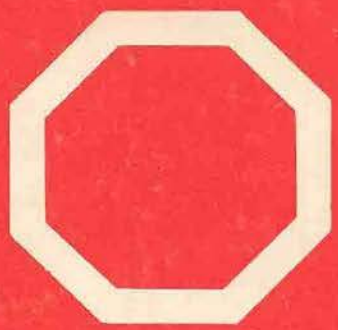
MARC REPORT NUMBER 8



General Report

ENVIRONMENTAL EDUCATION IN THE UNITED KINGDOM UNIVERSITIES AND POLYTECHNICS: A COMPENDIUM

Prepared by:
MONITORING AND ASSESSMENT RESEARCH CENTRE of the
SCIENTIFIC COMMITTEE ON PROBLEMS OF THE ENVIRONMENT,
INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

With the support of:
UNITED NATIONS ENVIRONMENT PROGRAMME and
THE ROCKEFELLER FOUNDATION

The Monitoring and Assessment Research Centre (MARC), Chelsea College, University of London, became operational on 1 July 1975.

The broad objective of the Centre is to develop methods which will assist in the understanding, definition, evaluation and solution of major environmental problems of global, regional and national concern. Increasing international awareness of these problems, such as chemical pollution, depletion of soil, forest-cover and other important natural resources as well as the spread of endemic diseases, has emphasized the need for such an approach. In this way the Centre offers scientific support to the development of environmental monitoring systems and in particular to the global system set up as part of the United Nations Environment Programme.

The Centre's work in this regard is funded by the United Nations Environment Programme and The Rockefeller Foundation.

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MARC General Reports are intended as synoptic reviews of environmental topics relevant to monitoring. Each is written by a specialist in the field, keeping a sense of perspective across the whole breadth of the subject. Their main purpose is to be usable by those environmental scientists and managers who are not expert in the topic being covered but who need to obtain a broader, multidisciplinary understanding of monitoring and assessment problems.

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Environmental Education in the United Kingdom Universities and Polytechnics: a Compendium*

by Kenneth Guy
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A General Report (1978)

Prepared by:

Monitoring and Assessment Research Centre of the
Scientific Committee on Problems of the Environment,
International Council of Scientific Unions

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1.0 Introduction

1.1 Rationale

This compendium is produced by the Monitoring and Assessment Research Centre (MARC) as a background to its programme on the development of education and training in environmental monitoring and assessment relevant to the needs of developing countries. Its aim is to map out as comprehensively as possible existing environmental education coverage in the United Kingdom in order that

(i) relevant expertise can be located for possible collaboration on the design and implementation of new courses;

(ii) duplication in the content of new courses can be avoided.

Although much vocational training of personnel in the environmental field is undertaken by professional organizations and agencies, it was decided that in the first instance the coverage offered by universities and polytechnics only would be reviewed.

A first glance at the literature on environmental courses available (see bibliography, Annex III) revealed that no one source adequately provided the type and range of information sought. For example, some sources gave only the titles of courses and the degrees awarded, while others, although providing more detail, concentrated solely on what might be termed subsections of environmental education. It was therefore decided to assemble a compendium which would attempt to provide the information available in a useful format. The idea met with a warm response from the various interested parties consulted at this stage.

1.2 Format

The information in the compendium is presented in the following way. Universities and polytechnics are in separate sections (Section 3.0 and Section 4.0 respectively). Each section is divided into two parts:

The first - subsections 3.1 and 4.1 - lists the names of institutions and the courses which each offers. The institutions themselves appear alphabetically and are numbered. Information on each course on offer is given as follows:

(i) Each course is assigned to one of eight environmental categories which describes the content matter of the course. These categories and the rationale for their use are discussed in Section *2.2.1.* They are intended as simple guidelines for those consulting the compendium.

(ii) Each course has a number of keyletters. These refer to the range of topics covered by the course. A complete list of topics, their associated keyletters and an explanation of their use are given in Section *2.2.2.*

(iii) Courses for which no details were available at the time of publication are referred to as 'Other Relevant Courses'.

(iv) Abbreviations used to denote the award offered are listed in Annex I.

(v) The addresses of the institutions are given in Annex II.

(vi) A select bibliography of useful reference sources for environmental education courses in the United Kingdom appears as Annex III.

The second part—subsections 3.2 and 4.2—offers an alternative presentation of the information on environmental categories, keyletters and status.

1.3. Notes to users

There are a number of ways of extracting information from a compendium. The notes which follow are intended as a guide to users, starting from any one of the four following

reference points:

(i) *The name of the institution*
Where *the name of the institution* is known, consult Section 3.1 (universities) or Section 4.1 (polytechnics) for the range and type of courses offered.

(ii) *The environmental education category*
To establish the *category of environmental education* you seek, first consult the list in Table 1, Section *2.2.1.* This outlines the course categories and their scope. Having selected a category, refer next to Section 3.2 (universities) or Section 4.2 (polytechnics). These sections show at a glance the course category (vertical column), the course topics (horizontal line) and the institutions (numbered) providing the courses concerned. This information will guide you to fuller details given in Sections 3.1 and 4.1.

(iii) *The topics covered by a course*
For information on *course topics,* refer to Table 2, Section *2.2.2.* which gives a Keyletter Index of the topics covered. The number of courses available under each topic can be established by referring to the Keyletter Chart in Sections 3.2 and 4.2 referred to above.

(iv) *The level of instruction*
For the *level of instruction* refer to the status column of Sections 3.2 (universities) and 4.2 (polytechnics). A status key indicates four separate levels. For fuller details, refer to Sections 3.1 (universities) and 4.1 (polytechnics).

2.0 Compilation of the Compendium

This section reviews the stages involved in compiling the compendium and gives an explanation of some of the concepts used.

2.1 Criteria for inclusion

The first problems encountered concerned the definition of environmental education and the criteria to be used for including courses in the compendium. Numerous definitions exist (1) but none seemed to provide an appropriate means of demarcation.

In the event, a pragmatic approach was adopted. No rigid definition was attempted: instead, the decision whether or not to include a course was left to the institutions providing the information. The information itself was obtained by contacting all United Kingdom universities and polytechnics with a request to provide details of all courses run by them which could be said to be relevant to environmental management, with particular reference to developing countries. This preliminary inquiry met with an excellent response. The information obtained from the institutions, together with supplementary details abstracted from several other sources (see Annex III), was classified and collated and a follow-up exercise carried out. This took the form of a circular list addressed to all universities and polytechnics with a request that they consider the selection of courses, comment on their relevance and, if appropriate, expand upon the information already provided.

It should be noted that the list did not include what may be termed 'mainstream subjects' such as Geography, Biology and Town and Country Planning which are offered by the large majority of universities and polytechnics at several levels. Courses in these subjects have been included in the compendium only where they were specifically mentioned as being relevant by the institutions themselves. It should also be noted that where information on courses is sparse, they are included in the compendium under the broad category 'Other Relevant Courses'.

2.2. *The presentation of information*

Once the collection of information had been completed, the question of classification had to be considered. The problems of classifying environmental education have been encountered by others (2). Emmelin (3), drawing on a number of sources, outlines several complementary schemes. Three of these can be summarized as schemes which rely on the classificatory principles of

(i) form, i.e. the particular type and level of education given, whether it be a long, integrated course of study, a short, multidisciplinary overview, the training of specialists or an adjunct to professional training;
(ii) content, i.e. classification based on subject matter;
(iii) audience, i.e. the type of groups receiving the education.

For the purposes of this compendium, it was decided that while information would be provided on the basis of form and audience, an attempt would be made at the same time to evolve a classification system based on content. The main stumbling block to this approach is not only the variety of subject matter contained within a particular course but also the disparity between courses with the same nominal heading. Nevertheless, the following two approaches were adopted:

2.2.1 Environmental Education Categories

In the first instance, the literature received from the institutions contacted was reviewed and a number of category headings generated. Each course was then assigned to the category which seemed best to reflect the main emphasis of its subject matter. These categories are given in Table 1.

Table 1, Environmental Education Categories

Category	Remarks
Environmental Sciences	Courses which offer a broad range of subjects concerning natural and man-made environments and the relationships between them. Usually there is an emphasis on natural science complemented by other subjects.
Ecology	
Science and Society	Interdisciplinary courses dealing with science, technology and society which have a substantial environmental component.
Resource Management	Courses stressing the managerial aspects of the availability and use of either specific resources or natural resources in general.
Environmental Planning	Courses relating to urban, town and regional planning and design.
Environmental Engineering	Courses which generally treat the interaction of different branches of engineering with the environment.
Pollution Control	
Environmental Health	Courses which deal in one way or another with environmentally related public health.

It is clear from this Table that the categories given are not mutually exclusive. Placing a course into a specific category is not easy, especially if the information on the course is inadequate. Nevertheless, for the purposes of this compendium, an attempt has been made to do so with the aim of providing a rough but simple indexing tool.

2.2.2 The Keyletter Index

To provide a more detailed and less rigid method of classification, a second approach was also adopted. In this, use was made of a world-wide survey undertaken by the Centre d'Etudes Industrielles (4) which looked at Educational needs in environmental management. This survey produced a ranked list of topics widely felt to be deserving of treatment in environmental education, particularly for developing countries. In the compilation of this present compendium, the first 20 topics occuring in the ranked list referred to above were circulated to universities and polytechnics in order that they could indicate which of these topics were treated by the courses they specified. In cases where replies were not received, the codification was made on the literature available. In this way a content classification is provided which also gives some indication of the emphases in environmental education in the United Kingdom and which can be compared with world-wide needs in this field. In the pages that follow, this classification scheme is referred to as the 'Keyletter Index' which is outlined in Table 2.

Table 2, Keyletter Index of Course Topics

Keyletter	Range of Topics
A	Pollution
B	Industrial Development
C	Land Use Planning
D	Conservation of National Resources
E	Environmental Law
F	Resources and Energy
G	Cost of Environmental Damage
H	Environmental Damage
I	Industrial Location
J	Appropriate Technology
K	Organization for Environmental Management
L	Monitoring Environmental Quality
M	Water Supplies
N	Environmental Goals
O	Transportation
P	Human Health
Q	Urban Planning
R	International Co-operation
S	Environmental Impact Assessment
T	Modelling the Environment

3.0 The University Compendium

3.1 Presentation 1

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
01	**Aberdeen**	a. Ecology	Ecology	Botany and Zoology
02	**Aston in Birmingham**	a. Science and Society	The Social Aspects of Science and Technology	Technology Policy Unit
		b. Resource Management	Biology of Water Management	Biological Science – Applied Hydrobiology Section
		c. Environmental Planning	Environmental Planning and Design	Architectural, Planning and Urban Studies
		d. Environmental Health	Environmental Health	Construction and Environmental Health
		Other Relevant Courses	*The Biology of Man and his Environment (B.Sc.)* *Combined Honours (Social Aspects of Science) (B.Sc.)* *Environmental Science (M.Sc. - proposed)*	
03	**Bath**	*Relevant Courses*	*Building Engineering with Environmental Engineering (B.Sc.)*	
04	**Birmingham**	a. Environmental Sciences	Geography Studies	Geography
		b. Resource Management	Water Resources Technology	Civil Engineering
		c. Resource Management	Science of Resources	School for the Science of Resources
		d. Resource Management	Conservation and Utilization of Plant Genetic Resources	Plant Biology

DETAILS	KEYLETTERS	STATUS
Intended to provide the technical and theoretical background necessary for posts demanding a broad ecological approach. The main emphasis is on terrestrial ecology.	CDFHKLT	M.Sc. — One year
Areas of special interest: those which measure, forecast and assess the impact of technology on society; the methods by which society controls science and technology; the conservation of resources and the safeguarding of the environment.	BDJKLS	M.Sc. — One year
Provides an introduction to water management and covers aspects of water quality, pollution, resources, supply and treatment.	AEHKLMP	M.Sc. — One year
Intended to bring planning and design skills closer together and to present the opportunity to tackle environmental problems on an integrated and multidisciplinary basis.	BCIKQ	B.Sc. — Three or four years/M.Sc. — Two or three years/ P.G. Dip. — One year
Primarily aimed at future local authority environmental officers; covers the requisite technical and legislative ground for such positions.	ABEKP	B.Sc. — Four-year sandwich course
Interdisciplinary programmes of study offering a broad range of subjects concerning the natural and man-made environments and the relationships between them.	BCDINQ	B.A./B.Sc./B.Soc.Sc./ M.Sc./M.A.
Covers aspects of water resources such as reservoir control, meteorology and water quality control. Background coverage of economics, law and engineering is provided.	AEKLM	M.Sc. — One year
An integrated course of study of the scientific, technological, economic and social aspects of resource availability and use.	ABDFGHJLMOPS	B.Sc. — Three years
Seeks to provide training in genetic resources for scientists, in particular those from developing countries, in order to make them aware of the problems and to provide adequate tuition in the theory and practice of genetic conservation.	DJR	M.Sc. — One year

