

The Institution of Environmental Sciences

The professional body for environmental scientists

President: His Grace the Duke of Westminster OBE TD DL

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Please reply to:

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Cyril Le Marquand House
St. Helier, Jersey,
JE4 8QT

e-mail:
m.romeril@jersey.gov.uk

14th July, 2000

Mr. K. McNichol,
ST+M,
20 - 22 Queensberry Place,
London, SW7 2DZ

Copy for info.

Dear Mr. McNichol,

Please find enclosed the completed questionnaire.

I can confirm that my Institution is fully supportive of such a scheme that will enhance "work-readiness" in new graduates. The Institution feels that this emphasis is particularly important in the environmental sciences where the acquisition of transferable skills is a critical component of the education process. Obviously in the environmental field this is as much to do with broader inter-personal skills as with more specific business awareness since environmental scientists often have to convey scientific messages to lay people.

I also have a strong personal view on the matter since I have a wide experience of meeting new graduates as an external examiner, and of employing them. Unfortunately I am only too aware of the frequent lack of work-readiness in students just about to graduate.

If I can be of any further help please let me know

Yours sincerely,

Dr. Michael Romeril

RECEIVED
18 JUL 2000



**Feasibility Study for the Development of a
Generic Graduate Apprenticeship in
Science**

**Consultation Document
June 2000**

The concept:

**A generic Graduate Apprenticeship in Science which incorporates
common components and work experience into disciplinary courses
leading to degrees in Chemistry or Physics or Biology**

Section 1: introductory/explanatory notes

What is a Graduate Apprenticeship?

Graduate Apprenticeships were announced in the "Learning Age" Green Paper as a means of enhancing the work-readiness of new graduates. They are frameworks which integrate study at degree level with structured work-based learning. They bridge higher education and first employment so that new graduates are better prepared for work in particular sectors. Equally it is hoped that the Graduate Apprenticeship can be used to encourage employees in small and medium-sized businesses to study part-time, with the work-based element being delivered in their place of employment. A number of NTO-led pilots are already in place.

What are the benefits?

A Graduate Apprenticeship offers benefits to both employers and individuals:

- It answers employer demands for recruits who can combine graduate level skills and knowledge with business awareness and understanding – such people are able to make a more immediate and effective contribution to business competitiveness and so could be particularly attractive to smaller employers who may not have previously considered taking on graduates
- In the context of scientific professions, a Graduate Apprenticeship could be a useful route into the labour market for students on science-based academic degree programmes who want to build up some expertise in a specific sector
- It could also be a means of widening participation in higher education – a combination of work and part-time study may be a positive option for many people interested in higher education but not prepared or able to study full-time. This means that a Graduate Apprenticeship also offers access to higher education for returners to work

Delivery

Open, distance and computer-based learning delivery methods should be equally valid and available for this proposed Graduate Apprenticeship.

Section 2: common components of a generic Science Graduate Apprenticeship

The work placement element(s) of this Graduate Apprenticeship would be based on Key Skills and National Occupational Standards (NOS). In this section we have listed the skills areas and NOS which we believe could be included. Where you agree, please indicate by ticking all appropriate boxes:

A KEY SKILLS:

Communication	<input checked="" type="checkbox"/>
Application of Number	<input checked="" type="checkbox"/>
Information Technology	<input checked="" type="checkbox"/>
Working with Others	<input checked="" type="checkbox"/>
Improving Own Performance	<input checked="" type="checkbox"/>

Comments/additions:

I presume that "application of numbers" includes "statistical analysis"

B LABORATORY SKILLS (LAATS/LATA):

[Irrespective of Science discipline]

- Level 2
- Level 3
- Level 4

Comments/additions:

C RESEARCH SKILLS (standards approved by QCA/SQA and designed to be built into academic or National Vocational Qualifications):

- Preparing the research brief
- Gaining funding for research work
- Gathering and evaluating information from secondary sources
- Developing the research design
- Carrying out investigations and analysing the information collected
- * Interpreting and documenting research and findings
- Developing a dissemination plan
- Protecting and exploiting intellectual property rights

Comments/additions:

* Does this need to specifically include the word 'evaluation'.
I am not sure if this is strictly the same as 'interpretation'.

If there are any other NOS which you would include in a generic Science Graduate Apprenticeship, please list below by NOS title:

Does developing the research design and/or carrying out investigations include the consideration of
(1) statistical validity, and
(2) problems of research outdoors and/or with natural systems.

Also interviews/questionnaire techniques can find use in scientific studies and I wonder if this is another specific skill that needs to be listed.

Section 3: Support and other comments

In the light of this consultation document, do you support the idea of a generic Science Graduate Apprenticeship?

Yes No

Please use the space below to add any other comments you have on feasibility, content, delivery or other aspects of such a Graduate Apprenticeship:

The difficulty I foresee with full time ~~graduates~~ ^{students} is that of finding time in an already crowded syllabus. Such students are already under considerable strain especially with the demands of financing themselves and my experience as an external examiner would raise questions on the ability to deliver this objective with a normal 3yr degree course

Section 4: Further contact and involvement

It may help us to discuss some aspects of your answers in more detail. If you are happy for us to contact you again, please give your details below:

Name: DR. MICHAEL ROMERIL
 Position: ENVIRONMENTAL ADVISER (Vice President)
 Organisation: STATES OF JERSEY (Institution of Environmental Sciences)
 Telephone: 01534 603420
 Email: m.romeril@jersey.gov.uk

ST+MC plans to hold a workshop where the Science Graduate Apprenticeship will be discussed and ideas proposed for a framework of content and structure, prior to the development of a proposal to DfEE. Would you like to attend?

Yes No

Would you like to be involved in the development of this Graduate Apprenticeship if the results of the feasibility study are positive?

Yes No

depending on commitments!

Thank you for your help and interest

Please return your completed questionnaire no later than Monday 31st July by post, fax or email, to:

Science Graduate Apprenticeship Feasibility Study
 Science, Technology & Mathematics Council
 20-22 Queensberry Way
 London SW7
 Tel: 0207 225 1155
 Fax: 0207 225 1997

If you have any questions or concerns about this questionnaire or would like more information about the Science, Technology and Mathematics Council, please contact Bill McNichol, CEO, on 020 7225 1155 or email him on either of the following addresses: bill@stmc.org.uk / mcnichol@btconnect.com