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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

# 1990

**GUIDE TO TRAINING OPPORTUNITIES  
FOR INDUSTRIAL DEVELOPMENT**  
(Eighteenth issue)

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**APERÇU DES MOYENS DE FORMATION  
POUR LE DÉVELOPPEMENT INDUSTRIEL**  
(Dix-huitième édition)

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**REPERTORIO DE  
OPORTUNIDADES DE CAPACITACIÓN  
PARA EL DESARROLLO INDUSTRIAL**  
(Decimoctava edición)

The designations "developed" and "developing" countries are intended for technical convenience and do not, necessarily, express a judgement about the stage reached by a particular country or area in the development process.

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Les expressions "pays développés" et "pays en développement" ont un sens purement technique et n'expriment pas nécessairement un jugement sur le stade de développement atteint par tel ou tel pays ou région.

• • •

Las designaciones "países desarrollados" y "países en desarrollo" se han adoptado con fines técnicos, y su empleo no necesariamente entraña la expresión de un juicio sobre la etapa alcanzada por un país o región en el proceso de desarrollo.

## Preface

This compilation of industrial training opportunities for personnel from developing countries is the eighteenth edition of a UNIDO publication that first appeared in 1972. It is based on the replies to a questionnaire soliciting information about training facilities, sent to Governments, organizations, institutions and other bodies concerned with industrial training. To reduce the size of this edition entries listed in earlier issues have not been repeated unless a specific request to do so was received from the organizer. Likewise, a single entry frequently covers many courses given by the same organization. Approximately 810 entries in the *Guide* cover more than 3,000 training courses. It should be emphasized that while these are but a fraction of the facilities existing globally for industrial training, they are possibilities that Governments and organizations believe are of particular interest to UNIDO.

Reflecting the increasing importance of technical co-operation among developing countries, the number of entries covering training opportunities in those countries continues to grow. This increase is indicative of the attractiveness and benefit to personnel from developing countries of receiving training in circumstances that are similar to those in their home countries. Moreover, greater use of the facilities in developing countries helps to mitigate the difficulties that sometimes arise in arranging suitable training programmes in industrialized countries, where facilities are often strained.

The *Guide* is divided into three chapters:

- I. Training opportunities organized and offered by UNIDO (yellow pages);
- II. Training opportunities offered by institutions other than UNIDO classified according to industrial branches and industrial functions, excluding short-term courses of less than half a month; and
- III. Other courses, and short-term courses that may be of interest as part of longer, more comprehensive training programmes.

The training opportunities listed are suitable mainly for technical, managerial and administrative personnel, including entrepreneurs, at the level of engineers (or equivalent) and above, engaged in industry and its development. With a few exceptions, courses in the regular curricula of universities or similar institutions are not included, nor is information on *ad hoc* training in industry or elsewhere. Part-time courses are also not included.

Chapter I follows chronological order, while the entries in chapters II and III are listed by country in English alphabetical order.

*UNIDO is not in a position to give further details on courses in chapters II and III. Readers who wish to have more information are asked to contact the institutions directly, using the mailing address given in each entry.*

The training opportunities listed in the *Guide* are not limited to holders of UNIDO fellowships. Any qualified individual from a developing country who

has not applied for or won a UNIDO fellowship may apply for a course or be nominated to attend. Such applications and nominations may go directly to the organizer of the course. Applicants for UNIDO fellowships, however, must be nominated by their Governments, and the nominations must be sent through the Resident Representative of the United Nations Development Programme (UNDP) to UNIDO. Further information on UNIDO training activities is available from the UNIDO Industrial Training Offer Programme, 1990.

Information on training facilities in a wide range of subjects may be requested from the secretariats of the Economic Commission for Africa (ECA), Addis Ababa; the Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok; the United Nations Office at Geneva; the United Nations Conference on Trade and Development (UNCTAD), Geneva; the International Labour Organisation (ILO), Geneva; the International Centre for Advanced Technical and Vocational Training, Turin, Italy; the International Maritime Organization (IMO), London; the Food and Agriculture Organization of the United Nations (FAO), Rome; the United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris; the World Intellectual Property Organization (WIPO), Geneva; and other international organizations.

It is hoped that this publication will continue to benefit those in developing countries who are in need of industrial training. The nineteenth edition of the *Guide* is scheduled to appear in late 1990 and will cover courses to be offered in 1991 and, to the extent possible, 1992.

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## Préface

Le présent répertoire des possibilités de formation industrielle offertes aux cadres de pays en développement est la dix-huitième édition d'un document de l'ONUDI publié pour la première fois en 1972. Il a été établi d'après les renseignements fournis par un certain nombre de gouvernements, d'organisations et d'institutions s'occupant de formation industrielle en réponse à un questionnaire sur les possibilités de formation qu'ils offraient. Afin de condenser la présente édition, les rubriques qui figuraient déjà dans les éditions précédentes n'ont été réinsérées que sur la demande expresse des organisateurs. Il est également fréquent qu'une rubrique englobe plusieurs stages mis sur pied par une même organisation. Les quelque 810 rubriques couvrent plus de 3 000 stages de formation. Il convient de souligner que ces possibilités de formation ne représentent qu'une infime partie de celles qui sont offertes dans le monde entier mais que les organisations et les gouvernements estiment qu'elles présentent un intérêt particulier pour l'ONUDI.

Du fait de l'importance croissante de la coopération technique entre pays en développement, le nombre des possibilités de formation offertes dans ces pays ne cesse d'augmenter, ce qui témoigne des avantages que présente, pour leurs ressortissants, une formation dans des conditions proches de celles de leur pays d'origine. En outre, le recours accru aux moyens dont disposent les pays en développement contribue à atténuer les difficultés que soulève parfois l'organisation de stages de formation appropriés dans les pays industrialisés, où les services compétents ne sont souvent plus en mesure d'accepter un surcroît de travail dans ce domaine.

Le présent *répertoire* comprend trois chapitres :

- I. Possibilités de formation offertes par l'ONUDI elle-même (pages jaunes);
- II. Possibilités de formation offertes par des institutions autres que l'ONUDI, classées par secteurs industriels et fonctions industrielles, à l'exception des stages de courte durée (moins de 15 jours); et
- III. Stages qui n'entrent pas dans les catégories précitées et stages de courte durée qui peuvent utilement s'insérer dans des programmes de formation plus longs et plus vastes.

Les possibilités de formation énumérées sont destinées avant tout au personnel technique et administratif (ingénieurs ou équivalents et personnel de rang supérieur) et aux chefs d'entreprise qui travaillent dans l'industrie et participent à son développement. A quelques exceptions près, les matières figurant ordinairement au programme des universités et des établissements similaires n'ont pas été retenues, non plus que les renseignements concernant des programmes spéciaux de formation organisés notamment dans l'industrie. Il en a été de même pour les stages à temps partiel.



Pour le chapitre premier, on a adopté l'ordre chronologique, tandis que dans les chapitres II et III, les possibilités de formation énumérées sont classées dans l'ordre alphabétique anglais des pays hôtes.

*Pour obtenir de plus amples renseignements sur les stages autres que ceux organisés par l'ONUDI elle-même, on se mettra en rapport directement avec les institutions intéressées; leurs adresses figurent dans les rubriques consacrées aux stages qu'elles organisent.*

Les moyens de formation indiqués ne sont pas réservés exclusivement aux titulaires de bourses de l'ONUDI. S'il remplit les conditions requises, tout ressortissant d'un pays en développement peut demander à participer à l'un de ces stages ou à être désigné pour y participer. Dans le cas des personnes n'ayant pas sollicité ou obtenu une bourse des Nations Unies, les demandes ou les candidatures peuvent être présentées directement à l'organisateur du stage considéré. Les candidats à des bourses de l'ONUDI doivent être désignés par leurs gouvernements et leurs dossiers doivent être soumis à l'Organisation par l'intermédiaire du Programme des Nations Unies pour le développement (PNUD). Pour tous renseignements complémentaires sur les activités de formation de l'ONUDI, prière de consulter la brochure intitulée "Programme de formation industrielle proposé par l'ONUDI pour 1990".

Des renseignements sur les possibilités de formation dans de nombreux domaines peuvent être obtenus auprès du secrétariat de la Commission économique pour l'Afrique (CEA), à Addis-Abeba; de la Commission économique et sociale pour l'Asie et le Pacifique (CESAP), à Bangkok; de l'Office des Nations Unies à Genève; de la Conférence des Nations Unies sur le commerce et le développement (CNUCED), à Genève; de l'Organisation internationale du Travail (OIT), à Genève; du Centre international de perfectionnement professionnel et technique de Turin (Italie); de l'Organisation maritime internationale (OMI), à Londres; de l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO), à Rome; de l'Organisation des Nations Unies pour l'éducation, la science et la culture (UNESCO), à Paris; de l'Organisation mondiale de la propriété intellectuelle (OMPI), à Genève; et d'autres organisations internationales.