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
04	**Birmingham**	e. Environmental Planning	Transportation and Environmental Planning	Transportation and Environmental Planning
		f. Environmental Engineering	River Engineering	Civil Engineering
05	**Bradford**	a. Environmental Sciences	Environmental Sciences	School of Environmental Science
		b. Science and Society	Science and Society	School of Studies in Science and Society
		c. Other Relevant Courses	*Environmental Forecasting (Various short courses run by the Management Centre)*	
06	**Bristol**	a. Ecology	Botany and Geography	Botany and Geography
		Other Relevant Courses	*Advanced Functional Design Techniques for Buildings (Environmental Option) (M.Sc.)*	
07	**Brunel**	a. Resource Management	Weed Biology	Biology
		b. Pollution Control	Environmental Pollution Science	Industrial Chemistry
		Other Relevant Courses	*Medicinal, Agricultural and Environmental Chemistry (B. Tech.)*	
08	**Cambridge**	a. Environmental Planning	Development Studies	Cambridge Course on Development
		Other Relevant Courses	*Natural Sciences (Applied and Environmental Biology Options) (B.A.)*	
09	**City**	*Relevant Courses*	*Civil Engineering (B.Sc./M.Sc.)* *Environmental Engineering (Buildings) (B.Sc.)*	

DETAILS	KEYLETTERS	STATUS
Allows specialization in several fields, including highway and traffic engineering, transportation and traffic planning, construction management and urban science.	BCKOQST	M.Sc. – One year
Designed for civil engineers requiring specialized knowledge of the design of control and regulating works on river systems including the economic aspects of project appraisal. Basic instruction is also given in the general water cycle.	AEHKM	M.Sc. – One year
Designed for those with particular interests in biological, physical science, geographical and management aspects of the environment. Special options include applied ecology, pollution, environmental planning and environmental health. One option in the final year specifically deals with environmental management overseas.	A – T	B.Tech. – Four-year sandwich course
Designed for those interested in managing science in such a way that it can be used for the benefit of society as a whole.	A – T	B.Tech. – Four-year sandwich course
Intended to provide a background in ecology. Project work of a research nature is undertaken in the final year.	DFLN	B.Sc. – Three years
Designed for graduates who wish to enter research or development work in industry or Government service, in the U.K. or overseas. It aims to provide a wide knowledge of modern research techniques and of field experimentation in the biology and control of weeds.	CDIK	M.Sc. – One year/ Cert. – 30 months
Provides a broad education in the basic sciences necessary for an understanding of pollution problems. Focuses on air and water pollution, pollution control, land reclamation and food standards.	ACEHLMP	M.Tech. – 30 months/ Cert. – Two years
Intended for those concerned with the formulation, planning and implementation of development policies. Specialization is offered in the field of Land Policy and the Environment.	BCDFIKQR	M.Phil. – One year

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
10	**Cranfield Institute of Technology**	a. Environmental Engineering	Energy Conservation and the Environment	School of Mechanical Engineering
		Other Relevant Courses	*Ecological Physics (M.Sc./Ph.D. by research) — current applied research relates mainly to the dispersion and management of airborne pests.*	
11	**Dundee**	a. Environmental Sciences	Environmental Studies	Faculty of Environmental Studies
		b. Environmental Planning	Town and Regional Planning	Faculty of Environmental Studies
		c. Environmental Engineering	Civil Engineering in Hot Climates	Faculty of Engineering and Applied Science
12	**Durham**	a. Ecology	Ecology	Botany and Zoology
13	**East Anglia**	a. Environmental Sciences	Environmental Sciences	School of Environmental Sciences
		b. Resource Management	Coastal Ecology: Aspects of Management	Institute of Terrestrial Ecology
		c. Pollution Control	Marine Pollution	Ministry of Agriculture, Fisheries and Food, Directorate of Fisheries Research, Fisheries Laboratory
		Other Relevant Courses	*Chemistry and Environmental Sciences (B.Sc.) Environmental Sciences and Computing (B.Sc.) Development Studies (B.A.)*	
14	**Edinburgh**	a. Environmental Sciences	Environmental Chemistry	Chemistry

DETAILS	KEYLETTERS	STATUS
Intended primarily for mechanical or civil engineers but also suitable for other engineers and physicists seeking to acquire expertise in energy conservation. It is envisaged that students completing the course will be equipped for careers in consultancy, the fuel, primary metal or manufacturing industries, power generation, the supply of services for buildings, and in local government.	ABFHJLS	M.Sc. – One or two years
Allows a choice of options from the conventional geography and regional and town planning syllabi. A more widely based course is being considered.	BCDIKQ	B.Sc. – Four years
Primarily designed to meet the needs of those who wish to practise as Chartered Town Planners although it could prove useful to applicants interested in environmental issues in general.	BCIKQ	B.Sc. – Four years
Coverage includes environmental health engineering, development planning and development economics.	BCMOPQ	M.Sc. – One year
Comprehensive course for prospective practising ecologists, emphasizing ecological methodology and wetland ecology.	ADFHKLMST	M.Sc. – One year
A broad environmental education. A choice of units in geography, geology and biology and more specialized units in tropical resources and development, urban and regional planning, and environmental planning and development.	A – T	B.Sc. – Three years
Emphasizes aspects of coastal ecology relating to the management of plant and animal populations at the coast.	CDKLMN	Short training course
One of many courses available for environmental managers. Longer courses also cater for overseas students.	AHLM	Short training course
A chemistry degree with emphasis on the interactions of chemicals with the biosphere and the chemistry of the biosphere.	ABFGHJLM	B.Sc. – Four years

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
14	**Edinburgh**	b. Ecology	Ecological Science	Forestry and Natural Resources
15	**Exeter**	a. Environmental Engineering	Environmental Chemical Engineering	Chemical Engineering
		b. Environmental Engineering	Environmental Engineering	Chemical Engineering
16	**Heriot-Watt**	a. Environmental Planning	Environmental Planning	Town and Country Planning
		b. Environmental Planning	Environmental Conservation (Urban and Architecture)	Architecture
		c. Environmental Planning	Urban Design	Architecture
17	**Hull**	*Relevant Courses*	*Geography (B.A./B.Sc.)*	
18	**Kent at Canterbury**	a. Environmental Sciences	Environmental Physical Science	Faculty of Natural Sciences
		b. Environmental Planning	Urban Studies	Faculty of Social Sciences
19	**Lancaster**	a. Environmental Sciences	Environmental Sciences	Environmental Sciences
		b. Environmental Sciences	Geophysical Sciences	Environmental Sciences and Physics
		c. Ecology	Ecology	Environmental Sciences and Biological Sciences

DETAILS	KEYLETTERS	STATUS
Aims to provide an understanding of the scientific basis of resource management for future resource managers, rural planners, conservationists and ecologists. Honours are awarded in Ecology or Resource Management or Wildlife and Fisheries Management or Forestry.	ACDFGHKLMT	B.Sc. – Four years
A chemical engineering degree which offers courses in biological sciences and geography in order that the effects of technology on the environment can be fully understood.	ABDFHJL	B.Sc. – Three years
Aims to develop those aspects of engineering of particular relevance to environmental matters, e.g. pollution control, the design of plant to minimize pollution and waste and the conservation of energy resources.	ABDFHJL	M.Sc. – One year
Aims at producing sound professional competence in environmental planning.	BCDEIKLQ	M.Sc. – Two years/ P.G. Dip.–21 months
Concerned with problems of architectural and urban conservation and provides a specialized training in this area of professional work.	DEJKLNQ	M.Sc. – One year full-time + one year part-time/P.G. Dip.– one year
Provides a professional bridge between environmental planning and architecture for designers wishing to operate at the civic or urban level.	CEJKLNOQST	M.Sc. – One year full-time + one year part-time/P.G. Dip.– one year
Designed to provide students with a soundly based scientific training and some appreciation of the methods and perspectives that relate environmental problems to their social context.	ADFHLMNST	B.Sc. – Three years
This course was the first urban studies course to be launched in Britain. It has an interdisciplinary focus - drawing on economics, sociology and politics - and provides a training in the analysis of urban problems and means of government intervention which are relevant to a wide variety of occupations, e.g. local and central government, planning, housing administration, etc.	CIKNOQ	B.A. – Three years
A broad training in scientific methods as applied to physical processes in the natural environment.	AFHJLMT	B.Sc. – Three years
A course for physicists interested in the application of classical physics to environmental problems.	DFHJLT	B.Sc. – Three years
Maintains a higher content of physical sciences than is the case with most ecology courses.	ADHLMT	B.Sc. – Three years

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
20	**Leeds**	a. Environmental Sciences	Geography	Geography
		b. Pollution Control	Environmental Pollution Control	Fuel and Combustion Science
21	**Leicester**	a. Ecology	Ecology	Adult Education
22	**Liverpool**	a. Environmental Planning	Civic Design	Civic Design
		b. Environmental Planning	Transport Design	Civic Design
		Other Relevant Courses	*Regional Science (B.Phil.)* *Environmental Biology (B.Sc.)*	
23	**London – Bedford College**	*Relevant Courses*	*Environmental Earth Sciences (B.Sc.)* *Environmental Physical Sciences (B.Sc.)*	
24	**London – Chelsea College**	a. Environmental Sciences	Environmental Biology	Biological Sciences Group
		b. Environmental Sciences	Applied Biology	Biological Sciences Group
		c. Resource Management	Geology	Geology
		d. Resource Management	Applied Hydrobiology	Applied Biology
		e. Pollution Control	Environmental Pollution, monitoring and control	Held in conjunction with Tottenham College of Technology and The Roehampton Institute of Higher Education

DETAILS	KEYLETTERS	STATUS
Component courses include: Natural Resource Systems; Resource Analysis; Resource Planning; Urban and Regional Planning; Urban and Regional Analysis; Population Analysis; Systems of Spatial Organization; Urban Systems.	BCDFIKLMOQ	B.Sc. – Three years
A multifunctional course dealing with environmental monitoring, management and control.	AFHLNST	M.Sc. – One year
Aimed at adults from all backgrounds. The course units include botany, zoology, conservation, land use, physical sciences, economics and a series of ecosystem studies.	CDFH	Cert. – Three years part-time
Provides professionally recognized education in urban and regional planning, with a wide range of second-year options, including planning for developing countries.	BCEIKMNOQRT	M.C.D. – Two years
Contains much of the Master of Civic Design course content (see above) and in addition aspects of planning and design for transport. Emphasis is on policy and the assessment of transport demand.	BCEIKMNOQST	M.T.D. – Two years/ P.G. Dip. – One year
Aims to stimulate interest in the environmental issues confronting man, and to deal with problems relating to the management, conservation, regulated exploitation and pollution of ecosystems.	ADFLN	B.Sc. – Three years
Aims to provide a basic training in the Biological Sciences, together with some degree of specialization in selected applied fields such as marine biology or entomology.	ADFLN	B.Sc. – Three years
Course units include the following: Palaeoenvironment Analysis; Water Resources and Environmental Management; Fuel Resources and Environmental Management; Economic Geology.	DFM	B.Sc. – Three years
Offers a training in hydrobiology to graduates in biological subjects or in chemistry. Important aspects of the course include the ecology and productivity of natural waters, water conservation and pollution, water purification, fish and the management of fisheries.	ADFKLM	M.Sc. – One year
Intended for environmental managers around the world, this course covers both practical and management aspects of environmental control. Topics covered include air pollution, water pollution, food, housing, noise, radiation and solid wastes.	A – T	Short seven-week training course

