to Scotland. Any encouragement for the Scottish Executive to take up this initiative would be welcomed by the RSC. Information about Science Year is attached.

Next Meeting

It was agreed that a meeting in mid-September should be arranged. A date would be agreed by correspondence.

DRAFT
ROUTE TO CCHEM



• Nb. You do not require an accredited degree to achieve AMRSC or MRSC this is only required for progression to CChem

DRAFT

REGULATIONS FOR THE AWARD OF CHARTERED CHEMIST

- CC1 All applicants for Chartered Chemist have to be a Member (MRSC) or Fellow (FRSC).
- CC2 Applicants are required to produce evidence of being awarded a RSC accredited degree at the standard of 1st or 2nd class honours and be engaged in the practice, application and/or teaching of chemistry.
- CC3 Applicants who cannot fulfil the academic requirements in CC2 above must demonstrate that they have an in depth knowledge and critical awareness of a substantial area of chemistry. This is usually demonstrated by achievement of a suitable postgraduate award and/or appropriate professional development. Council, at its discretion, may require applicants to attend a Professional Interview, or undertake other procedures, to determine the extent of the applicant's understanding of chemistry.
- CC4 All applicants are required to present evidence of professional attributes in a range of specific areas to a level prescribed by Council. This is accomplished by means of a two year Professional Development Programme (PDP). Applicants, who have to first be in the category of Member (MRSC), must register with the Society at the beginning of the Programme. They are also, at the time of registration, required to nominate a mentor/assessor who is able to provide guidance in developing the attributes and to verify the evidence provided.
- CC5 Applicants with substantial professional experience over at least ten years, and who believe that they have already achieved the level of professional attributes prescribed by Council, may apply for the direct award of Chartered Chemist without registering for the 2 year Professional Development Programme. In collating their submission, such applicants are required to identify a mentor/assessor who is able to assist with the collection of information and to verify the evidence provided.
- CC6 For the final assessment, all applicants are required to provide the name of a referee who is currently a Chartered Chemist. If, however, the agreed mentor/assessor is not a Chartered Chemist, two referees will be required, one of whom should be a Chartered Chemist and another who should preferably be a scientist or engineer chartered by their own professional society or institution that is acceptable to the Society. In all cases the referee is expected to have sufficient knowledge of the applicant's work.
- CC7 Chartered Chemists are entitled to use the abbreviation "CChem" after their names.

BELOW ARE **EXTRACTS** FROM THE **DRAFT** GUIDANCE FOR CCHEM WHICH WILL BE ISSUED LATER IN THE YEAR.

4.0 WHAT DOES CHARTERED CHEMIST (CCHEM) MEAN?

“A Chartered Chemist is someone who is making a significant impact in their professional role drawing upon highly developed chemical skills.”

To be awarded the Chartered Chemist designation you will be expected to provide evidence to show that:-

- **your professional competence involves the application of chemistry across a variety of contexts the outcome of which may be unpredictable;**
- **you exercise substantial personal autonomy and are accountable for critical analysis and diagnosis, design, planning, execution and evaluation;**
- **you have significant influence on the work of others;**
- **you observe health and safety requirements relevant to the job and pay due regard to personal safety and the safety of others.**

Admission to CChem is not granted as recognition of “long service” nor is it granted in cases where an individual’s involvement or academic achievement is not at an appropriate level or is not in chemistry.

General Requirements

Chartered Chemists (CChem) must meet the following criteria:-

- must be MRSC or FRSC;
- hold an accredited degree in chemistry or equivalent;
- demonstrate that the chemical knowledge and skills derived from their education and training are critical to fulfilling the requirements of their job;
- submit a portfolio of evidence to meet the 12 professional attributes.

The assessment of professional attributes leading to the award of CChem, is intended to enhance further an individual’s standing by demonstrating that he/she has attained an appropriate level of professional competence in the practice, application or teaching of chemistry.

5.0 WHAT IS THE PROFESSIONAL DEVELOPMENT PROGRAMME (PDP)?

The normal route for those qualified to MRSC (or those meeting the requirements for this category) to CChem is by way of the Professional Development Programme (PDP).

The Professional Development Programme (PDP) is the procedure whereby the Society, guides the professional development of its members. Guidance is usually provided by the applicant's line manager or an experienced colleague who acts as a Mentor/Assessor throughout the PDP. On behalf of the society the Mentor/Assessor monitors the applicant's approach and attitude to work and to any outside activities in chemistry, to ensure that these are in accordance with the requirements for the award of the Chartered Chemist designation.

The Professional Development Programme (PDP) relates primarily to an applicant's professional achievements, approach and attitude towards work and matters related with, or affected by it. PDP is, therefore, undertaken in employment and is for a period of at least two-years. Full-time, post-graduate students are not eligible to register for assessment whilst still engaged on their studies.

In addition to personal achievement in the workplace, an applicant's performance will be judged against 12 professional attributes.

5.1 Professional Attributes

The 12 attributes that will be assessed through the PDP are:

1. Make significant personal contributions to key tasks in your employment area and understand fully the chemical science objectives of the work done and its relevance to the employer or others.
2. Demonstrate a high level of appropriate professional skills in the practice of chemical sciences.
3. Develop your chemical science and other professional skills as required for the work undertaken and career development.
4. Demonstrate an understanding and appreciation of Health, Safety and Environmental issues and adhere to the relevant requirements relating to your role.
5. Evaluate critically and draw conclusions from scientific and other data.
6. Demonstrate integrity and respect for confidentiality on work and personal issues. Demonstrate other professional attributes such as thoroughness and reliability.
7. Plan and organise time systematically, demonstrate foresight in carrying out tasks, and offer suggestions for improvements to tasks/duties.
8. Demonstrate an interest in broader developments in chemical science and make a contribution to the profession of chemistry outside your direct work environment.
9. Write clear, concise and orderly documents and give clear oral presentations.
10. Discuss work convincingly and objectively with colleagues, customers and others. Respond constructively to, and acknowledge the value of alternative views and hypotheses.

11. Demonstrate the ability to work as part of a team.

12. Exert effective influence.

In addition to the portfolio of evidence a summary of this evidence will also be required. Details of how to collate the portfolio of evidence and summary sheet can be found on page XXXX.

In presenting evidence, any issues of confidentiality or sensitivity can be erased from an original document or, if more appropriate, a general overview of the area being evaluated can be submitted.

Examples of the type of evidence that will be required is given at XXXXXX but this is not exhaustive and the evidence will have to reflect the work the individual undertakes.

It is anticipated that evidence for each attribute will be approximately 1-4 pages of A4 but the total portfolio should not exceed 30 pages of A4. Evidence can relate to more than one attribute and this can then be cross referenced, there is no need to include two copies.

6.0 TIMETABLE FOR PDP