L'ONUDI espère que la présente publication sera aussi utile que les précédentes à ceux qui, dans les pays en développement, ont besoin d'une formation industrielle. La dix-neuvième édition du répertoire, qu'il est prévu de publier à la fin de 1990, indiquera les possibilités de formation offertes pour l'année 1991 et, dans la mesure du possible, pour l'année 1992.

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## *Prefacio*

La presente compilación de oportunidades de capacitación industrial para personal de países en desarrollo constituye la decimoctava edición de una publicación de la ONUDI que apareció por vez primera en 1972. Está basada en las respuestas a un cuestionario enviado a gobiernos, organizaciones, instituciones y otras entidades que se ocupan de la capacitación industrial, solicitando información sobre servicios e instalaciones para este objeto. A fin de reducir las dimensiones de esta edición, no se ha repetido ninguna entrada que figurase en ediciones anteriores salvo cuando se ha recibido una solicitud expresa de la entidad organizadora. Asimismo, una sola entrada sirve, a menudo, para reseñar varios cursos impartidos por la misma organización. El *Repertorio* contiene aproximadamente 810 entradas y facilita información sobre más de 3.000 cursos de capacitación. Si bien estas cifras no pasan de ser una fracción de las oportunidades de capacitación industrial existentes en todo el mundo, cabe señalar que se trata de oportunidades consideradas por los gobiernos y las organizaciones competentes como de particular interés para la ONUDI.

De resultas de la creciente importancia de la cooperación técnica entre países en desarrollo, sigue en aumento el número de entradas sobre oportunidades de capacitación en esos países. Este aumento denota también el atractivo y los beneficios que presenta para el personal de países en desarrollo el recibir capacitación en condiciones similares a las del propio país. Además, el recurrir en mayor medida a los servicios de esta índole existentes en los países en desarrollo contribuye a aliviar las dificultades que a veces entraña la organización de cursos de capacitación adecuados en los países industrializados, cuyos servicios están ya excesivamente recargados.

El *Repertorio* está dividido en tres capítulos:

- I. Oportunidades de capacitación organizada y ofrecida por la ONUDI (páginas amarillas);
- II. Oportunidades de capacitación ofrecidas por instituciones distintas de la ONUDI y clasificadas de la siguiente manera: ramas industriales y funciones industriales, que no sean cursos cortos, de menos de medio mes de duración; y
- III. Otros cursos, y cursos cortos que puedan ofrecer interés como componentes de programas de capacitación de contenido más amplio y de mayor duración.

Las oportunidades de capacitación aquí compiladas corresponden principalmente a las necesidades del personal técnico, directivo y administrativo, incluidos los empresarios, a nivel de ingenieros (o equivalente) y personal de categoría superior, dedicado a actividades relacionadas con la industria y su desarrollo. Con escasas excepciones, no se han incluido ni los cursos que forman parte de los planes de estudio ordinarios de universidades o

instituciones similares, ni la información relativa a la capacitación especial impartida en la industria o en otros centros. Tampoco se han incluido los cursos a tiempo parcial.

En el capítulo I se sigue el orden cronológico, mientras que en los capítulos II y III las entradas se presentan en el orden alfabético inglés de los países en que se ofrece la capacitación.

*La ONUDI no está en condiciones de dar más detalles sobre los cursos enumerados en los capítulos II y III. Se ruega a los lectores que deseen más información al respecto que se dirijan directamente a esas instituciones, cuyas direcciones figuran junto a cada entrada.*

Las oportunidades de capacitación indicadas en el *Repertorio* no se ofrecen sólo a becarios de la ONUDI. Cualquier persona calificada de un país en desarrollo que no haya solicitado u obtenido una beca de la ONUDI puede solicitar su admisión o ser presentada como candidato para participar en uno de estos cursos. Esta solicitud y su candidatura pueden dirigirse directamente al organizador del curso. En cambio, las candidaturas a becas de la ONUDI deben ser presentadas a la Organización por los respectivos gobiernos, por conducto del Representante Residente del Programa de las Naciones Unidas para el Desarrollo (PNUD). En el Programa de Ofertas de Capacitación Industrial de la ONUDI para 1990 se ofrece más información sobre las actividades de capacitación de la Organización.

Puede solicitarse información sobre servicios de capacitación, en muchas materias, a las secretarías de la Comisión Económica para África (CEPA), en Addis-Abeba; la Comisión Económica y Social para Asia y el Pacífico (CESPAP), en Bangkok; la Oficina de las Naciones Unidas en Ginebra; la Conferencia de las Naciones Unidas sobre Comercio y Desarrollo (UNCTAD), en Ginebra; la Organización Internacional del Trabajo (OIT), en Ginebra; el Centro Internacional de Perfeccionamiento Profesional y Técnico, en Turín (Italia); la Organización Marítima Internacional (OMI), en Londres; la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO), en Roma; la Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), en París; la Organización Mundial de la Propiedad Intelectual (OMPI), en Ginebra, y otras organizaciones internacionales.

Se espera que esta publicación siga beneficiando a aquellas personas de los países en desarrollo que requieran capacitación industrial. La publicación de la decimonovena edición de este *Repertorio* está prevista para finales de 1990; comprenderá los cursos que vayan a ofrecerse en 1991 y, en la medida de lo posible, en 1992.

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## Chapter I. Training opportunities offered by UNIDO

UNIDO organizes group training programmes for technical and managerial personnel in industry and industrial institutions in developing countries, in co-operation with Governments, firms and organizations having specialized knowledge and experience in a particular field. Two kinds of training are offered: in-plant group training programmes, which last from two to five months, and seminars and other group training programmes, lasting from one to six weeks.

The objectives of the in-plant group training programmes are to furnish the participants with intensive practical experience in a relatively short time and to upgrade their theoretical knowledge. The programmes are monitored by experts and usually include four elements: a theoretical introduction, studies, in-plant training and study tours. At the end of each programme, an evaluation session is held, during which participants are provided with the opportunity to assess the value of what they have learned in the light of conditions in their home countries. The seminars and other group training programmes have the same objectives. They offer theoretical instruction and, to the extent feasible, practical work.

At the time of the publication of this *Guide*, the UNIDO group training programmes listed in this chapter are scheduled to take place in 1990. They are all organized *subject to the availability of funds* and suitable host facilities. The programmes are held on a regional or interregional basis, this being clearly indicated for each of the programmes listed. Please note that the language in which the course will be conducted is shown for each programme; it is essential that participants are proficient in that language to obtain maximum results out of the programme.

Formal applications for participation should be submitted to UNIDO through appropriate government channels and UNDP resident representatives only after the official invitation requesting nomination of candidates has been received. Apart from that, however, Governments are asked to notify UNIDO as early as possible of their interest in participating.

The general requirements for admission are a university degree or equivalent and several years of practical experience in the particular field.

Further information may be obtained from:

Industrial Human Resource Development Branch, DIO  
United Nations Industrial Development Organization  
P.O. Box 300  
A-1400 Vienna, Austria

Any query regarding these programmes should reach UNIDO as far in advance as possible to allow time for the channelling of communications.



## Chapitre I. Possibilités de formation offertes par l'ONUDI

L'ONUDI organise, en coopération avec les gouvernements des pays hôtes et avec le concours d'entreprises industrielles et d'instituts spécialisés dans les domaines considérés, des stages de formation en groupe à l'intention du personnel technique et des cadres de gestion des entreprises et instituts industriels des pays en développement. L'Organisation propose deux types de formation : stages de formation collective en entreprise, qui durent de deux à cinq mois, et séminaires ou autres stages de formation collective qui durent de une à six semaines.

Les stages de formation collective en entreprise ont pour objectifs de permettre aux participants d'acquérir, dans un laps de temps relativement court, une solide expérience pratique et de parfaire leurs connaissances théoriques. Ils sont dirigés par des experts et comprennent en général quatre parties, à savoir une introduction théorique, des études, une formation dans des entreprises et des visites d'établissements. Tous les stages se terminent par une session d'évaluation au cours de laquelle les participants évaluent les connaissances qu'ils ont acquises, eu égard aux conditions existant dans leur pays d'origine. Les séminaires et les autres stages de formation collective répondent aux mêmes objectifs et comportent une formation théorique et, dans la mesure du possible, des travaux pratiques.

Au moment de la publication du présent *Répertoire*, les stages de formation en groupe de l'ONUDI mentionnés ci-après étaient prévus pour 1990. Tous sont organisés sous réserve de disposer des fonds nécessaires et de trouver, dans le pays d'accueil, des moyens de formation adéquats. Les stages sont organisés sur une base régionale ou interrégionale; cela est clairement indiqué pour chacun des stages figurant dans la liste. Il est à noter que la langue dans laquelle le cours sera conduit est mentionnée pour chaque stage. Il est essentiel que les participants maîtrisent cette langue pour retirer le maximum de résultats du stage.