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
25	**London – Imperial College of Science and Technology**	a. Environmental Sciences	Life Sciences	Life Sciences
		b. Environmental Sciences	Environmental Technology	Centre for Environmental Technology
		c. Environmental Engineering	Technology and Development	Chemical Engineering and Chemical Technology
		d. Environmental Health	Public Health Engineering	Civil Engineering
26	**London – King's College**	a. Environmental Sciences	Human Environmental Studies	School of Human Environmental Studies
27	**London – London School of Economics and Political Science**	a. Environmental Planning	Urban and Regional Planning	Economics, Geography, Government and History
28	**London – London School of Hygiene and Tropical Medicine**	a. Environmental Health	Medical Programme	Various departments
29	**London – Queen Mary College**	a. Environmental Sciences	Environmental Biology	School of Biological Sciences
30	**London – Royal Holloway College**	a. Ecology	Biological Sciences - Ecology	Botany and Zoology
31	**London – School of Oriental and African Studies**	a. Environmental Sciences	Geography	Geography
32	**London – University College**	a. Resource Management	Conservation	Botany and Microbiology

DETAILS	KEYLETTERS	STATUS
A broad-based course in the life sciences offering a series of ecological options. These include a second-year course "Exploitation and Management of Biological Resources" and a third-year course in "Environment and Man".	ADFGHKLMNS	B.Sc. – Three years
Designed to expose graduates with first specialized degrees to a wide range of environmental issues. This is intended to facilitate broadminded decision-making in specialist fields at a later date.	A – T	M.Sc./P.G. Dip. – one year
Seeks to combine advanced training in engineering with an analysis of social development in industrializing nations.	BFJRT	M.Sc./P.G. Dip. – one year
Provides a basic introduction to the engineering techniques available for overcoming public health problems.	AHLMP	M.Sc./P.G. Dip. – one year
A degree consisting of a foundation year in basic ecological, evolutionary and geological principles with opportunities for specialization in the last two years.	A – T	B.Sc. – Three years
Covers areas of industrial location, water resources and demography.	BCIKMOPQ	M.A. – One year
Post-graduate medical programme offers studies in human nutrition and tropical health, occupational hygiene, occupational and social medicine and tropical medicine and hygiene with an environmental emphasis.	P	M.Sc./M.Phil./P.G. Dip.
Students split their time in the first year between Biological Sciences and Chemistry, Physics and Mathematics. Specialization in Environmental Biology is offered in the second and third years.	DLMN	B.Sc. – Three years
Studies are available in maritime and mountain ecology, plant geography, limnology, mammalogy and general ecology. In particular, a course entitled "Management Limnology" considers management strategies for water supply.	DLMN	B.Sc. – Three years/ M.Phil. – One year
Courses include: Resource Evaluation and Environmental Management; Concepts and Techniques of Land Resources; Use of Air Photographs and Remote-Sensing Techniques in Geographical Studies; Tropical Ecosystems.	CDFGHKLNS	B.A. – Three years
Applies a knowledge of the structure and functioning of ecosystems to their conservation and management. As such it includes discussions of the economics and planning of rural land use.	ACDHLM	M.Sc. – One year

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
32	**London – University College**	b. Environmental Planning	Town Planning	School of Environmental Studies
		c. Environmental Planning	Development Planning	School of Environmental Studies
		d. Environmental Planning	Design and Planning	School of Environmental Studies
		e. Environmental Planning	Urban Development Planning	School of Environmental Studies
		f. Environmental Planning	Urban Studies (Developing Countries)	Geography and Centre for Urban Studies
		g. Environmental Engineering	Environmental Design and Engineering	School of Environmental Studies
		Other Relevant Courses	*Architecture, Planning, Building and Environmental Studies.* *Civil, Structural and Environmental Engineering (B.Sc. (Eng.)* *Social Policy in Environmental Planning (M.A./M.Sc.)* *Human Sciences (B.Sc.)*	
33	**London – Westfield College**	*Relevant Courses*	*Environmental Science (B.Sc.)*	
34	**London – Wye College**	a. Environmental Sciences	Rural Environmental Studies	Various
		Other Relevant Courses	*Environmental Chemistry (B.Sc.)* *Landscape Ecology (M.Sc.)*	
35	**Loughborough – University of Technology**	a. Resource Management	Recreation Management	Physical Education and Sports Science
		b. Environmental Planning	Transport Management and Planning	Transport Technology
		c. Environmental Planning	Transport Planning	Transport Technology
		d. Environmental Engineering	Environmental Engineering	Civil Engineering

DETAILS	KEYLETTERS	STATUS
Designed for graduates in approved relevant subjects who wish to make a career in planning or a related occupation.	CEGIKNOPQ	M.Phil. – Two years
Specifically designed to meet the needs of planners facing the immediate problems and opportunities of rapid urbanization in developing countries.	BCIOQ	P.G. Dip. – One year
Designed to meet the needs of teachers in schools of architecture and planning.	BC	P.G. Dip. – Two years
Three programmes are normally offered annually. Each concentrates on a particular topic within the context of national and regional development planning, with special reference to developing countries.	BCIR	Cert. – Three months
Intended for social science graduates from developing countries who are concerned with the socio-economic aspects of growth.	BGINPQR	P.G. Dip. – Ten months
Courses are broadly conceptual rather than technological and are intended to enable students to work as designers in collaboration with architects.	HILQ	M.A./M.Sc. – One year full-time or two years part-time
Offers studies in land use, geology, animal and plant sciences, horticulture and conservation within a wider framework of environmental sciences.	CDFHL	B.Sc. – Three years
A course aimed at furthering the effectiveness of managers in the growing leisure industry.	CK	M.Sc. – One year
Emphasizes the technology, management economics and social effects of transport. It includes studies on noise, vibration, air pollution and fuel conservation.	ACFHKOT	B.Sc. – Three years
Considers the planning and assessment of transport systems with due regard to the technological and economic aspects of such systems.	ACFHKOQT	M.Sc. – One year
Mainly concerned with the importance of comfortable living and working conditions in urban communities, but includes units on energy conservation, pollutants and building appraisal.	AHPQ	B.Tech. – Four-year sandwich course

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
35	**Loughborough — University of Technology**	e. Environmental Health	Water and Waste Engineering for Developing Countries and Hot Countries	Water and Waste Engineering for Developing Countries (WEDC) Group
36	**Manchester — The University**	a. Science and Society	Structure and Organization of Science and Society	Liberal Studies in Science
		b. Science and Society	Liberal Studies in Science	Liberal Studies in Science
		c. Pollution Control	Pollution and Environmental Control	Pollution Research Unit
		Other Relevant Courses	*Environmental Aspects of Building Design (Masters)*	
37	**Newcastle Upon Tyne**	a. Environmental Sciences	Agricultural and Environmental Science	Various
		b. Resource Management	Water Resources	Civil Engineering
		c. Environmental Planning	Environmental Design	Architecture
		d. Environmental Engineering	Civil and Environmental Engineering	Civil Engineering
		e. Environmental Engineering	Engineering Hydrology	Civil Engineering
		f. Environmental Health	Public Health Engineering	Civil Engineering
38	**Nottingham**	a. Environmental Sciences	Environmental Studies	Environmental Studies Committee

DETAILS	KEYLETTERS	STATUS
Courses concern knowledge and ideas connected with the technology and management of environmental health engineering projects in hot climates and developing countries. Tailor-made post-experience courses are also offered to suitable centres in developing countries.	AJMPR	Cert. – One-week and three-month courses
An interdisciplinary course dealing with the relationships between science, technology, philosophy, sociology and social development and organization.	BFJKNS	M.Sc. – One year
Covers much the same ground as the M.Sc. course above and also includes a basic grounding in the physical or biological sciences.	BFJKNS	B.Sc. – Three years
Deals with the technical, legal and economic aspects of pollution control.	AEGHKLPR	M.Sc. – One year
Organized under a Director of Studies and taught by members of several departments in the Faculty of Agriculture. Designed for students interested in the scientific problems associated with increasing world food production and the environmental consequences of modern agriculture.	CDFHL	B.Sc. – Three years
Deals with public health, hydraulic engineering and management of water resources.	FMP	M.Sc. – One year
Research degree, suitable for students from a variety of backgrounds, the major requirement being interest in the application of their disciplines to building design.	FJLNRT	M.Sc. – Two years
Examines the interaction between civil engineering works and the environment and gives a broad engineering training, particularly related to environmental control.	ACHKOST	B.Sc. – Three years
Deals with physical and engineering hydrology and hydraulics.	FM	M.Sc. – One year
Concerns all aspects of public health engineering and places particular emphasis on water pollution, water supply and waste-water treatment.	AELMP	M.Sc. – One year/ P.G. Dip. or Cert. – Nine months
The University has an Environmental Studies Committee which supervises work in the environmental field. The following one-week short courses have been run for industry to date: Air Pollution Control; Disposal of Liquid Wastes; Recycling of Domestic Wastes; Recycling of Metals; Safety and Mine Environment; Mining and Surface Environment.	A – T	One-week courses

UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
38 Nottingham	b. Environmental Planning	Environmental Planning for Developing Countries	Institute of Planning Studies
	Other Relevant Courses	*Environmental Biology (B.Sc.)* *Architecture and Environmental Design (B.Sc.)* *Environmental Planning (Masters)*	
39 The Open University	a. Science and Society	The Man-Made World	Faculty of Technology
	b. Science and Society	The Control of Technology	Faculty of Technology
	c. Resource Management	Environmental Control and Public Health	Faculty of Technology
40 Oxford	a. Resource Management	Agricultural Economics	Institute of Agricultural Economics
	b. Resource Management	Forestry and its Relation to Land Management	Forestry
	c. Resource Management	Research Methods in Forestry	Department of Forestry and the Commonwealth Forestry Institute
	d. Resource Management	Planning and Management and in Forestry	Department of Forestry and the Commonwealth Forestry Institute
	Other Relevant Courses	*Human Sciences (B.A.)*	
41 Reading	a. Environmental Sciences	Environmental Plant Geography	Botany and Geography

DETAILS	KEYLETTERS	STATUS
A course recognized by the Royal Town Planning Institute, examining planning responses to the problems of rural development and urbanization, with an emphasis on social, economic and design studies.	CEFIJNOQS	M.A. – 21 months
General course concerning technology and its effects. In particular, one section is entitled: "Maintaining the Environment".	ABDFGHLOQT	Foundation course
Interdisciplinary course treating the political and social aspects of technological decision-making. Commences in 1978. Includes coverage of environmental impact assessment techniques.	A – T	Third level course
Designed both for those with a professional interest in the environment and for laymen who wish to take an informed stand on environmental issues. Content matter covers the technology as well as the legislation used to control the exploitation of the natural environment and its limited resources.	ABDEFGHJKL MNP	Second level course
Focuses on the use of economic theory and quantitative techniques in the analysis of agricultural problems in developed and developing countries.	CKT	M.Sc. – One year
Designed for those intending to follow a vocation in forestry or the wider aspects of land management. It comprises silviculture and the planning and management aspects of forestry and land use.	CDFKL	M.Sc. – One year
Aimed at candidates from developing Commonwealth countries, this course outlines current principles and practices of forest research, placing emphasis on practical research in the field in tropical countries.	L	Summer Course – 14 to 15 weeks
Designed to familiarize forestry managers with modern management practices. Emphasis is primarily on developing countries.	K	Summer Course – 14 to 15 weeks
Botany or Biology at A level and Chemistry and Mathematics at O level required for entry. All students required to take Botany, Physical Geography and either Geology or Soil Science for first two terms of course. Course designed to provide an integrated knowledge of plants,	ADH	B.Sc. – Three years

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
41	**Reading**	a. Continued		
		b. Environmental Sciences	Advanced Educational Studies (Environmental Education)	School of Education
		c. Resource Management	Tropical Agricultural Development	Agriculture and Horticulture
		d. Environmental Planning	Environmental Planning	School of Planning Studies
		e. Environmental Planning	Integrated Land Resources Survey	School of Earth Sciences
42	**Royal College of Art**	*Relevant Courses*	*Environmental Design (Masters)*	
43	**Salford**	a. Environmental Sciences	Environmental Sciences	Civil Engineering, Sociology and Political Studies
		b. Environmental Sciences	Environmental Resources	Biology

DETAILS	KEYLETTERS	STATUS
their immediate environment and the broader landscape in which they occur in both natural and man-modified ecosystems. Practical work in field and laboratory is an essential part of the course.		
Suitable for experienced serving teachers or other professional staff in the education service. One-third of course spent on general and elective education studies; remainder on subject-, problem- and professionally-based studies relating to the interaction of man with the environment and the flow of energy and natural resources.	ABCDFGHKLN PQST	P.G. Dip. – One year
Suitable for graduates in Agriculture, Agricultural Economics or a natural science relevant to Agriculture. Some relevant experience in tropical agriculture required for admission to M.Sc. course. Four options available: Tropical Crop Production, Tropical Animal Production, Farm Economics and Project Appraisal with particular reference to overseas development, and Sector Planning and Project Appraisal with particular reference to overseas development. Final 15 months of M.Agr.Sc. course normally spent in tropics.	CDJKST	M.Sc. – One year/ M.Agr.Sc. –Two years
Intended for those wishing to become Chartered Planners who have a good first degree, or its equivalent, in a relevant discipline. Some practical experience in planning desirable. Syllabus includes spatial economics and social structure of cities and regions; the organizational framework (social, administrative and legal institutions); planning theory; planning process (techniques and policies).	BCDEFJKNOQST	M.Phil.– Two years/ P.G. Dip.– 21 months
For graduates with suitable degrees in Science, Agriculture or Geography; designed to train surveyors in carrying out terrain surveys on which the evaluation of land resources, especially in developing countries, could be based. Syllabus based on study of relevant aspects of the Earth and Physical Sciences; techniques of land resource survey; and land use planning and plan implementation. Course includes field work in the tropics or subtropics.	ACDJKMST	M.Phil. – Two years
Specializes in studying environmental hazards to the health, safety and welfare of society and the legal and administrative means of their control.	ACEKNPQ	B.Sc. – Three or four years
Provides a broad understanding of the complexities of environmental affairs. The course consists of a central option and two options in either tropical environmental affairs or countryside recreational resources. The course is currently undergoing revision, and potential applicants are advised to check with the Chairman of the Department before applying.	A – T	M.Sc. – One year

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
43	**Salford**	c. Environmental Planning	Urban Studies	Civil Engineering, Economics, Geography, and Sociological and Political Studies
		d. Environmental Engineering	Environmental Chemical Engineering	Chemical Engineering
		e. Environmental Health	Health Physics and Environmental Physics	Pure and Applied Physics
		Other Relevant Courses	*Radiological Health and Safety (M.Sc.)* *Physics of Natural Resources (B.Sc.)*	
44	**Sheffield**	a. Environmental Sciences	Natural Environmental Sciences	Botany, Geography and Geology
		b. Environmental Planning	Natural Environmental Sciences with Landscape Studies	Botany, Geography, Geology, Landscape Architecture
		c. Environmental Planning	Landscape Design	Landscape Architecture
		Other Relevant Courses	*Combustion Science and Pollution Control (M.Sc.)* *Energy Studies (B.Sc.)*	
45	**Southampton**	a. Environmental Sciences	Environmental Sciences	Biology, Geography, Geology and Oceanography
		b. Environmental Sciences	Environmental Studies	Adult Education
		c. Environmental Planning	Transportation Planning and Engineering	Civil Engineering
		d. Environmental Engineering	Irrigation Engineering	Civil Engineering
		e. Environmental Engineering	Environmental Aspects of Automotive Engine Design and Operation	Mechanical Engineering and Institute of Sound and Vibration Research

DETAILS	KEYLETTERS	STATUS
Aims to widen the student's appreciation of the functioning of urban areas, of the problems of urban living, and of the policies and practices for guiding growth and alleviating urban problems in different parts of the world.	CIOQ	M.Sc. – One year full-time or two years part-time
Aims to apply principles of chemical engineering to such problems as resource conservation, materials recycling and pollution abatement.	ADFHL	B.Sc. – Three years
Designed to provide a basic training for physicists in the medical, safety and environmental protection fields. Subjects ancillary to physics include radiation and pollution chemistry, economics, geography and sociology.	AGHP	B.Sc. – Three years/ M.Sc. – One year
A broad environmental education for those with particular interests in botany, geography and geology.	ADFHKL	B.Sc. – Three years
Consists of a foundation year in biology, geography and geology after which students specialize in landscape studies.	ACDHINQT	B.Sc. – Three years
Aims to demonstrate the applications of subjects such as ecology and geography to landscape design.	CDHQST	P.G. Dip. – Two years
A course consisting of units of biology, geography and geology with some mathematics and options in broader environmental matters.	A – Q	B.Sc. – Three years
Provides an opportunity for local residents to follow a practical study course in environmental matters.	A – T	Cert. – Three-year part-time course
Concerned with the interaction of land use planning, transportation systems and the environment.	CEGHIKOQT	M.Sc. – One year/ P.G. Dip. – Nine months
Examines all aspects of irrigation engineering for developing countries, from climatology to economics and design.	CDEIJMNRS	M.Sc. – One year/ P.G. Dip. – Nine months
Includes studies in mathematics, psychology, social sciences and vibration studies.	AFJO	M.Sc. – One year

UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
45 Southampton	f. Environmental Engineering	Sound and Vibration Studies	Institute of Sound and Vibration Research
	Other Relevant Courses	*Geography (B.A./B.Sc.)* *Economics (Ecological Option) (B.Sc.)*	
46 Stirling	*Relevant Courses*	*Earth and Environmental Science (B.Sc.)* *Technological Economics (Biology) (B.Sc.)*	
47 Strathclyde	a. Resource Management	Environmental Control Engineering and Resource Utilization	Civil Engineering
	b. Environmental Engineering	Environmental Engineering (Building Services) or (Occupational Hygiene)	Environmental Engineering
	c. Environmental Health	Environmental Health	Civil Engineering
	d. Environmental Health	Public Health Engineering	Civil Engineering
	Other Relevant Courses	*Hydraulics, Hydrology and Coastal Dynamics (M.Sc.)* *Traffic Engineering (M.Sc.)*	
48 Surrey	a. Environmental Health	Radiation and Environmental Protection	Physics
49 Sussex	a. Environmental Sciences	Environmental Science	School of Molecular Science

DETAILS	KEYLETTERS	STATUS
Includes an environmental engineering option.	AIJLQS	M.Sc. – One year/ P.G. Dip. – Nine months
The main theme of this course is the control and utilization of water resources although, overall, the course is designed to provide an integrated approach to environmental problems.	ACDFMPQT	M.Sc./P.G. Dip. – One or two years full-time, three years part-time
Aimed at graduates in mechanical, civil or environmental engineering who wish to specialize in environmental control in building design or in occupational hygiene.	AEFHLP	M.Sc./P.G. Dip. – One or two years
Specifically designed to meet the needs of the environmental health profession.	AEHKLMPQ	B.Sc. – Four years
Concerns the biology, chemistry and engineering of water supplies and sewage.	ALMP	M.Sc./P.G. Dip. – One year
One of the most highly developed sciences concerned with maintaining environmental quality in the face of increasing technological activity is that of Radiation Protection. This course provides a thorough grounding in Radiation Protection and shows how the technical and organizational procedures of this discipline are applicable to the broader field of Environmental Protection. In particular, the environmental effects of large-scale energy generation by both nuclear and fossil fuel power sources are studied.	ADEFGHIJKL PRST	M.Sc. – One year full-time or two years part-time
The Environmental Science major embodies a combination of courses at the molecular level; in addition to components from the traditional science subjects, the major develops an appreciation of the social and economic aspects of the interaction of man with his environment. The aim of this degree course is to provide undergraduates with a thorough scientific training and to stimulate their awareness of the balance of interactions at work in the environment.	ABFH	B.Sc. – Three years

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
49	**Sussex**	b. Science and Society	History and Social Studies of Science	Division of History and Social Studies of Science and the Science Policy Research Unit
		c. Environmental Planning	Urban and Regional Studies	Graduate Division of Urban and Regional Studies
		Other Relevant Courses	*Science, Technology and Society with Physics (B.Sc.)*	
50	**Ulster**	a. Environmental Sciences	Environmental Science	School of Biological and Environmental Studies
		b. Ecology	Ecology	School of Biological and Environmental Studies
		Other Relevant Courses	*Environmental Physics (B.Sc.)* *History of Resource Management (B.A.)*	
51	**Wales – University College of Wales, Aberystwyth**	a. Environmental Sciences	Environmental Science	Botany and Microbiology
		Other Relevant Courses	*Botany/Zoology (Environmental Biology) (B.Sc.)*	
52	**Wales – University College of North Wales, Bangor**	*Relevant Courses*	*Forestry (B.Sc.)*	
53	**Wales – University College, Cardiff**	a. Environmental Sciences	Environmental Studies	Various
		b. Other Relevant Courses	*Population Growth Studies (P.G. Dip.)*	

DETAILS	KEYLETTERS	STATUS
Courses within the M.Sc. programme concentrate on the interactions between Science and the social environment and include units on resource planning and development planning. Environmental sciences are dealt with as an essential part of education, rather than as a separate study.	BDFHJNP	M.Sc. – One year
A one-year course which aims to bring together students from various first degree disciplines who have a common interest in urban problems, planning and regional policy. The course considers the following sorts of questions: What processes bring about regional differences in living standards and rates of economic growth? How do the social areas of cities develop? How does the individual behave with respect to these areas? What is the role of the state in solving urban and regional problems? These general questions and a host of more specific ones which arise from them are tackled with the help of concepts and techniques drawn from several social science disciplines and statistics.	BCIOQ	M.A. – One year.
A broad interdisciplinary course dealing with all environmental systems (except oceans) with a strong biological emphasis.	A – T	B.Sc. – Three years
An integrated programme of ecology with units from the environmental science department.	DFHT	B.Sc. – Three years
A unified course in environmental science for those interested in physical geography, biology and ecology. There are opportunities for specialization in the final year.	ACDEFHKMST	B.Sc. – Three years
This course aims to provide a broad framework of environmental knowledge to complement the more specialized courses in the general honours degree. Environmental Studies form a one- or two-year option.	ABCDFHOPQ	B.Sc. General – One- or two-year option

	UNIVERSITY	CATEGORY	COURSE TITLE	DEPARTMENT
54	**Wales – The University of Wales Institute of Science and Technology**	a. Environmental Sciences	Environmental Science with Pure and Applied Chemistry	Chemistry
		b. Resource Management	Applied Hydrobiology	Applied Biology
		c. Resource Management	Management and Technology (Specialist Option - Ocean Resource Management)	Centre for Graduate Management Studies
55	**Wales – University College of Swansea**	*Relevant Courses*	*Environmental Biology (B.Sc.)*	
56	**Warwick**	a. Environmental Sciences	Environmental Sciences	Environmental Sciences
		Other Relevant Courses	*The Schools of Law and Politics, as part of their undergraduate Programme, run courses entitled respectively "Urban and Environmental Legal Problems" and "Political Aspects of Environmental Planning".*	
57	**York**	*Relevant Courses*	*Human and Environmental Biology (B.Sc.)* *Chemistry (Chemistry Part I, with Part II in Chemistry, Resources and the Environment) (B.Sc.)* *Conservation Studies (Dip.)* *Short four-day courses are also offered on a range of environmentally-related issues.*	

DETAILS	KEYLETTERS	STATUS
An integrated study of the interrelationships of the natural environment and industrial activity with particular reference to energy, pollution and resource management.	ADFT	B.Sc. – Three years
Deals with water supply, waste treatment, and river, lake and reservoir management, stressing biological aspects.	AHLMP	M.Sc. – One year
'Core' subjects involve management techniques and skills, with specialist studies in Ocean Resource Management, Evaluation and Technology.	DFIJKO	M.Sc. – One year full-time or 27 months part-time
Can be taken alone or in combination with biochemistry, engineering, microbiology and virology, molecular science or physics.	A – T	B.Sc. – Three years

UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section 2.2.2)																			
			(section 2.2.1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
01	a	M	Ec			X	X		X		X				X								X
02	a	M	SS		X		X						X	X	X							X	
	b	M	RM	X				X			X			X	X	X			X				
	c	B, M/D	EP		X	X						X		X						X			
	d	B	EH	X	X			X						X					X				
04	a	B,M	ES		X	X	X					X					X			X			
	b	M	RM	X				X						X	X	X							
	c	B	RM	X	X		X		X	X	X		X		X	X		X	X			X	
	d	M	RM				X						X								X		
	e	M	EP		X	X								X				X		X		X	X
	f	M	EE	X				X			X			X		X							
05	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	b	B	SS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
06	a	B	Ec				X		X						X		X						
07	a	M/O	RM			X	X					X		X									
	b	M/O	PC	X		X		X			X				X	X			X				
08	a	M	EP		X	X	X		X			X		X						X	X		
10	a	M	EE	X	X				X		X		X		X							X	
11	a	B	ES		X	X	X					X		X						X			
	b	B	EP		X	X						X		X						X			