Les candidatures ne doivent être présentées à l'ONUDI par l'intermédiaire des services officiels compétents et du représentant résident du PNUD qu'après réception de l'invitation officielle demandant l'envoi de candidatures; les gouvernements sont en outre priés de faire savoir le plus rapidement possible à l'ONUDI s'ils envisagent de présenter des candidats à tel ou tel stage.

Les conditions générales d'admission sont les suivantes : être titulaire d'un diplôme universitaire (ou d'une équivalence) et justifier de plusieurs années d'expérience dans le domaine sur lequel porte la formation.

De plus amples renseignements sur les stages peuvent être obtenus à l'adresse suivante :

Service de la mise en valeur des ressources humaines pour l'industrie, DOI  
Organisation des Nations Unies pour le développement industriel  
Boite postale 300  
A-1400 Vienne (Autriche)

Les demandes de renseignements concernant les stages doivent parvenir suffisamment tôt à l'ONUDI pour que celle-ci puisse y donner suite en temps utile, compte tenu des délais de transmission des communications.

## Capítulo I. Oportunidades de capacitación ofrecidas por la ONUDI

La ONUDI, con la colaboración de diversos gobiernos así como empresas y organizaciones poseedoras de experiencia y conocimientos especializados, organiza programas de capacitación colectiva destinados a personal administrativo y técnico de categoría superior de la industria y las instituciones industriales de países en desarrollo. Se ofrecen dos tipos de capacitación: programas de capacitación colectiva en el trabajo, que duran de dos a cinco meses, y seminarios y otros programas de capacitación colectiva, de una a seis semanas de duración.

Los objetivos de los programas de capacitación colectiva en el trabajo consisten en dar a los participantes, en un espacio de tiempo relativamente corto, la posibilidad de adquirir experiencia práctica intensiva y de ampliar sus conocimientos teóricos. Los programas son supervisados por expertos y, en general, constan de cuatro elementos: una introducción teórica, los estudios, la capacitación en el trabajo, y viajes de estudio. Cada programa termina con una sesión de evaluación, en la cual los participantes examinan la utilidad de lo que han aprendido, a la luz de las circunstancias existentes en sus respectivos países. Los seminarios y demás programas de capacitación colectiva tienen los mismos objetivos: ofrecen enseñanza teórica y, en la medida de lo posible, estudios prácticos.

En el momento de publicarse este *Repertorio*, los programas de capacitación colectiva de la ONUDI mencionados en este capítulo están programados para llevarse a cabo en 1990. La organización de cada uno de estos programas está sujeta a la disponibilidad de los recursos financieros necesarios así como la disponibilidad de una infraestructura de capacitación adecuada por la entidad huésped. Los programas se celebrarán con carácter regional e interregional; esto está claramente indicado para cada programa anunciado. Por favor, nótese que la lengua en la cual el curso será conducido está indicada en cada programa. Es esencial que los participantes conozcan bien esta lengua para obtener los mayores resultados del programa.

Las solicitudes oficiales de participación deben presentarse a la ONUDI a través de los conductos gubernamentales apropiados y por medio del Representante Residente del Programa de las Naciones Unidas para el Desarrollo, pero sólo después de recibida la invitación oficial en la que se pide la designación de candidatos. No obstante, se ruega a los Gobiernos que notifiquen a la ONUDI, lo antes posible, su interés por participar en estos programas.

Los requisitos generales de admisión son un título universitario (o su equivalente) y varios años de experiencia práctica en la esfera respectiva.

Puede obtenerse mayor información sobre estos programas escribiendo a:

Subdivisión de Recursos Humanos para el Desarrollo Industrial, DOI  
Organización de las Naciones Unidas para el Desarrollo Industrial  
P.O. Box 300  
A-1400 Viena (Austria)

Cualquier pregunta concerniente a estos programas deberá ser recibida en la ONUDI con la mayor antelación posible a fin de poder disponer de tiempo suficiente para contestarla.

## JANUARY/JANVIER/ENERO

### Maintenance of bio-medical and laboratory equipment

*Short description:* A 3-week course at the Technical University of Budapest followed by 5 weeks of training at four leading industrial companies covering the operation of equipment, its electronic system, installation, maintenance and trouble-shooting.

*Duration:* January/March. *Invited countries:* Interregional programme. *Qualifications:* Bachelor's or master's degree in electronics. English.

*Host institution:* Organization for International Technical and Scientific Co-operation (TESCO)  
1054 Budapest, Hungary

### Maintenance of bio-medical equipment

*Short description:* The objective of the course is to upgrade the skills of participants in a systems approach, which could be applied in the management, organization and implementation of maintenance programmes in the field of bio-medical equipment.

*Duration:* January/February. 3 weeks. *Invited countries:* China, India, Indonesia, Malaysia, Philippines, Republic of Korea, Thailand. *Qualifications:* Managers or engineers responsible for maintenance programmes in the field of bio-medical equipment. English.

*Host institution:* Sopha France  
Paris, France

### Production management in manufacturing industry

*Short description:* Role of factory managers; scientific production; management techniques; problem solving and decision making; human motivation and training; practical application of modern production management techniques in Japanese industries. *Duration:* January/March. 5 weeks. *Invited countries:* Interregional programme. *Qualifications:* Factory managers, production managers or managers having production management responsibility; at least 3 years of managerial experience. English.

*Host institution:* Association for Overseas Technical Scholarship  
Tokyo, Japan

## MARCH/MARS/MARZO

### Grain milling and storage (with training of trainers)

*Short description:* Phase I covers technological aspects: technology and equipment of silos, flour mills; production of loose and granulated mixed fodders; quality control of grain, mixed fodders and flour. Lecture-type instruction, laboratory practicals and in-plant training in selected enterprises. Phase II covers training of trainers: personnel management concept; management of the training function in the plant; determination and analysis of training needs; concepts of learning psychology; use

and development of audio-visual aids and materials for training; individualized and group training methods; curriculum development; evaluation and follow-up of training; training of managers and workers; practice in conducting training sessions. *Duration:* March/June. *Invited countries:* Interregional programme. *Qualifications:* Degree in technology or equivalent; managerial or supervisory post in a grain milling enterprise or in a governmental or semi-governmental body dealing with grain milling enterprises; at least 3 years of experience. Candidates are expected to carry out training activities in their home countries upon completion of the programme. English.

*Host institution:* Institute for Advanced Training of Managers and Specialists of the USSR Ministry of State Purchases  
Moscow, Union of Soviet Socialist Republics

### **Industrial planning and development**

*Short description:* Macro-planning and strategy oriented course; long-term development issues of industrialization, industrial strategies and planning, industrial incentives and promotional policies, issues on technology transfer and labour employment, issues of financing industrial development, project preparation, project appraisal; field trip and workshop. *Duration:* March/April. 4 weeks. *Invited countries:* Regional programme for Asia. *Qualifications:* University degree or equivalent; at least 3 years of experience in industrial development; industrial development economists in government organizations and public institutions for industrial development and implementation; between 30 and 45 years of age. English.

*Host institution:* International Development Centre  
Tokyo, Japan

### **Iron and steel industry technology**

*Short description:* In-plant training in: sintering, iron-making; oxygen-converter electric-arc and open-hearth furnace steelmaking; ladle metallurgy; continuous steel casting; sheet and section rolling; maintenance of electrical and mechanical equipment; refractory maintenance; environmental protection; foundry practice. Theory of the technological processes involved; study visits to a number of plants in related industries. *Duration:* March/June. 12-14 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in metallurgical, chemical, electrical or mechanical engineering; at least 3 years of experience; directly engaged in iron and steel industry. English.

*Host institution:* Zaporozh Steel  
Zaporozhye, Ukrainian Soviet Socialist Republic

### **Management and organization of industrial co-operatives**

*Short description:* Intensive training programme consisting of theoretical and practical training in organization and management of industrial co-operatives to upgrade the skills and knowledge of personnel in ministries and co-operative organizations responsible for the development of industrial co-operatives. *Duration:* March/June. 10 weeks. *Invited countries:* Regional programme for Africa. *Qualifications:* Degree in economics, business administration or co-operatives or equivalent; senior policy and decision-making personnel; also senior management personnel engaged in industrial co-operatives. English.

**Host institutions:** Central Union of Work Co-operatives  
Poland  
Centre for International Technical Co-operation  
Rome, Italy

**Venues:** Poland  
Italy

#### **Rehabilitation of railway equipment**

**Short description:** The objective of the course is to upgrade practical experience and theoretical knowledge of managers and engineers responsible for stock rehabilitation. **Duration:** March/June. 12 weeks. **Invited countries:** Regional programme for Africa. **Qualifications:** Engineers in railway maintenance and repair. English.

**Host institution:** British Rail Engineering Ltd. (BREL)  
Derby, United Kingdom

**Venues:** Derby, United Kingdom  
Egypt

#### **Technology and equipment in electric welding**

**Short description:** Technology and equipment for electric fusion, resistance, welding processes, modern welding, arc power resources, welding material and structures, constructive technological designing of welded material. In-plant training in plants manufacturing electric welding equipment, metalworking industry as well as laboratories. **Duration:** March/July. **Invited countries:** Interregional programme. **Qualifications:** Degree in electrical or mechanical engineering or equivalent; at least 3 years of experience related to electric welding. English.