CATEGORY KEY:

ES — Environmental Sciences
SS — Science and Society
EP — Environmental Planning
PC — Pollution Control
Ec — Ecology
RM — Resource Management
EE — Environmental Engineering
EH — Environmental Health

STATUS KEY:

B — Bachelor's Degree
M — Master's Degree
D — Post-graduate Diploma
O — Other

UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section 2.2.2)																		
			(section 2.2.1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
11	c	M	EE		X	X										X		X	X	X			
12	a	M	Ec	X			X		X		X			X	X	X						X	X
13	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	b	O	RM			X	X							X	X	X	X						
	c	O	PC	X							X				X	X							
14	a	B	ES	X	X				X	X	X		X		X	X							
	b	B	Ec	X		X	X		X	X	X			X	X	X							X
15	a	B	EE	X	X		X		X		X		X		X								
	b	M	EE	X	X		X		X		X		X		X								
16	a	M/D	EP		X	X	X	X				X		X	X					X			
	b	M/D	EP				X	X					X	X	X		X			X			
	c	M/D	EP			X		X					X	X	X		X	X		X		X	X
18	a	B	ES	X			X		X		X				X	X	X					X	X
	b	B	EP			X						X		X			X	X		X			
19	a	B	ES	X					X		X		X		X	X							X
	b	B	ES				X		X		X		X		X								X
	c	B	Ec	X			X				X				X	X							X
20	a	B	ES		X	X	X		X			X		X	X	X		X		X			
	b	M	PC	X					X		X				X		X					X	X
21	a	O	Ec			X	X		X		X												
22	a	M	EP		X	X		X				X		X		X	X	X		X	X		X
	b	M/D	EP		X	X		X				X		X		X	X	X		X		X	X

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UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section *2.2.2*)																		
			(section *2.2.1*)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
24	a	B	ES	X			X		X						X		X						
	b	B	ES	X			X		X						X		X						
	c	B	RM				X		X							X							
	d	M	RM	X			X		X					X	X	X							
	e	O	PC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
25	a	B	ES	X			X		X	X	X			X	X	X	X					X	
	b	M/D	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	c	M/D	EE		X				X				X								X		X
	d	M/D	EH	X							X				X	X			X				
26	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
27	a	M	EP		X	X						X		X		X		X	X	X			
28	a	M/D	EH																X				
29	a	B	ES				X								X	X	X						
30	a	B,M	Ec				X								X	X	X						
31	a	B	ES			X	X		X	X	X			X	X		X					X	
32	a	M	RM	X		X	X				X				X	X							
	b	M	EP			X		X		X		X		X			X	X	X	X			
	c	D	EP		X	X						X						X		X			
	d	D	EP		X	X																	
	e	O	EP		X	X						X									X		
	f	D	EP		X					X		X					X		X	X	X		
	g	M	EE								X	X			X					X			

CATEGORY KEY:
- ES — Environmental Sciences
- SS — Science and Society
- EP — Environmental Planning
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UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section *2.2.2*)																		
			(section *2.2.1*)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
34	a	B	ES			X	X		X		X				X								
35	a	M	RM			X								X									
	b	B	EP	X		X			X		X			X				X					X
	c	M	EP	X		X			X		X			X				X		X			X
	d	B	EE	X							X								X	X			
	e	O	EH	X									X						X		X		
36	a	M	SS		X				X				X	X			X					X	
	b	B	SS		X				X				X	X			X					X	
	c	M	PC	X				X		X	X			X	X				X		X		
37	a	B	ES			X	X		X		X				X								
	b	M	RM						X							X			X				
	c	M	EP						X				X		X		X				X		X
	d	B	EE	X		X					X			X				X				X	X
	e	M	EE						X							X							
	f	M/D	EH	X				X							X	X			X				
38	a	O	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	b	M	EP			X		X	X			X	X				X	X		X		X	
39	abc	B	RM/SS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
40	a	M	RM			X								X									X
	b	M	RM			X	X		X					X	X								
	c	O	RM												X								
	d	O	RM											X									
41	a	B	ES	X			X				X												
	b	D	ES	X	X	X	X		X	X	X			X	X		X		X	X		X	X

CATEGORY
- ES — Environmental Sciences
- SS — Science and Society
- EP — Environmental Planning
- PC — Pollution Control
- Ec — Ecology
- RM — Resource Management
- EE — Environmental Engineering
- EH — Environmental Health

STATUS KEY:
- B — Bachelor's Degree
- M — Master's Degree
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- O — Other

UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section 2.2.2)																			
			(Section 2.2.1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
41	c	M/M	RM			X	X						X	X								X	X
	d	M/D	EP		X	X	X	X	X				X	X			X	X		X		X	X
	e	M	EP	X		X	X						X	X		X						X	X
43	a	B	ES	X		X		X						X			X		X	X			
	b	M	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	c	M	EP			X						X						X		X			
	d	B	EE	X			X		X		X				X								
	e	B,M	EH	X						X	X								X				
44	a	B	ES	X			X		X		X			X	X								
	b	B	EP	X		X	X				X	X					X			X			X
	c	D	EP			X	X				X									X		X	X
45	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	b	C	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	c	M/D	EP			X		X		X	X	X		X				X		X			X
	d	M/D	EE			X	X	X				X	X			X	X				X	X	
	e	M	EE	X					X				X					X					
	f	M/D	EE	X								X	X		X					X		X	
47	a	M/D	RM	X		X	X		X							X			X	X			X
	b	M/D	EE	X				X	X		X				X				X				
	c	B	EH	X				X			X			X	X	X			X	X			

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UNIVERSITY	COURSE	STATUS	CATEGORY	KEYLETTERS (section *2.2.2*)																			
			(section *2.2.1*)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
47	d	M/D	EH	X											X	X			X				
48	a	M	EH	X			X	X	X	X	X	X	X	X	X				X		X	X	X
49	a	B	ES	X	X				X		X												
	b	M	SS		X		X		X		X		X				X		X				
	c	M	EP									X						X		X			
50	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	b	B	Ec				X		X		X												X
51	a	B	ES	X		X	X	X	X		X			X		X						X	X
53	a	B	ES	X	X	X	X		X		X							X	X	X			
54	a	B	ES	X			X		X														X
	b	M	RM	X							X				X	X			X				
	c	M	RM				X		X			X	X	X				X					
56	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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4.0 The Polytechnic Compendium

4.1 Presentation I

	POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
01	**City of Birmingham**	*Relevant Courses*	*Transport Administration (P.G. Dip.)*	
02	**Bristol**	a. Environmental Health	Environmental Health	Construction and Environmental Health
		b. Environmental Health	Environmental Health	Construction and Environmental Health
03	**Central London**	a. Environmental Planning	Various	School of Environment, Research Centre
		Other Relevant Courses	*Air and Water Pollution Control (P.G. Dip.)– see entry for* Middlesex Polytechnic*). Transportation Planning and Management (M.Sc.)*	
04	**City of London**	a. Resource Management	Applied Biology (Estuaries and Inland Waters)	Biological Sciences
05	**Hatfield**	*Relevant Courses*	*Environmental Studies (B.Sc.)*	
06	**Huddersfield**	a. Environmental Sciences	Human Ecology	Life Sciences
07	**Kingston**	a. Environmental Sciences	Geography	Geography
		b. Environmental Engineering	Civil Engineering	Civil Engineering
08	**Lanchester**	a. Resource Management	Geography	Faculty of Applied Science
		b. Resource Management	Combined Science	Faculty of Applied Science

DETAILS	KEYLETTERS	STATUS
Designed to provide entry to the profession of Environmental Health Officer in Local Government and allied fields, e.g. Hygiene Officers in industry and Environmental Health appointments overseas.	ADEHJKLT	B.Sc. – Four-year sandwich course
Aimed primarily at future local authority environmental health officers. Students are approved as paid pupils by local authorities.	AEMP	Dip. – Three-year sandwich course
Courses are available to practitioners and external students and include coverage of the application and monitoring of solar heating systems to houses, agriculture, horticulture and fishculture; the design of buildings for the handicapped; and the use of recreational facilities in urban areas.	CDFJPQ	Two-day courses
Designed for the water industry, this course emphasizes modern techniques of assessing physical, chemical and biological parameters in water.	AHKLM	H.N.C. – Two-year part-time course
Interdisciplinary course focusing on the interactions between man and the environment. The course takes a broad approach to environmental problems and management and includes elements of economics and sociology.	CDFGKNPQR	B.Sc. – Four-year sandwich course
Elements relevant to environmental management include pedology, landform science, biogeography, climatology and recreational management.	CDQ	B.Sc. – Three years
The final year of this course contains a range of optional subjects which occupy about 40 per cent of the formal teaching programme. Of the five subjects offered, Public Health Engineering, Water Resources Engineering and Traffic Engineering all have environmental implications.	MOP	B.Sc. – Four-year sandwich course
A modular degree which offers courses on resource management and the geography of development as final year options. Students are also able to take a course on environmental chemistry in the second year.	ACDFHKNQS	B.Sc. – Four-year sandwich course
The Geography options noted above are also available in this modular degree scheme.	ACDFHKNQS	B.Sc. – Four-year sandwich course

	POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
08	**Lanchester**	c. Resource Management	Modern Studies	Faculty of Social Science
		d. Environmental Planning	Urban and Regional Planning	Faculty of Social Science
		e. Environmental Planning	Local Planning	Faculty of Social Science
		f. Environmental Planning	Regional Planning	Faculty of Social Science
09	**Leeds**	a. Environmental Health	Environmental Health	School of Constructional Sciences
10	**Leicester**	a. Environmental Sciences	Science and the Environment	Life Sciences
11	**Liverpool**	a. Environmental Planning	Environmental Planning	Town and Country Planning
12	**Middlesex**	a. Science and Society	Science and Technology	Faculty of Social, Economic and Environmental Studies
		b. Resource Management	Conservation Policy	Social, Economic and Environmental Studies
		c. Resource Management	Management and Water Quality Control	Faculty of Engineering, Science and Mathematics

DETAILS	KEYLETTERS	STATUS
Options in Urban Geography and Land Use and Conservation are available in the final year. The latter focuses on man's use of resources and the ways in which resources are allocated in relation to political, economic and natural systems.	CDFKQR	B.A. – Three years
Designed to give a broad education in modern planning theory and practice. Includes elements in government, economics, sociology, design and environmental problems.	CDIKOQT	B.A. – Five-year sandwich course
Focuses on the problems facing local planners in policy development and implementation with the aim of providing planners with an interdisciplinary and multilevel approach to problem solving.	CIQ	P.G. Dip. – One year full-time or two or three years part-time
Aims to provide education to a high level of competence in regional planning and government and in national and European environmental policy.	CEKQR	M A. – One year full-time or nine months full-time and one year part-time
A broad-based course where students can specialize in air pollution control, noise control or occupational hygiene in the final year.	ABEHJKLPS	B.Sc. – Four-year sandwich course
Science education in the framework of a study of man in relation to his environment. Demonstrates interaction of physical, chemical and biological factors with economic and social aspects of man's interaction with his environment.	A – N, QST	B.Sc. – Three years
The Department offers a variety of courses dealing with the major facets of environmental planning.	BCDEIKNOQST	B.A. – Three years/ H.N.C. – Two years part-time/P.G. Dip. – Two-year sandwich course or three years part-time plus various short courses
Deals with the interactions between social sciences, natural sciences and technology in the modern world and includes units on industrial and economic development and planning.	A – T	B.Sc. – Four years
Examines current environmental policies from four viewpoints and includes units on conservation philosophy and conservation policies in rural and urban areas.	CDH	P.G. Dip. – One year part-time
A short course primarily intended for students from developing countries.	KM	Advanced course – four weeks

	POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
12	**Middlesex**	d. Pollution Control	Air Pollution Control	Faculty of Engineering, Science and Mathematics
		e. Pollution Control	Air and Water Pollution Control	Faculty of Engineering, Science and Mathematics
		f. Environmental Health	Community Water Supply and Public Health	Faculty of Engineering, Science and Mathematics
		g. Environmental Health	Water Supply and Public Health Engineering	Faculty of Engineering, Science and Mathematics
		Other Relevant Courses	*Traffic Engineering and Transportation Planning (P.G. Dip.)* *Economics and Geography (B.A.)* *Geography (B.A./B.Sc.)* *Social Science (Geography and Planning Option) (B.A.)* *In response to requests from developing countries, a number of educational and training schemes are being implemented in the following areas:* *(a) Water Supply Engineering* *(b) Water Resource Technology* *(c) Public/Environmental Health Engineering* *(d) Planning and Management in Water Industry.*	
13	**Newcastle Upon Tyne**	*Relevant Courses*	*Environmental Engineering (Dip.)* *Environmental Technology (Dip.)* *Combined Studies (Environmental Studies) (B.A.)*	
14	**North East London**	a. Environmental Sciences	Life Sciences	Applied Biology, Biological Science and Chemistry
15	**North London**	a. Resource Management	Geography	Geography
		b. Environmental Planning	Town Planning	Faculty of Environment

DETAILS	KEYLETTERS	STATUS
Intended for environmental health inspectors and others concerned with air pollution control.	AEGLP	Dip. — One year part-time
An application of scientific and technical principles to the control of pollution supported by related legal studies. This course is offered jointly with the Polytechnic of Central London.	AEGLMP	P.G. Dip.—18 months part-time
A training programme specifically designed for WHO* Fellows from Africa	MP	Training Programme — six months
Attended chiefly by government-sponsored Fellows from developing countries. A practically orientated course providing a study of water supply techniques and public health engineering practice.	MP	Dip. — 12 weeks
The above departments co-operate in offering courses in ecophysiology, disease, food resources, genetics and pollution.	ADFP	B.Sc. — Four years part-time
A geography course integrating studies in human and physical geography around a central theme of environmental management, resources and development planning.	ABCDFGHIK MNQR	B.Sc. — Three years
Encourages a broad view of planning knowledge and enables effective use to be made of this in the realization of the social and environmental planning processes.	CEGHIKQ	P.G. Dip. — One year full-time + one year part-time or three years part-time

*World Health Organization

POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
16 **North Staffordshire**	a. Environmental Sciences	Chemistry	Chemistry
	b. Environmental Sciences	Combined Sciences	Chemistry
	c. Environmental Sciences	Chemistry	Chemistry
	d. Environmental Sciences	Chemical Trace Analysis	Chemistry
	e. Science and Society	Modern Studies: International Relations Option	International Relations and Politics
	f. Science and Society	Business Studies	Business and Legal Studies
	g. Resource Management	Geography	Geography and Sociology
	h. Environmental Planning	Mathematical Analysis for Business	Mathematics
17 **Oxford**	a. Environmental Sciences	Science	Various

DETAILS	KEYLETTERS	STATUS
Includes both theoretical and practical environmental options which are taken in conjunction in the second year of study. Aspects covered include the toxic hazards of chemicals, environmental impacts, air and water pollution and industrial waste and recycling.	ADFGHLMN PST	H.N.D. – Two years
The third year chemistry course contains a section on environmental chemistry which includes studies of hazards from toxic substances, industrial waste disposal, resource utilization and recycling, and air and water pollution.	ADFGHLMN PST	B.Sc. – Three years
Part II includes sections on pollution and effluent control and hazards in the work environment.	AH	Grad. R.I.C.
Contains options in environmental analysis, food and drugs, and industrial analysis.	L	P.G. Dip. – 16 months part-time
This option covers international environmental matters in both a general and particular way. Generally, pollution and population as international political issues are covered in two courses: "Structure and process in the State System" and "Structure of World Society". More particularly, the role of pollution as a factor in processes of international co-operation is covered in a course entitled "International Organization".	RS	B.A. – Three years
A 24-week course offered in the first year is designed to stimulate discussion of the responsibilities of business to the public and to the environment. The problems of growth, population, waste, food and the impact of business on the environment are studied in as much depth as possible.	ABDHIK	B.A. – Three years
Includes a wide range of courses related to the use, misuse, management and planning of resources and the environment as a whole. Advanced optional courses cover areas indicated by the keyletters shown, while the choice of optional courses in the second and third years allows specialization in the study of developing countries.	CDIOQ	B.Sc. – Three years
Mathematical treatments are given to problems arising from the location of industrial concerns, the efficiency of transportation and the modelling or simulation of the environment.	IOT	B.Sc. – Three years
A modular degree allowing specialization in either environmental biology, geology and environment, or human biology. Units of environmental significance include environmental planning, man and environment, conservation ecology and human health	ACDFP	B.Sc. – Three years/ Dip. H.E. – Two years

	POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
17	**Oxford**	b. Environmental Planning	Planning Studies	Town Planning
		c. Environmental Planning	Urban Planning Studies	Town Planning
		d. Environmental Planning	Town Planning	Town Planning
		e. Environmental Planning	Planning	Town Planning
		f. Environmental Planning	Urban Planning	Town Planning
18	**Plymouth**	a. Environmental Sciences	Environmental Sciences	Environmental Sciences
		b. Environmental Sciences	Biological Sciences	Environmental Sciences
		c. Environmental Sciences	Applied Biology	Environmental Sciences

DETAILS	KEYLETTERS	STATUS
Provides a broad education in planning and opportunities for specialization in environmental design, urban development, urban policy, rural development, and regional development.	CDEIKNOQST	B.A. – Three years
A course for graduates with good planning degrees or experience. It follows similar lines as the second year of the graduate diploma course (see 'f' below) and offers major areas of specialization in urban development, regional development, social planning and urban planning economics. A dissertation is also submitted.	CKNQS	M.Sc. – One year
Intended for graduates and professionals (with social science or design backgrounds) working locally who wish to study the principles and methods of planning in urban and rural areas.	CEIKNOQST	P.G. Dip. – Three years part-time
A course for graduates in planning studies or an equivalent qualification designed to extend skills and knowledge to a professional level. The course is intended to develop planning, management and research skills with opportunities for specialization in urban conservation and renewal, housing, transport, industrial and commercial development and rural resource management.	CEIKNOQS	P.G. Dip. – One year
A course intended for social science or design graduates wishing to specialize in urban planning and control. Major areas of specialization offered are: urban development, regional development, social planning and urban planning economics.	CEIKNOQST	P.G. Dip. – Two years
An interdisciplinary course based on Geography, Geology, Chemistry, Biology, Social Science and Mathematics. Resource studies form the compulsory core of the degree, with options in Human Ecology, Environmental Chemistry and Environmental Geology.	ACDFKLMQST	B.Sc. – Three years
The degree emphasizes the environmental aspects and implications of biology while enabling students to specialize at the cellular, physiological or ecological level of organization. Special options include Fish Farming, Pollution Studies, Crop Protection, Toxicology and Microbiology.	ADKLT	B.Sc. – Three years
A technological course including compulsory Environmental Biology in Part 1 and Biological and Environmental Measurement in Part II. Options include Pollution Studies, Physiology, Plant Physiology, Electron Microscopy, Parasitology and Microbiology.	ALMS	H.N.D.

POLYTECHNIC	CATEGORY	COURSE TITLE	DEPARTMENT
19 **Sheffield City**	a. Environmental Planning	Urban Land Economics	Urban and Regional Studies
	b. Pollution Control	Chemical Pollution Monitoring	Chemistry
	Other Relevant Courses	*Environmental Resources (B.A. — commencing 1977)* *Water Engineering and Pollution Control(P.G. Dip.)*	
20 **Polytechnic of The South Bank**	a. Environmental Health	Occupational Hygiene	Faculty of Environmental Science and Technology
	Other Relevant Courses	*Environmental Engineering (B.Sc./Dip.)* *Environmental Engineering and Design (P.G. Dip.)*	
21 **Sunderland**	a. Environmental Sciences	Environmental Studies	Faculty of Humanities
22 **Teeside**	*Relevant Courses*	*Water Resources and Utilization (M.Sc.)*	
23 **Thames**	a. Environmental Health	Environmental Health	School of Science and Mathematics
24 **The Polytechnic of Wales — Glamorgan**	a. Resource Management	Urban Estate Management	Estate Management and Quantity Surveying

DETAILS	KEYLETTERS	STATUS
A study of the economic origins, processes and effects of urban growth.	CEGIQT	B.Sc. – Four-year sandwich course
Designed to equip a wide range of persons employed in industrial and public service organizations with a substantial basic knowledge and understanding of the subject.	AKL	P.G. Dip. – One year part-time
Provides training for the profession of occupational hygiene. It spans a range of environmental stresses such as chemical pollution, dusts, noise, vibration, ionizing radiation and extremes of temperature and pressure.	ABELP	B.Sc. – Three years
The first year introduces the techniques and concepts required for a study of the environment; subsequent courses given on resource utilization, pollution, degradation, the interaction of man and the environment, and the quantitative aspects of analysis.	ACDFHNQ	B.Sc. – Three years
Entry requirements are biology at 'O' level and a natural science subject at 'A' level.	ALMP	B.Sc. – Four-year sandwich course
Consists of five main areas of study: urban and regional economics, valuation and taxation, land and building laws, management and the physical and social environment.	EGK	B.Sc. – Four-year sandwich course

4.2 Presentation II

POLYTECHNIC	COURSE	STATUS	CATEGORY	KEYLETTERS (section 2.2.2)																			
			(section 2.2.1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
02	a	B	EH	X			X	X			X		X	X	X								X
	b	O	EH	X				X								X			X				
03	a	O	EP			X	X		X				X						X	X			
04	a	O	RM	X							X			X	X	X							
06	a	B	ES			X	X		X	X				X			X		X	X	X		
07	a	B	ES			X	X													X			
	b	B	EE													X		X	X				
08	a	B	RM	X		X	X		X		X			X			X			X		X	
	b	B	RM	X		X	X		X		X			X			X			X		X	
	c	B	RM			X	X		X					X						X	X		
	d	B	EP			X	X					X		X				X		X			X
	e	D	EP			X						X								X			
	f	M	EP			X		X						X						X	X		
09	a	B	EH	X	X			X			X		X	X	X				X			X	
10	a	B	ES	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X
11	a	B,D,O,O	EP		X	X	X	X				X		X			X	X		X		X	X
12	a	B	SS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	b	D	RM			X	X				X												
	c	O	RM											X		X							

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			(section 2.2.1)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
12	d	O	PC	X				X		X					X				X				
	e	D	PC	X				X		X					X	X			X				
	f	O	EH													X			X				
	g	O	EH													X			X				
14	a	B	ES	X			X		X										X				
15	a	B	RM	X	X	X	X		X	X	X	X		X		X	X			X	X		
	b	D	EP			X		X		X	X	X		X						X			
16	a	O	ES	X			X		X	X	X				X	X	X		X			X	X
	b	B	ES	X			X		X	X	X				X	X	X		X			X	X
	c	O	ES	X							X												
	d	D	ES												X								
	e	B	SS																		X	X	
	f	B	SS	X	X		X				X	X		X									
	g	B	RM			X	X					X						X		X			
	h	B	EP									X						X					X
17	a	B,O	ES	X		X	X		X										X				
	b	B	EP			X	X	X				X		X			X	X		X		X	X
	c	M	EP			X								X			X			X		X	
	d	D	EP			X		X				X		X			X	X		X		X	X
	e	D	EP			X		X				X		X			X	X		X		X	

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POLYTECHNIC	COURSE	STATUS	CATEGORY	KEYLETTERS (section *2.2.2*)																		
			(section *2.2.1*)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
17	f	D	EP			X		X				X		X			X	X		X		X	X
18	a	B	ES	X		X	X		X					X	X	X				X		X	X
	b	B	ES	X			X							X	X								X
	c	O	ES	X											X	X						X	
19	a	B	EP			X		X		X		X								X			X
	b	D	PC	X										X	X								
20	a	B	EH	X	X			X							X				X				
21	a	B	ES	X		X	X		X		X						X			X			
23	a	B	EH	X											X	X			X				
24	a	B	RM					X		X				X									

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5.0 Overview

5.1 Levels of Instruction

The compendium makes reference to 250 programmes of study in 81 university and polytechnic establishments in the United Kingdom.* Although not fully comprehensive, the courses mentioned are felt to represent the bulk of programmes relevant to environmental management as defined by the institutions running them. Brief details are provided for 178 of these courses.

A breakdown is given in Tables 3 and 4 of the spread of courses between first degree, post-graduate and other levels of instruction, e.g. short training courses, diplomas in higher education, post-experience diplomas, adult education certificates and the like.

Table 3, The Status of Courses Presented in Universities and Polytechnics (all known courses)

	First Degrees	Post-graduate Degrees	Others	Total
Universities & Polytechnics	122	99	29	250
Universities	87	81	12	180
Polytechnics	35	18	17	70

Table 4, The Status of Courses presented in Universities and Polytechnics (course details available)

	First Degrees	Post-graduate Degrees	Others	Total
Universities & Polytechnics	77	78	23	178
Universities	49	66	10	125
Polytechnics	28	12	13	53

The relative dearth of short training programmes suggests scope for development in this area. This is especially so, given the rich pool of educational resources which clearly exists in universities and polytechnics in the field of environmental education in general.

5.2. Environmental Education Categories

It was noted in Section *2.2.1.* that courses in the compendium were assigned to eight separate, but by no means mutually exclusive, environmental categories. Given the somewhat arbitrary assignment of courses to categories, it is helpful for purposes of analysis to compress the eight categories into four broader ones. How these new categories have been derived and their educational emphases are described in Table 5.

*Post-graduate Masters and Diplomas are not distinguished as separate when the programmes followed are for the most part identical.

Table 5, Environmental Education Categories

New Category	Derived from (see section *2.2.1*)	Educational Emphasis
Environmental Sciences	Environmental Sciences Ecology	Natural Sciences
Environmental Management	Science and Society Resource Management	Management skills
Environmental Planning	Environmental Planning	Planning and Design skills
Environmental Protection	Environmental Engineering Pollution Control Environmental Health	Technical skills

In considering the distribution of courses among these categories as illustrated in Figure 1, a number of points emerge:

(i) Overall—for all university and polytechnic courses for which details were available—the split between the four categories is roughly equal, with a slightly greater emphasis on Environmental Sciences.

(ii) Comparison of all first degree and post-graduate courses indicates that while by far the largest category at first degree level is Environmental Sciences, the Environmental Planning category dominates the post-graduate level, with Environmental Sciences the smallest grouping.

(iii) For university courses alone, the Environmental Sciences category again dominates, the remaining courses being distributed equally amongst the other categories.

(iv) At the university first degree level, the majority of courses fall within the Environmental Sciences category, in contrast to the post-graduate level where this is again the smallest category, the size of the other three categories being roughly equal.

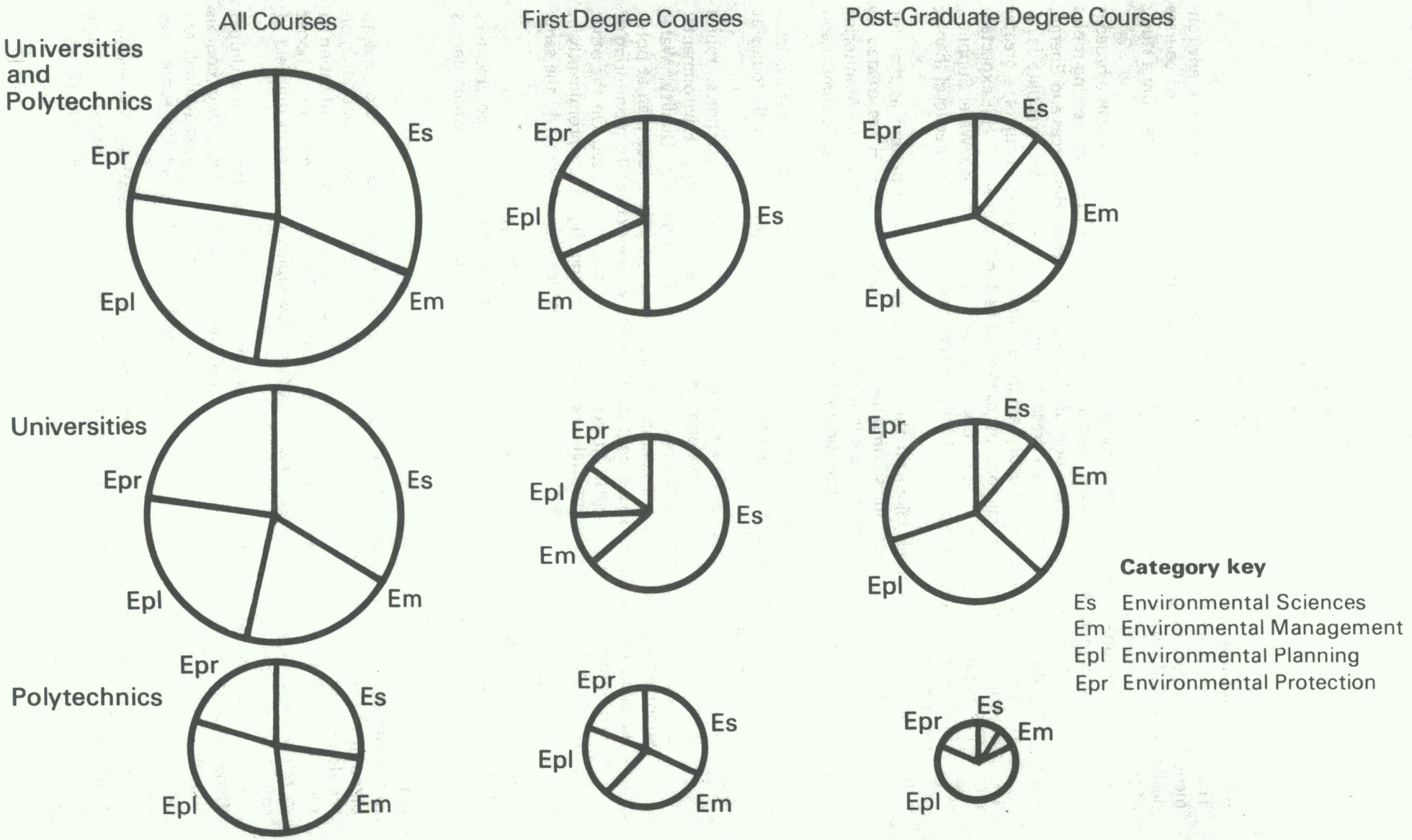
(v) Polytechnic courses are divided approximately equally among the four categories with the Environmental Planning category being marginally greater.

(vi) First degree courses at polytechnics fall mainly into the Environmental Sciences and Environmental Management categories, whereas the majority of the small sample of post-graduate degree courses lie in the Environmental Planning category.

(vii) There appear to be significant differences between first degree university courses and polytechnic courses. Whereas the Environmental Sciences category predominates for the universities, the size of this category in the polytechnics is narrowed considerably by an increase in Environmental Management and, to a lesser extent, Environmental Planning courses.

(viii) Any meaningful comparison between post-graduate courses at universities and at polytechnics is limited by the lack of detail on the latter. However, if the 12 post-graduate polytechnic courses do form a representative sample, the increased emphasis on Environmental Planning courses at the expense of Environmental Management and Protection courses is the main difference.

Figure 1: The distribution of courses among environmental education categories



*Areas of the circles shown are proportional to the number of courses detailed in the compendium

5.3 The Keyletter Index

The Keyletter Index referred to in Section *2.2.2.* may also be used to review environmental education in the United Kingdom. Figure 2 shows the percentage of courses dealing in detail with each keyletter topic. Again, a number of points arise from a study of this Figure.

(i) Comparison of all first degree and post-graduate degree courses reveals a broader course content at first degree level and a large number of courses treating topics A D F H (Pollution, Conservation of National Resources, Resources and Energy, Environmental Damage) in contrast to the number at the post-graduate level. However, in view of the broader nature of most first degree courses, a greater coverage of environmental concepts as exemplified in topics A D F H is expected. In the same way, topics G M N (Cost of Environmental Damage, Water Supplies, Environmental Goals) are treated by more courses at the first degree level than at the post-graduate level.

(ii) The university figures taken on their own reveal the same pattern as that for universities and polytechnics combined. Again, topics A D F H are treated by fewer courses at the post-graduate level and topics G M N (and also L - Monitoring Environmental Quality) trail considerably at the post-graduate level in comparison with the first degree level.

(iii) Taking polytechnic courses on their own, the small number of courses available at the post-graduate level precludes any meaningful comparison with topics at the undergraduate level.

(iv) Comparing all courses at universities with all those at polytechnics, topics B F H J L M (Industrial Development, Resources and Energy, Environmental Damage, Appropriate Technology, Monitoring Environmental Quality, Water Supplies) are treated by considerably more courses at universities than at polytechnics. For example, 51 per cent of university courses cover the monitoring of environmental quality against 30 per cent of polytechnic courses. On the other hand, topics E Q (Environmental Law, Urban Planning) figure less prominently in syllabi of university courses. All other topics feature in approximately the same percentage of courses in both types of institution.

(v) For first degree courses, the pattern is very similar to (iv) above.

(vi) A comparison of post-graduate courses at universities with those at polytechnics is again precluded by the small number of polytechnic courses for which details were available.

5.4. Final Remarks

In the introduction to this compendium, it was said that its purpose was twofold: first, to pinpoint relevant expertise available in the United Kingdom for possible collaboration on the design and implementation of new courses and, second, to minimize duplication in the content of the new courses with courses already existing. At the same time, it hoped to relate the information gathered to the needs of developing countries in the field of education and training.

In the first instance, there is obviously a wealth of expertise available in the United Kingdom upon which to draw. This is reflected in the wide range and variety of courses already on offer. The compendium also shows that the majority of courses available are for a minimum of one year and very frequently extend over three years and sometimes four.

The compendium reveals at the same time that there are comparatively few training programmes of short duration. Furthermore, only 30 courses are noted as being specifically relevant to developing countries (see Table 6) and of these 30, only 10 are of short duration. This suggests a gap which might usefully be filled.