**Host institution:** E. O. Paton Institute of Electric Welding  
Kiev, Ukrainian Soviet Socialist Republic  
(with visits to Minsk, Leningrad, Zaporozhye, Kherson)

## **APRIL/AVRIL/ABRIL**

#### **Cement industry technology**

**Short description:** Technical aspects of cement industry including feasibility studies, raw materials, production management technologies, quality control, maintenance, energy conservation, pollution and pollution control. **Duration:** April/May. 5 weeks. **Invited countries:** Interregional programme. **Qualifications:** Degree in chemical, mechanical, electrical or relevant branch of engineering; 1-5 years of experience; employed in cement industry. English.

**Host institution:** Cement Research and Development Centre  
Ankara, Turkey

#### **Design and production of spare parts**

**Short description:** Design and modern production processes (including economic and technical aspects); foundry materials, melting and casting technologies, pattern-making practice, moulding materials and moulding technology; quality control related to the production of spare parts and repair of castings; environmental protection including noise control and other safety and pollution problems.

*Duration:* April/June. 10 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in foundry or metallurgy or equivalent; at least 1 year of experience (preferably in a supervisory position) in the production of spare parts. English.

*Host institution:* Foundry Research Institute  
Krakow, Poland

### **Industrial management and planning**

*Short description:* Technical aspects and methods of industrial planning at different levels; uniform systems of industrial planning at national, regional, sectoral and factory levels (long-term forecasts, long-term, medium-term and annual plans); organs of planning co-ordination of national industrial development plans at international level; strategies, planning and methods for human resources development at national, regional and enterprise levels. *Duration:* April/May. 5½ weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree and/or extensive experience in industrial planning preferably at national, sectoral and branch levels; senior positions with government or public enterprises. Good English.

*Host institution:* Institute of Economy of Developing Countries  
DDR-1157 Berlin, German Democratic Republic

### **Small-scale power plant: design, operation and maintenance**

*Short description:* Participants from least developed countries will gain from the results achieved and the experience of a developing country; they will be provided with more working knowledge on the various aspects of energy management and efficiency and with various tools and techniques in achieving fuel efficiency and in increasing energy productivity. *Duration:* April/May. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in mechanical, electrical or chemical engineering or equivalent; at least 2 years of experience in plant or production engineering, or consultancy in energy management at the plant level. Preference will be given to candidates who could generate a multiplier effect. English.

*Host institution:* Technical Assistance Council (TAC) of the Philippines  
Bureau of Energy Utilization  
Productivity and Development Centre  
Manila, Philippines

## **MAY/MAI/MAYO**

### **Methods and techniques of pesticide production and formulation**

*Short description:* Development of pesticide chemicals; plant design environmental considerations; equipment used in pesticide formulation; testing of products; formulation of granular and wettable powders, dusts, aerosols, baits and emulsifiable compositions; packaging; quality control distribution; study tours to major pesticide plants. *Duration:* May/June. *Invited countries:* Interregional programme. *Qualifications:* Degree in agricultural or chemical engineering or chemistry or equivalent; at least 3 years of experience in a supervisory or managerial capacity in the production and formulation of pesticides. English.

*Host institution:* Karl Marx University  
Leipzig, German Democratic Republic

### **Reconditioning of spare parts and components for agricultural machinery**

*Short description:* Theory and practice-oriented training with testing and demonstrations in workshops and industrial plants on technological processes related to reconditioning of spare parts. *Duration:* May/June. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in mechanical or related engineering or equivalent; 1-6 years of experience in production and repair of spare parts. English.

*Host institution:* Scientific Research and Technological Engineering  
Institute for Machine Building Industry  
Bucharest, Romania

### **Training of trainers in development finance institutions**

*Short description:* The programme is designed to familiarize participants with: the various phases of a project cycle; the entire process of training, e.g. systematic assessment of training needs, curriculum design and development, conduct of training courses, use of training methods and techniques. *Duration:* May/June. 5 weeks. *Invited countries:* Regional programme for Africa. *Qualifications:* University degree; middle and senior level trainers in development finance institutions; at least 1-2 years of experience as trainers. English.

*Host institution:* Centre for Financial Assistance to African Countries  
(FINAFRICA)  
Milan, Italy

## **JUNE/JUIN/JUNIO**

### **Maintenance des installations portuaires**

*Brève description :* Le programme portera essentiellement sur la maintenance et la gestion des ports et comportera des exposés théoriques et des cas de démonstrations pratiques; visites suivies de discussions et d'échanges de vues professionnels. *Durée :* Juin. 4-5 semaines. *Pays invités :* Pays francophones de l'Afrique de l'Ouest et de l'océan Indien. *Qualifications :* Ingénieur gestionnaire et haut responsable technique de port justifiant, au moins, de 5 années d'expérience pratique dans la réparation des bateaux et dans la gestion et la maintenance des installations portuaires. Français.

*Organismes hôtes :* Association de gestion des ports de l'Afrique de l'Ouest et du Centre  
(AGPAOC)  
Port autonome de Marseille, France

*Lieux :* Marseille, France  
Abidjan, Côte d'Ivoire  
Lagos, Nigéria

### **Management of human resources development for industry**

*Short description:* The objective of the programme is to upgrade the knowledge and widen the experience of professionals responsible for the planning and co-ordination of training activities in industry in developing countries. Studies of the main topics, such as human resources planning and methodology, are complemented by study visits to educational institutions of all levels, round-table discussions and practice orientation. *Duration:* June/July. 5 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in technology or economics or equivalent; at least 3 years of experience in industrial training; candidates must be responsible for the

planning and co-ordination of training activities at regional or sectoral industrial level or advise the policy-making organ dealing with industrial training. English.

**Host institution:** Ministry of Middle and Higher Education  
Institute for the Advanced Training of Managers and Specialists  
Moscow, Union of Soviet Socialist Republics

#### **Technology of mineral fertilizer production**

**Short description:** Lectures and discussions on: nitrogen and phosphate fertilizers; technology and planning of mineral fertilizer production; raw material, present development prospects of world production of mineral fertilizers; key processes and operations and their economic evaluation; 1 month in-plant training at nitrogen fertilizer plants in the USSR. **Duration:** June/October. **Invited countries:** Inter-regional programme. **Qualifications:** Degree in chemical engineering or chemistry or equivalent; at least 3 years of experience in a supervisory or managerial capacity in the fertilizer industry. English.

**Host institution:** Institute of Nitrogen Industry  
USSR Ministry for Mineral Fertilizers Production  
Moscow, Union of Soviet Socialist Republics

### **JULY/JUILLET/JULIO**

#### **Design and manufacturing of agricultural machinery**

**Short description:** With emphasis on practical training, the programme will cover operations related to casting, heat treatment, moulding, design, manufacturing process, construction and operation of agricultural machinery including walking tractors and quality control. **Duration:** July/October. 15 weeks. **Invited countries:** Interregional programme. **Qualifications:** Agricultural or mechanical engineering; 3-5 years of experience in manufacturing of farm machinery implements; industry supervisory responsibilities. English.

**Host institution:** Jiangsu Institute of Agricultural Machinery  
Zhenjiang, Jiangsu, China

#### **Maintenance engineering for Preferential Trade Area (PTA) countries**

**Short description:** Theoretical and practical training including case-studies and group work as well as study visits related to centralized and decentralized maintenance systems, planned and emergency/breakdown maintenance systems and maintenance engineering activities for mechanical, electrical and instrumentation maintenance. **Duration:** July/August. 5 weeks. **Invited countries:** Subregional programme for PTA countries. **Qualifications:** Degree in mechanical, electrical, instrumentation engineering or equivalent; 2-5 years of maintenance experience in iron and steel, cement, sugar or food-processing industry, preferably with supervisory responsibilities. English.

**Host institution:** Zimbabwe Iron and Steel Co.  
Redcliff, Zimbabwe

#### **Repair and maintenance of diesel engines**

**Short description:** The basic working principles, construction and general characteristics of high-speed diesel engines, the basic work involved in the assembly inspection and



adjustment of such engines and the techniques of their installation, maintenance, overhaul and repair. *Duration:* July/October. 15 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in mechanical engineering; 3-5 years of experience with supervisory responsibilities in maintenance, repair and overhaul of diesel engines. English.

*Host institution:* Ministry of Machine Building  
Shanghai Diesel Engines Works  
Shanghai, China

## AUGUST/AOUT/AGOSTO

### **Environmental and management aspects of air and water pollution from industry**

*Short description:* Analysis of air, water and soil pollution and industrial waste; practical exercises in laboratories; study visits to purification plants and environmental control installations. *Duration:* August/September. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in chemistry, biology, geology, or pharmacy; experience and responsibilities related to environmental pollution problems. English.

*Host institution:* State University of Ghent  
Ghent, Belgium

## SEPTEMBER/SEPTEMBRE/SEPTIEMBRE

### **Documentation and industrial information**

*Short description:* Function of industrial information in industrial development; retrieval systems and their practical application; classification systems; information systems for industry; practical training in industrial information and documentation; study visits to specialized institutes providing information services to industry. *Duration:* September/October. *Invited countries:* Interregional programme. *Qualifications:* University degree or equivalent; a few years of experience in the field of industrial/technological information and documentation in the operation of existing information documentation centres. English.

*Host institution:* All Union Institute for Scientific and Technical Information (VINITI)  
Moscow, Union of Soviet Socialist Republics

### **Entretien du matériel ferroviaire**

*Breve description :* Le programme portera essentiellement sur les problèmes liés à l'achat et au stockage du matériel, les activités dans les ateliers, la surveillance des travaux, l'utilisation d'ordinateurs, la formation pratique de personnel et les principes économiques fondamentaux de l'entretien et de la réparation du matériel roulant. On prévoit également des visites d'étude dans des entreprises spécialisées dans la fabrication de matériel ferroviaire. *Durée :* Septembre/novembre. *Pays invités :* Programme régional pour l'Afrique. *Qualifications :* Etre titulaire d'un diplôme d'ingénieur (ou d'un diplôme équivalent), justifier d'une expérience pratique de 2 ans au moins et occuper un poste de cadre technique ou administratif. Préférence

sera donnée aux candidats ayant déjà une expérience pratique de l'entretien et de la réparation du matériel roulant de chemin de fer. Français.

**Organismes hôtes :** Société nationale des chemins de fer belges (SNCB)  
Bruxelles, Belgique  
Union africaine des chemins de fer (UAC)  
Afrique

**Lieux:** Belgique  
Afrique

### **Iron and steel industry**

**Short description:** Theoretical and practical training and study visits with emphasis on: individual practical training in basic oxygen furnaces and slab casting; hot and cold rolling mills operation, including finishing; blast furnace operations; hot rolling mill process control; quality control; industrial safety; electrical and mechanical maintenance. **Duration:** September/December. 12 weeks. **Invited countries:** Inter-regional programme. **Qualifications:** Degree in metallurgy, chemistry, mechanical or electrical engineering; 1-5 years of experience in iron and steel industry; between 23 and 35 years of age. English.

**Host institution:** Ereğli Iron and Steel Works  
Ereğli, Turkey

### **Iron and steel industry technology**

**Short description:** In-plant training in sintering, iron-making; oxygen-converter, electric-arc and open-hearth furnace steelmaking; ladle metallurgy; continuous steel casting; sheet and section rolling; maintenance of electrical and mechanical equipment; refractory maintenance; environmental protection; foundry practice. Theory of the technological processes involved; study visits to a number of plants in related industries. **Duration:** September/December. 12-14 weeks. **Invited countries:** Inter-regional programme. **Qualifications:** Degree in metallurgical, chemical, electrical or mechanical engineering; at least 5 years of experience; directly engaged in iron and steel industry. English.

**Host institution:** Zaporozh Steel  
Zaporozhye, Ukrainian Soviet Socialist Republic

### **Management of medium-size industrial enterprises**

**Short description:** Lectures, guided discussions, group work, project work and visits to selected industrial plants. Seven modules: theory of management; managing the economy; production management; organization of enterprises management; management planning in administration; human resources development concepts; training of trainers. **Duration:** September/October. 6 weeks. **Invited countries:** Regional programme for English-speaking African countries. **Qualifications:** Degree preferably in technology or economics or equivalent; at least 5 years of experience in industrial management. The programme is for general managers, deputy general managers, potential general managers who by virtue of their functions can influence the formulation of plans. English.

**Host institution:** Centre for Professional Development (CPD)  
Sofia, Bulgaria

### **Man-made fibres**

**Short description:** In-plant group training programme on the application of man-made fibres in textile processing; blending and quality control. **Duration:**

September/October. *Invited countries:* Interregional programme. *Qualifications:* English.

*Host institution:* Austrian Federal Chamber of Commerce  
Association of Austrian Industrialists  
Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie  
Österreichisches Chemiefaserinstitut  
Vienna, Austria

#### **Metalworking industry**

*Short description:* Planning, executing and supervising of the manufacturing processes of machine parts; design of jigs and fixtures, design and use of cutting tools; operation and maintenance, quality control and economics of metalworking operations; practical studies in laboratories and in-plant training in metalworking (12 to 15 machine-producing factories). *Duration:* September/December. *Invited countries:* Interregional programme. *Qualifications:* Degree in mechanical engineering or equivalent; at least 3 years of experience in a supervisory or managerial capacity in metalworking, particularly machine tool operations, planning, manufacture and maintenance and repair. English.

*Host institution:* Lumumba University  
Moscow, Union of Soviet Socialist Republics

#### **Methods and technology in the printing industry**

*Short description:* Production of newspapers, periodicals, books (including textbooks and other printed material); planning and design of printing houses; tasks and problems in the training of specialists for the graphic arts industry; standardization and quality control in the graphic arts industry; study visits, practical training in plants manufacturing printing machinery and in printing houses. *Duration:* September/October. *Invited countries:* Interregional programme. *Qualifications:* Degree in the field of printing industry or equivalent; managerial or high level technical personnel in the printing industry or senior officials of a public or private printing organization; at least 2 years of experience. English.

*Host institution:* VEB Polygraph  
Leipzig, German Democratic Republic

#### **Organization and management of agro-industrial enterprises**

*Short description:* Theoretical training on different aspects of agro-industrial enterprises: organization planning; management financing and investment policy; economic infrastructure. Practical training on organizational aspects of agro-industrial enterprises and food processing plants; vegetable oils and fats technology; dairy technology; fruit and vegetable processing technology; study visits to agro-industrial enterprises. *Duration:* September/October. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in food processing, nutrition, agricultural or chemical engineering; at least 3 years of managerial and technical experience in food processing. English.

*Host institution:* Federal Centre for Agricultural and Industrial Managers' Training  
Novi Sad, Yugoslavia

#### **Petroleum refineries**

*Short description:* The objective of the programme is: to upgrade the skills of engineers, managers and senior industrial executives responsible for operations, maintenance

and efficient use of energy; to identify training needs and requirements in the refineries and potential mechanisms for meeting these needs; and to assess resources available to assist refineries in implementing change. *Duration:* September. 3 weeks. *Invited countries:* Regional programme for Latin America. *Qualifications:* Degree in engineering; more than 3 years of experience in refinery operations, maintenance and repair of equipment, energy saving management.

*Host institution:* Ecole nationale supérieure des industries chimiques  
Paris, France

#### **Small-scale foundry operations for least developed countries**

*Short description:* Theoretical and practical training at the Marmara Research Institute on small-scale foundry technology; study visits to foundries near Istanbul, Ankara and Bursa. *Duration:* September/October. 7 weeks. *Invited countries:* Least developed and other selected countries. *Qualifications:* Degree in foundry or metallurgy or equivalent; senior policy and decision makers in small-scale foundry industry. English.

*Host institution:* MARMARA Scientific and Industrial Research Institute  
Gebze-Kocaeli, Turkey

#### **Technology and equipment in electric welding**

*Short description:* Technology and equipment for electric fusion, resistance, welding processes, modern welding, arc power resources, welding material and structures, constructive technological designing of welded material; in-plant training in plants manufacturing electric welding equipment, metalworking industry as well as laboratories. *Duration:* September/December. 14 weeks. *Invited countries:* Inter-regional programme. *Qualifications:* Degree in electrical or mechanical engineering or equivalent; at least 3 years of experience related to electric welding. English.

*Host institution:* E. O. Paton Institute of Electric Welding  
Kiev, Ukrainian Soviet Socialist Republic  
(with visits to Minsk, Leningrad, Zaporozhye, Kherson)

#### **Technology and equipment in rice-processing industry**

*Short description:* Major trends in the development of the rice-processing industry; rice-processing equipment and technology; maintenance and repair of equipment; modern silo structures; drying (technology and equipment); aspiration; pneumatic conveying systems; power supplying systems; job safety; quality control; environment protection; by-products utilization; hydrothermal treatment of grain; lecture-type instruction, laboratory practicals, in-plant training in selected enterprises. *Duration:* September/December. *Invited countries:* Interregional programme. *Qualifications:* University degree or equivalent; engineers and technicians with at least 3 years of experience in a supervisory or managerial capacity in the rice-processing industry. English.

*Host institution:* Institute for Advanced Training of Managers and Specialists  
RSFSR Ministry of Grain Products  
Moscow, Union of Soviet Socialist Republics

#### **Utilization of medicinal and aromatic plants in pharmaceutical industry**

*Short description:* The objective of the programme is to upgrade knowledge and skills in industrial processing of medicinal herbs. *Duration:* September. 3 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in pharmacy, chemistry,

chemical engineering; at least 2 years of experience in the field of medicinal and aromatic plants.