Figure 2: The percentage of courses treating keyletter topics

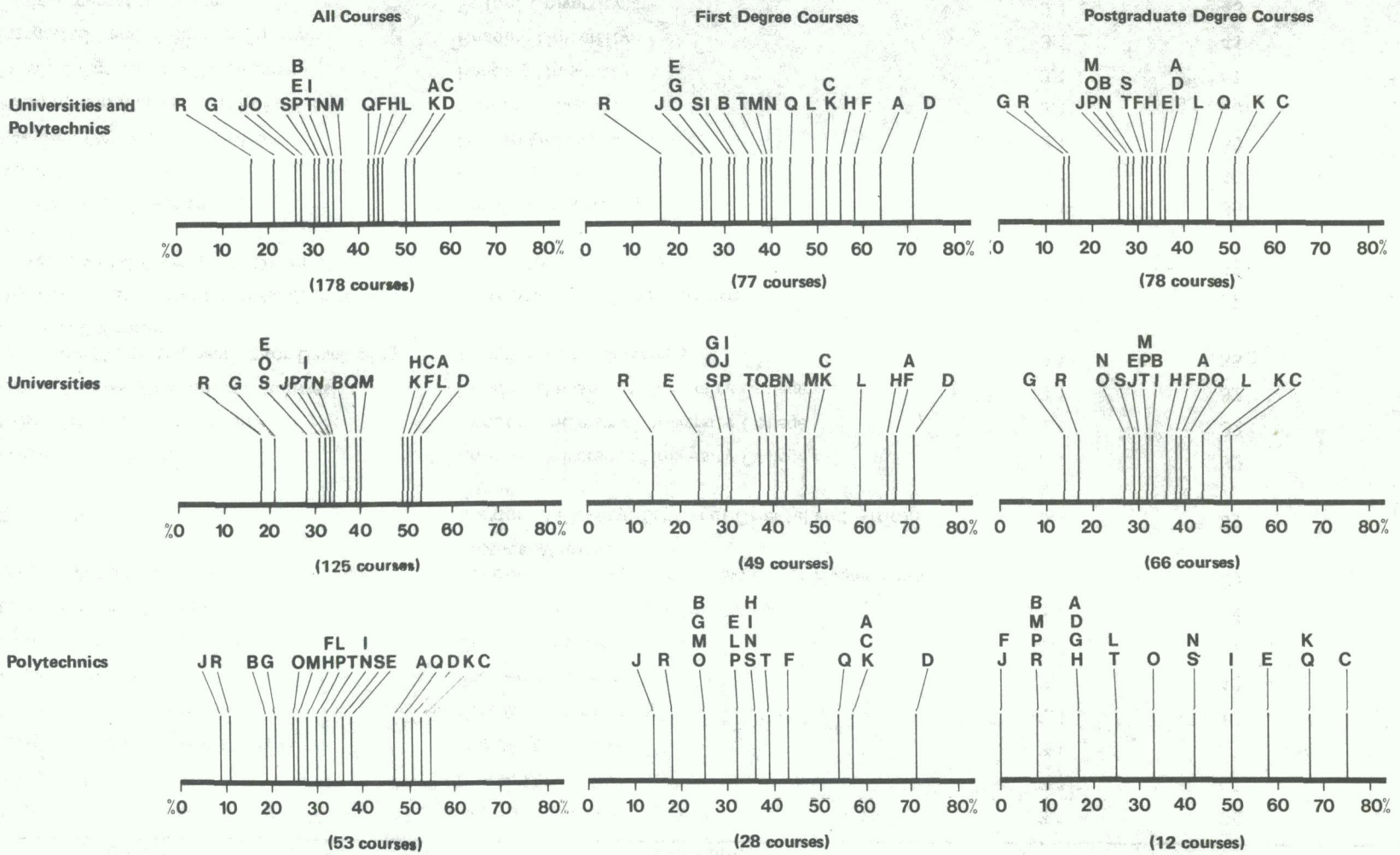


Table 6, Courses noted as being specifically relevant to Developing Countries

	Course Title	Institution	Section No.	Institute No.	Course No.
1	Environmental Sciences	Bradford University	3.1	05	a
2	Weed Biology	Brunel University	3.1	07	a
3	Civil Engineering in Hot Climates	Dundee University	3.1	11	c
4	Environmental Sciences	East Anglia University	3.1	13	a
5	Marine Pollution	East Anglia University	3.1	13	c
6	Civic Design	Liverpool University	3.1	22	a
7	Environmental Pollution	London University: Chelsea College	3.1	24	e
8	Medical Programme	London University: London School of Hygiene and Tropical Medicine	3.1	28	a
9	Geography	London University: School of Oriental and African Studies	3.1	31	a
10	Development Planning	London University: University College	3.1	32	c
11	Urban Development Planning	London University: University College	3.1	32	e
12	Urban Studies (Developing Countries)	London University: University College	3.1	32	f
13	Water and Waste Engineering for Developing and Hot Countries	Loughborough University	3.1	35	e
14	Agricultural and Environmental Science	Newcastle upon Tyne University	3.1	37	a
15	Environmental Planning for Developing Countries	Nottingham University	3.1	38	b
16	The Control of Technology	The Open University	3.1	39	b
17	Agricultural Economics	Oxford University	3.1	40	a
18	Research Methods in Forestry	Oxford University	3.1	40	c
19	Planning and Management in Forestry	Oxford University	3.1	40	d
20	Tropical Agricultural Development	Reading University	3.1	41	c
21	Integrated Land Resources Survey	Reading University	3.1	41	e
22	Environmental Resources	Salford University	3.1	43	b
23	Urban Studies	Salford University	3.1	43	c
24	Irrigation Engineering	Southampton University	3.1	45	d
25	Management and Water Quality Control	Middlesex Polytechnic	4.1	12	c

Table 6, Courses noted as being specifically relevant to Developing Countries

	Course Title	Institution	Section No.	Institute No.	Course No.
26	Conservation and Utilization of Plant Genetic Resources	Middlesex Polytechnic	4.1	12	d
27	Community Water Supply and Public Health	Middlesex Polytechnic	4.1	12	f
28	Water Supply and Public Health Engineering	Middlesex Polytechnic	4.1	12	g
29	Variety of short Courses	Middlesex Polytechnic	4.1	12	h
30	Geography	North Staffordshire Polytechnic	4.1	16	g

6.0 References

1. See, for example, definitions given in:

   OECD/CERI 1975 *Environmental Education at University Level: Trends and Data.* OECD, Paris

   Swann, J.A. and Stapp, W.B. Eds. 1974 *Environmental Education: Strategies toward a more livable future.* Wiley, New York

   Emmelin, L. 1975 *Environmental Education at University Level,* Council of Europe, Strasbourg

   Linke, R.D. 1974 *Environmental Education in Australia.* Report submitted to Advisory Committee on Research and Development in Education, Canberra

2. Newbould, P.J. 1976 *In Environmental Education at University Level: Trends and Data.* OECD/CERI, Paris

3. Emmelin, L. 1975 *Environmental Education at University Level,* Council of Europe, Strasbourg and Environmental Education at University Level, *Ambio,* **6** No.4, 201-209

4. Private communication 1977 *International Programme in Environmental Management Education,* Centre d'Etudes Industrielles in co-operation with United Nations Environment Programme, Conches-Geneva

ANNEX I

Abbreviations

B.A.	Bachelor of Arts
B.Phil.	Bachelor of Philosophy
B.Sc.(Eng.)	Bachelor of Science (Engineering)
B.Sc.	Bachelor of Science
B.Soc.Sc.	Bachelor of Social Science
B.Tech.	Bachelor of Technology
Cert.	Certificate (Post-graduate and other)
Dip.	Diploma (not specifically post-graduate)
Dip. H.E.	Diploma of Higher Education
Grad. R.I.C.	Graduate of the Royal Institute of Chemists
H.N.C.	Higher National Certificate
H.N.D.	Higher National Diploma
M.A.	Master of Arts
M.Agr.Sc.	Master of Agricultural Science
M.C.D.	Master of Civic Design
M.Phil.	Master of Philosophy
M.Sc.	Master of Science
M.Tech.	Master of Technology
M.T.D.	Master of Transport Design
Ph.D.	Doctor of Philosophy
P.G. Dip.	Post-graduate Diploma

ANNEX II

Addresses of United Kingdom Universities and Polytechnics listed in the compendium

(a) Universities

01	University of Aberdeen	Aberdeen, Scotland AB9 1FX
02	University of Aston in Birmingham	Gosta Green, Birmingham B4 7ET
03	University of Bath	Claverton Down, Bath BA2 7AY
04	University of Birmingham	P.O. Box 363, Edgbaston, Birmingham B15 2TT
05	University of Bradford	Bradford, West Yorkshire BD7 1DP
06	University of Bristol	Senate House, Tyndall Avenue, Bristol BS8 1TH
07	Brunel University	Uxbridge, Middlesex UB8 3PH
08	University of Cambridge	University Registry, The Old Schools, Cambridge CB2 1TN
09	The City University	St John Street, London EC1V 4PB
10	Cranfield Institute of Technology	Cranfield, Bedford MK43 0AL
11	University of Dundee	Dundee, Scotland DD1 4HN
12	University of Durham	Old Shire Hall, Durham DH1 3HP
13	University of East Anglia	Norwich NR4 7TJ
14	University of Edinburgh	Old College, South Bridge, Edinburgh EH8 9YL
15	University of Exeter	Exeter EX4 4QJ
16	Heriot-Watt University	Chambers Street, Edinburgh EH1 1HX
17	University of Hull	Hull HU6 7RX
18	University of Kent at Canterbury	The Registry, The University, Canterbury CT2 7NZ
19	University of Lancaster	University House, Lancaster LA1 4YW
20	University of Leeds	Leeds LS2 9JT
21	University of Leicester	Leicester LE1 7RH
22	University of Liverpool	P.O. Box 147, Liverpool L69 3BX
23	University of London, Bedford College	Inner Circle, Regent's Park, London NW1 4NS
24	University of London, Chelsea College	Manresa Road, London SW3 6LX
25	University of London, Imperial College of Science and Technology	South Kensington, London SW7 2AZ
26	University of London, King's College	The Strand, London WC2R 2LS
27	University of London, London School of Economics and Political Science	Houghton Street, London WC2A 2AE
28	University of London, London School of Hygiene and Tropical Medicine	Keppel Street, London WC1E 7HT
29	University of London, Queen Mary College	Mile End Road, London E1 4NS
30	University of London, Royal Holloway College	Egham Hill, Egham, Surrey TW20 0EX
31	University of London, School of Oriental and African Studies	Malet Street, London WC1E 7HP
32	University of London, University College	Gower Street, London WC1E 6BT
33	University of London, Westfield College	Kidderpore Avenue, Hampstead, London NW3 7ST
34	University of London, Wye College	Wye, Ashford, Kent TN25 5AH
35	Loughborough University of Technology	Loughborough LE11 3TU
36	University of Manchester	Manchester M13 9PL
37	University of Newcastle upon Tyne	Newcastle upon Tyne NE1 7RU
38	University of Nottingham	Nottingham NG7 2RD
39	The Open University	Walton Hall, Milton Keynes MK7 6AA
40	University of Oxford	University Offices, Wellington Square, Oxford OX1 2JD
41	University of Reading	Whiteknights, Reading RG6 2AH

42	Royal College of Art	Kensington Gore, London SW7 2EU
43	University of Salford	Salford M5 4WT
44	University of Sheffield	Sheffield S10 2TN
45	University of Southampton	Highfield, Southampton SO9 5NH
46	University of Stirling	Stirling, Scotland FK9 4LA
47	University of Strathclyde	Royal College, 204 George Street, Glasgow, Scotland G1 1XW
48	University of Surrey	Guildford, Surrey GU2 5XH
49	University of Sussex	Falmer, Brighton BN1 9RH
50	The New University of Ulster	Coleraine, County Londonderry, Northern Ireland BT52 1SA
51	University of Wales, University College of Wales	Aberystwyth, Dyfed SY23 2AX
52	University of Wales, University College of North Wales	Bangor, Gwynedd LL57 2DG
53	University of Wales, University College	P.O. Box 78, Cardiff CF1 1XL
54	University of Wales Institute of Science and Technology	Cardiff CF1 3NU
55	University of Wales, University College of Swansea	Singleton Park, Swansea, West Glamorgan SA2 8PP
56	University of Warwick	Coventry CV4 7AL
57	University of York	Heslington, York YO1 5DD

(b) Polytechnics

01	City of Birmingham Polytechnic	Perry Barr, Birmingham B42 2SU
02	Bristol Polytechnic	Coldharbour Lane, Bristol BS16 1Y
03	The Polytechnic of Central London	309 Regent Street, London W1R 8AL
04	City of London Polytechnic	117-119 Houndsditch, London EC3A 7BU
05	Hatfield Polytechnic	P.O. Box 109, Hatfield, Hertfordshire AL10 9AB
06	Huddersfield Polytechnic	Queensgate, Huddersfield HD1 3DH
07	Kingston Polytechnic	Penrhyn Road, Kingston upon Thames KT1 2EE
08	Lanchester Polytechnic	Priory Street, Coventry CV1 5FB
09	Leeds Polytechnic	Calverley Street, Leeds LS1 3HE
10	City of Leicester Polytechnic	P.O. Box 143, Leicester LE1 9BH
11	Liverpool Polytechnic	1 Rumford Place, Liverpool L3 9RH
12	Middlesex Polytechnic	82-88 Church Street, Edmonton, London N9 9PD
13	Newcastle upon Tyne Polytechnic	Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST
14	North East London Polytechnic	Romford Road, London E15 4LZ
15	The Polytechnic of North London	Holloway Road, London N7 8DB
16	North Staffordshire Polytechnic	College Road, Stoke-on-Trent ST4 2DE
17	Oxford Polytechnic	Headington, Oxford OX3 0BP
18	Plymouth Polytechnic	Drake Circus, Plymouth PL4 8AA
19	Sheffield City Polytechnic	Pond Street, Sheffield S1 1WB
20	The Polytechnic of the South Bank	Borough Road, London SE1 0AA
21	Sunderland Polytechnic	Chester Road, Sunderland, Tyne and Wear SR1 3SD
22	Teesside Polytechnic	Borough Road, Middlesbrough, Cleveland TS1 3BA
23	Thames Polytechnic	Wellington Street, Woolwich, London SE18 6PF
24	The Polytechnic of Wales	Llantwit Road, Treforest, Pontypridd, Glamorgan CF37 1DL

ANNEX III

Select Bibliography

The following list gives the reference sources in which the majority of courses mentioned in this compendium were first identified:

1. Directory of First Degree Courses, 1977-78 (Council for National Academic Awards) London.
2. Directory of Further Education. (Hobsons Press (Cambridge) Limited)
3. Directory of Post-graduate Courses 1977-78 (Council for National Academic Awards) London.
4. Handbook of Polytechnic Courses 1975 (Lund Humphries for the Committee of Directors of Polytechnics)
5. Higher Education in the United Kingdom 1976-78 (Longman for The British Council and the Association of Commonwealth Universities)
6. *How to apply for admission to a University* October 1978 entry (Universities Central Council on Admissions)
7. Schedule of Post-graduate Courses in United Kingdom Universities 1977 (Association of Commonwealth Universities for Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom)

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