*Host institution:* Medicinal Plant Research Centre  
Eskishir, Turkey

## OCTOBER/OCTOBRE/OCTUBRE

### Small-scale industry consultancy

*Short description:* The course will enable participants to define the role of small- and medium-scale enterprises in relation to the economic development of the country, to apply the skills and tools acquired in providing consultancy to small- and medium-scale enterprises, and to provide technical assistance and extension services to small- and medium-scale industries. *Duration:* October/December. 8 weeks. *Invited countries:* Least developed countries. *Qualifications:* Degree in economics, business management, industrial planning or small-scale industry; at least 3 years of experience in the government or private sector engaged in providing consultancy to small- and medium-scale enterprises. English.

*Host institution:* Institute for Small-scale Industries  
University of the Philippines  
Quezon City, Manila, Philippines

### Sugar (sugar-beet) production

*Short description:* The programme will be carried out both in sugar plants and in a sugar research institute and consists of theoretical and specialized practical in-plant training as well as study visits and an evaluation seminar. It will deal with both economic and technical aspects, including feasibility studies, raw material surveys, maintenance, production technologies and quality control. *Duration:* October/November. *Invited countries:* Interregional programme. *Qualifications:* Degree in chemical, agricultural, mechanical or electrical engineering; at least 2 years of experience; presently employed in the production of sugar. English.

*Host institution:* Sugar Research Institute  
Ankara, Turkey

## DATES NOT YET SPECIFIED/DATES NON ENCORE PRÉCISÉES/ FECHAS TODAVÍA NO DETERMINADAS

### Formation à la fonction maintenance

*Brève description :* Dans le cadre de la Décennie pour le développement industriel de l'Afrique, la formation à la fonction maintenance est une priorité vu la faible disponibilité des machines, le taux insuffisant de productivité et la dégradation prématurée des équipements. Le programme s'adresse à une trentaine d'ingénieurs et techniciens supérieurs responsables de la fonction maintenance des différents sous-secteurs de l'industrie des PMD. *Durée :* 4 semaines. *Qualifications :* Ingénieurs et techniciens supérieurs. *Pays invités :* Programme régional pour les pays africains francophones.

*Organisme hôte :* Ecole Mohammadia d'Ingénieurs  
Rabat, Agdal, Maroc

## **Formation des formateurs dans les institutions de financement dans le secteur des petites et moyennes entreprises**

**Brève description :** Formation des formateurs; évaluer des besoins en formation; établir les objectifs; élaborer des programmes en fonction de l'analyse des objectifs et des besoins; mettre en œuvre et suivre les programmes de formation; en évaluer l'incidence. **Durée :** —. **Pays invités :** Programme sous-régional **Qualifications :** Cadres supérieurs des banques de développement, des institutions de financement, des offices de promotion chargés de l'exécution et de l'évaluation des programmes de formation.

**Organisme hôte :** Union douanière et économique de l'Afrique centrale  
Bangui, République centrafricaine

**Lieu:** Douala, Cameroun

## **Maintenance and repair of machine tools in metalworking industry**

**Short description:** Planning, executing and supervising of the manufacturing processes of machine parts; design of jigs and fixtures, design and use of cutting tools; operation and maintenance, quality control and economics of metalworking operations; practical studies in laboratories and in-plant training in metalworking (12 to 15 machine-producing factories). **Duration:** —. **Invited countries:** Interregional programme. **Qualifications:** Degree in mechanical engineering or equivalent; at least 3 years of experience in a supervisory or managerial capacity in metalworking, particularly machine tool operations, planning, manufacture and maintenance and repair. English.

**Host institution:** Lumumba University  
Moscow, Union of Soviet Socialist Republics

## **Railway track**

**Short description:** Group training programme in the field of design and maintenance of railway track to improve maintenance systems and practices of railway tracks. **Duration:** —. **Invited countries:** Regional programme for Africa. **Qualifications:** Middle/senior engineers; degree in civil engineering and 3 years of experience in a railway environment or 7 years of experience as a high-level technician; good level of responsibility.

**Host institutions:** British Rail Training Centre  
Watford, United Kingdom  
Railways Training Institute  
Nairobi, Kenya

**Venue:** United Kingdom  
Kenya

## **Repair and maintenance of small and medium-size ships**

**Short description:** Theory in ships; materials; engines; pumps; electronics; electricity; equipment; maintenance; practical training on a medium-size ship-wharf; building of small vessels; repairs; ship repair workshop; training on board of the ship in the port. **Duration:** —. **Invited countries:** Interregional programme. **Qualifications:** Engineers and technicians; at least 3 years of experience in maintenance and repair of small and medium-size ships. English.

**Host institution:** Antwerp Port Engineering and Consulting (APEC)  
Apec, Belgium

**Venue:** Belgium  
Asia

**Utilisation des micro-ordinateurs dans la gestion et le management des petites et moyennes entreprises**

**Brève description :** Le programme envisage de former un noyau de responsables de gestion à l'utilisation de la micro-informatique et des logiciels. Il s'adresse aux chefs d'entreprise, directeurs financiers, créateurs d'entreprise, experts et conseils financiers, analystes financiers, formateurs et responsables de formation en gestion d'entreprise, analystes de dossiers de crédit dans les banques. *Durée :* 4 semaines.

**Qualifications :** Diplôme universitaire ou diplôme équivalent; quelques années d'expérience pratique dans une institution financière ou dans une banque à un poste élevé. *Pays initiés :* Programme interrégional.

**Organisme hôte :** Agence pour la coopération technique, industrielle et économique (ACTIM)  
Paris, France

**Chapter II. Training opportunities offered by institutions  
other than UNIDO**

**Chapitre II. Possibilités de formation offertes par des institutions  
autres que l'ONUDI**

**Capítulo II. Oportunidades de capacitación ofrecidas por instituciones  
distintas de la ONUDI**

**A. DEVELOPED COUNTRIES AND AREAS /  
PAYS ET ZONES DÉVELOPPÉS / PAÍSES Y ZONAS DESARROLLADOS**

**1. INDUSTRIAL BRANCHES/SECTEURS INDUSTRIELS/  
RAMAS INDUSTRIALES**

**Building materials industries/Industrie des matériaux de construction/  
Industrias de los materiales de construcción**

**L'industrie de la construction**

*Brève description* : Recherche technique appliquée dans les domaines suivants : matériaux, structures, équipements et confort acoustique et thermique; planification des chantiers et gestion des entreprises. *Début du cours* : A arranger. *Durée* : 3 mois. *Qualifications* : Ingénieur civil ou architecte. Français, anglais, néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur*: Centre scientifique et technique de la construction  
41, rue du Lombard  
1000 Bruxelles, Belgique

**Cement production**

*Short description*: Raw materials resources; quarrying; crushing and grinding of raw materials; kilns; homogenization and storage; drying and grinding of coal; cement grinding and storage; production and quality control; automation and instrumentation; maintenance; environmental matters. *Commencing date*: Mid-May. *Duration*: 3 weeks. *Qualifications*: Technical, managerial and supervisory personnel; at least 1 year of experience in cement industry. *Deadline for application*: 10 April. *Fees*: DKr 66,000.

*Organizer*: F. L. Smidth & Co. A/S  
Vigerslev Alle 77  
2500 Valby, Copenhagen, Denmark

**Concrete technology**

*Short description*: Cement manufacture; aggregate production and selection; testing of raw materials for concrete laboratory and on-site concrete tests, quality control and casting techniques; basic techniques and standard tests. *Commencing date*: To be arranged. *Duration*: 2 months. *Qualifications*: Professional qualifications. Good



English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

#### **Construction materials and testing**

*Short description:* Part I: Construction components: design, specification and use of construction components, timber components, roof coverings, drainage and sewage disposal, mechanical plant and mechanical handling techniques. Part II: Construction material testing: technology of testing construction materials, basic technology and standard tests. *Commencing date:* To be arranged. *Duration:* Part I: 3 months; part II: 3 months. *Qualifications:* Technical and professional qualifications. Good English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

### **Chemical industries/Industrie chimique/Industrias químicas**

#### **Material testing, corrosion problems, inspecting and overhauling chemical plants**

*Short description:* Material testing; metallography; laboratory; inspection and revision. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### **Plastics technology**

*Short description:* Top-level courses on: plastics processing and control engineering; application engineering; quality control; polymer physics; polymer chemistry; testing; environmental technology; automation and computation; control engineering. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Graduation and experience in industry. English, German. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Austrian Laboratory for Plastics Technology LKT-TGM  
(Laboratorium für Kunststofftechnik)  
Wexstrasse 19-23  
1200 Vienna, Austria

#### **Quality control in ammonia-urea (NPK) plants**

*Short description:* Quality control measures in ammonia-urea plants. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:*

Professional qualifications. English. *Deadline for application:* To be arranged.  
*Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### Chemical analysis of mineral samples

*Short description:* Course and practical training in chemical analysis of ores and mineral samples: titrimetry, electrolysis, polarography, spectrophotometry, atomic absorption, fluorimetry, plasma emission spectrometry. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Degree in chemistry. English, French, Spanish. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Laboratoire de traitement des minerais  
Université catholique de Louvain  
2, place Ste Barbe  
1348 Louvain-la-Neuve, Belgium

#### Corrosion et lutte contre la corrosion

*Brève description:* Corrosion électrochimique; diagrammes d'équilibres électrochimiques; études cinétiques de la corrosion; méthodes expérimentales; théorie et applications à la lutte contre la corrosion; principes de protection et cas particuliers de corrosion. *Début du cours:* Toute l'année, sauf en juillet et août. *Durée:* 2 semaines ou 3 mois. *Qualifications:* Diplôme de l'enseignement universitaire ou technique supérieur. Français, anglais. *Date limite d'inscription:* —. *Droits d'inscription:* A arranger.

*Organisateur:* Centre belge d'étude de la corrosion (CEBELCOR)  
2, avenue Paul Héger-Grille  
1050 Bruxelles, Belgique

#### Pharmaceutical technology

*Short description:* Preparation of ampoules, perfusion, solutions and ointments; study of granulation, manufacturing of capsules, tableting; control of the production of drugs; planning for production of antibiotics, sulphonamides, antiseptics; organization and starting up of semi-industrial pharmaceutical plants; visits to pharmaceutical plants. *Commencing date:* To be arranged. *Duration:* Approximately 3 months. *Qualifications:* Pharmacist, chemist or chemical engineer. English or French. *Deadline for application:* —. *Fees:* BF 40,000 (approximately).

*Organizer:* State University of Ghent  
Department of Toxicology  
Hospitaalstraat 13  
9000 Ghent, Belgium

#### Paints and polymers production

*Short description:* Methods used in research and analysis of paints and polymers (chromatography GLC, chromatography GPC, spectrofotometry IR and UV). *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* High or secondary technical education. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Paints Industry  
Gliwice, Poland  
*Contact address:*  
State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

### **Aflatoxin analysis and mycotoxins**

*Short description:* The course is designed to give scientists from developing countries instruction in the experimental techniques required for aflatoxin analysis in agricultural commodities as well as background information on mycotoxins in general. *Commencing date:* March. *Duration:* 13 weeks (8-week extension possible). *Qualifications:* Knowledge of chemistry equivalent to university entrance standard and/or a number of years of experience in an analytical chemistry laboratory. English. *Deadline for application:* 31 December. *Fees:* To be arranged.

*Organizer:* Overseas Development Natural Resources Institute  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

### **Fertilizer industry**

*Short description:* Production planning and plant management. Latest techniques of process controls, ammonia synthesis, nitric acid and ammonium nitrate technology; instrumentation technology; pollution control, water preparation; health and safety maintenance of plant. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Professional qualifications. Good English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

### **Pesticide residue analysis**

*Short description:* Introduction to the principles and techniques used in pesticide residue analysis. *Commencing date:* Mid-September. *Duration:* 13 weeks. *Qualifications:* Degree or equivalent qualification in chemistry; several years experience in analytical work. English. *Deadline for application:* 15 June. *Fees:* To be arranged.

*Organizer:* Overseas Development Natural Resources Institute  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

### **Pesticide residue analysis (advanced)**

*Short description:* This course will supplement the introductory training in pesticide residue analysis and should be taken immediately afterwards. Applicants with some previous knowledge and practical experience of pesticide residue analysis may be exempted from the introductory training. *Commencing date:* Early January. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* 15 October. *Fees:* To be arranged.

*Organizer:* Overseas Development Natural Resources Institute  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

**Electrical and electronic industries/Industries électriques et électroniques/  
Industrias eléctricas y electrónicas**

**Electricité**

*Brève description* : Sécurité et réglementation technique; utilisation des appareils de mesure des grandeurs électriques; électricité domestique; électricité industrielle, production de l'énergie électrique, machines tournantes C.C. et C.A., démarrage, régulation et automatisme, installation, mise en route entretien, protections électriques, phénomènes transitoires, les transformateurs, transport de l'énergie électrique, distribution, sécurité. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

**Electronique**

*Brève description* : Radio, TV : montage et fonctionnement en B.C., technique de transmission A.M., technique de transmission F.M., FM stéréo, transmission des images mouvantes, signaux vidéo et synchro, modulation, bande passante, étage de puissance, ampli vidéo, sélecteurs de canaux, entretien, réglage et réparation; téléphonie : installation téléphoniques simples, installations à circuits secondaires, installations complexes mais manuelles, installations complexes automatiques; industrielle ou de puissance : matériel de puissance à thyristors, circuits simples, variateurs de vitesse, onduleurs, hacheurs, circuits logiques, régulation, amplificateurs opérationnels. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

**Microelectronics: very large side integration (VLSI) circuits and system design**

*Short description*: MNOS and CMOS IC design; IC system design (architecture, design methodologies); CAD tools for IC design; testing ICs; "hands-on" experience: design of an IC and fabrication by silicon production facility. *Commencing date*: To be arranged. *Duration*: 12-18 months. *Qualifications*: English (French recommended). *Deadline for application*: —. *Fees*: BF 200,000 (plus cost of IC fabrication if required, BF 500,000).

*Organizer*: Laboratoire de micro-électronique  
Université catholique de Louvain  
Bâtiment Maxwell  
3, place du Levant  
1348 Louvain-la-Neuve, Belgium

### **Coal fired power plant operation and maintenance**

*Short description:* Load curves; energy processing; main and auxiliary equipment; unit start-up and shut-down procedure; diagnostic programme; emergency cases; overhaul organization; overhaul technology; transport organization; practical training. *Commencing date:* Throughout the year. *Duration:* 2 months. *Qualifications:* Engineers for power plant operation staff; practical experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Energy  
Warsaw, Poland

*Contact address:*

State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

### **Electronics in power industry**

*Short description:* Thyristor systems for speed control of electric motors driving; selected problems in designing, technology and testing of power transformers. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* High or secondary technical education; practical experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Energy  
Warsaw, Poland

*Contact address:*

State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

## **Food processing industries/Industrie alimentaire/Industrias alimentarias**

### **Boulangerie, pâtisserie, confiserie, chocolaterie**

*Breve description:* Hygiène en boulangerie/pâtisserie; fabrication de pains; fabrication de produits en pâte à choux ou feuilletage; fabrication de gâteaux à la crème au beurre; fabrication de truffes, creux, pralines, drops et berlingots, sujets en massepain; fabrication de crèmes glacées moulées; fabrication de montage en sucre; garnitures planes, en relief; peinture sur gâteaux; garnitures sculptées; présentation artistique et de circonstance du produit. *Début du cours:* Toute l'année sauf en juillet et août. *Durée:* —. *Qualifications:* Qualifications professionnelles. Français. *Date limite d'inscription:* —. *Droits d'inscription:* A arranger.

*Organisateur:* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### **Industrie sucrière de la betterave et technologie de la fabrication du sucre à partir de la betterave sucrière**

*Breve description:* Au cours de la campagne sucrière, un stage de formation technique orienté vers les aspects chimiques, technologiques et mécaniques de la fabrication

du sucre au Centre de documentation technique de l'industrie sucrière : laboratoires d'analyses de contrôle de la fabrication du sucre; laboratoire de la recherche appliquée; différentes étapes de la fabrication en sucrerie et raffinerie. *Début du cours* : Octobre à décembre. *Durée* : —. *Qualifications* : Diplôme universitaire ou équivalent. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : S.A. Société sucrière d'études et de conseils  
Aandorenstraat 1  
3300 Tienen, Tirlemont, Belgique

### Marine fishery

*Short description*: Modern fishing techniques and equipment; planning and management of marine resources; fish industry technologies and quality control; fish marketing organization; production and processing systems; pollution control and energy conservation; transport, distribution and export; research establishments. *Commencing date*: 13 March, 11 September. *Duration*: 3 months. *Qualifications*: Professional qualifications. English, French. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: International Training and Contact (ITC)  
Velodroomstraat 68  
2600 Antwerp, Belgium

### Meat processing

*Short description*: Particular study on food technology, European slaughterhouses, processing plants, departments, factories and workshops; new techniques of reception, control, freezing, thawing, cutting and deboning, preparing, transformation, handling, packing, storage, transport, distribution and marketing; fresh pre-packed meat, hamburgers, meat balls, sausages; control tests, economics, management, equipment, quality assurances, suppliers, rules, future tendencies. *Commencing date*: Throughout the year. *Duration*: 4-10 weeks. *Qualifications*: Professional qualifications. English or French. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: International Training and Contact (ITC)  
Velodroomstraat 68  
2600 Antwerp, Belgium

### Automation of food production processes

*Short description*: Analysis of, and model formation for, selected food production processes; structuring of control systems; presentation of practical examples. *Commencing date*: To be arranged. *Duration*: 3 weeks. *Qualifications*: Engineers, technologists. English. *Deadline for application*: 31 March 1990. *Fees*: To be arranged.

*Organizer*: Berlin Humboldt University  
Unter den Linden  
DDR-1086 Berlin, German Democratic Republic

### Beet sugar production

*Short description*: Sugar-beet substances; chemistry of hydrocarbons; beet sugar production; acceptance, storage and processing of sugar-beet. *Commencing date*: To

be arranged. *Duration:* 4 weeks. *Qualifications:* For food engineers and food chemists. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* Berlin Humboldt University  
Unter den Linden  
DDR-1086 Berlin, German Democratic Republic

#### **Drying and ventilation equipment for cereal crops (grain and seeds)**

*Short description:* Training in operation of machines for drying and ventilation. Includes theory, laboratory work, practical exercises and technical excursions. *Commencing date:* 2 May 1990. *Duration:* 2 months. *Qualifications:* Degree or certificate in agriculture or engineering. German, English. *Deadline for application:* 5 months before commencing date. *Fees:* To be arranged.

*Organizer:* Ingenieurschule für Getreidewirtschaft  
6600 Greiz, German Democratic Republic

#### **Grain cleaning and processing**

*Short description:* Machines for cleaning and processing of grain, oil seeds, leguminous crops, grass seeds; theory; practice; laboratory work; technical excursions. *Commencing date:* 2 May 1990. *Duration:* 2 months. *Qualifications:* Degree or certificate in agriculture or engineering. German, English. *Deadline for application:* 5 months before commencing date. *Fees:* To be arranged.

*Organizer:* Ingenieurschule für Getreidewirtschaft  
6600 Greiz, German Democratic Republic

#### **Grain conveying**

*Short description:* Operation, maintenance of continuous conveyors; theory, laboratory work, practical exercises and technical excursions. *Commencing date:* 2 May 1990. *Duration:* 2 months. *Qualifications:* Degree or certificate in agriculture or engineering. German, English. *Deadline for application:* 5 months before commencing date. *Fees:* Approximately \$US 500 per week (accommodation and full board included).

*Organizer:* Ingenieurschule für Getreidewirtschaft  
6600 Greiz, German Democratic Republic

#### **Meat industry technology**

*Short description:* The latest scientific and technical findings in the meat industry; study tours. *Commencing date:* February. *Duration:* 6 months. *Qualifications:* University or engineering school graduate; experience in meat industry; health certificate for foodstuff industry. German and teaching language. *Deadline for application:* 5 months before commencing date. *Fees:* \$US 500 per week (accommodation and full board included).

*Organizer:* AIS für Tierproduktion und Fleischwirtschaft  
1400 Oranienburg, German Democratic Republic

#### **Operation of plants for production of fresh and sour milk beverages**

*Short description:* Production technology and the function of all the machines in the production chain. Maintenance and small repairs; one third of the course devoted to theory, two thirds to practical work. *Commencing date:* To be arranged.

*Duration:* 2 months. *Qualifications:* Professional qualifications. German and other languages. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:*           Ingenieurschule für Milchwirtschaft  
3600 Halberstadt, German Democratic Republic

#### **Operation of plants for sterilized milk production**

*Short description:* Milk as a raw material, standardization, fundamentals of the plant, production, packing, quality control, preventive maintenance and repair; one third of the course devoted to theory, two thirds to practical work. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Qualifications in a relevant discipline. German and other languages. *Deadline for application:* 3 months before commencing date. *Fees:* Approximately \$US 500 per week (including accommodation and full board).

*Organizer:*           Ingenieurschule für Milchwirtschaft  
3600 Halberstadt, German Democratic Republic

#### **Meat processing**

*Short description:* Technology of sheep, cattle and poultry slaughtering; meat processing; machines, devices and hygienic requirements. *Commencing date:* 1990. *Duration:* 6 months. *Qualifications:* Professional qualifications. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and board).

*Organizer:*           Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabudalás utca 36-38  
9751 Vép, Hungary

#### **Milk production and processing**

*Short description:* Up-to-date technology of milk production; procedures of milk treatment and analysis; devices and technologies used in dairy farms and creameries. *Commencing date:* 1990. *Duration:* 2 months. *Qualifications:* Professional qualifications. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and board).

*Organizer:*           Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabudalás utca 36-38  
9751 Vép, Hungary

#### **Processing of potatoes and apples**

*Short description:* Production and conservation technology, with emphasis on small-scale processing. *Commencing date:* 1990. *Duration:* 3 months. *Qualifications:* Professional qualifications. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and board).

*Organizer:*           Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabudalás utca 36-38  
9751 Vép, Hungary

#### **Production and conservation of food**

*Short description:* Technology of production and conservation of meat, vegetable and fruit products. *Commencing date:* 1990. *Duration:* 3 months. *Qualifications:*



Professional qualifications. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and board).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabudulás utca 36-38  
9751 Vép, Hungary

### Quality assessment of food products

*Short description:* Quality assessment and standardization; quality inspection; test methods; computerized data processing. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Quality manager. English. *Deadline for application:* 3 months before commencing date. *Fees:* —.

*Organizer:* Hungarian Office for Standardization  
Üllői utca 25  
1091 Budapest, Hungary

### Vegetable and fruit products

*Short description:* The selection of the raw material; processing technology; marketing. *Commencing date:* 1990. *Duration:* 5 months. *Qualifications:* Professional qualifications. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and board).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabudulás utca 36-38  
9751 Vép, Hungary

### Sugar and alcohol technology

*Short description:* Part I: Beet anatomy and physiology; agricultural methodology; agricultural technology; sugar industrial plants; processing control; part II: Diffusion; epuration; concentration and vapour economy; crystallization; distillation; automatization. Two optional courses can be followed each year from a list of eleven courses. *Commencing date:* 1 November. *Duration:* 2 years. *Qualifications:* Italian. *Deadline for application:* 6 June. *Fees:* \$US 400 per year.

*Organizer:* Università degli Studi  
Rettorato  
Via Savonarola 9  
Ferrara, Italy

### Agro-industry

*Short description:* Planning aspects in rural industries; technology for the production and processing of agricultural products; management aspects in rural industries; excursions to industries and institutions. *Commencing date:* June. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree in agronomy or related field; at least 3 years of experience in the field. English. *Deadline for application:* 1 April 1989. *Fees:* f. 5,400.

*Organizer:* Koninklijk Instituut voor de Tropen (Royal Tropical Institute)  
Mauritskade 63  
1092 AD Amsterdam, Netherlands

### **Animal feed manufacturing**

*Short description:* Ingredients; transport systems; storage; cleaning; drying; weighing; blending; grinding; mixing; pelleting; addition of liquids; delivery systems; maintenance; safety aspects; feed mill design; control systems and nutritional and managerial aspects. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Experience in the animal feed manufacturing industry. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* International Training Centre on Animal Husbandry and Milling  
Technology  
Barneveld College  
P.O. Box 64  
3770 AB Barneveld, Netherlands

### **Farm mechanization**

*Short description:* Course for persons engaged in training, management or extension aspects of farm mechanization in tropical and subtropical farming systems. *Commencing date:* 20 August. *Duration:* 10 months. *Qualifications:* Diploma or bachelor's degree in agriculture (preferably in farm mechanization); experience in the field of farm mechanization. English. *Deadline for application:* 1 April. *Fees:* f. 6,322.

*Organizer:* Larenstein International Agricultural College  
P.O. Box 7  
7400 AA Deventer, Netherlands

### **Storage of goods**

*Short description:* Requirements for storage of goods (microclimatic requirements, technological solutions applied in storage and manipulation activities); climato-technological agents facilitating achievement of the required storage conditions (type of storage building, constructional and building requirements). *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* Secondary or higher education; 2 years of experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Stock Management  
Poznan, Poland  
*Contact address:*  
State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

### **Ciencia y tecnología de alimentos**

*Breve descripción:* El curso se basa en el estudio profundo de los fundamentos científicos de la tecnología de alimentos, de sus procesos industriales, de las técnicas de control de fabricación y de los problemas específicos de las principales industrias de la alimentación. Las asignaturas que cursan son las siguientes: química de los alimentos, tecnología de la conservación de alimentos, control analítico y de calidad de alimentos, control microbiológico e higiene en la industria de alimentos; tecnologías específicas: industrialización de frutas y hortalizas, tecnología post-cosecha de los cereales. *Fecha de iniciación:* Septiembre. *Duración:* 10 meses. *Calificaciones:* Titulados de facultades de ciencias químicas, ciencias biológicas, farmacia, veterinaria, de escuelas técnicas superiores de ingeniería y titulados

equivalentes del extranjero. Español. *Fecha límite de inscripción:* Extranjeros: hasta el 31 de marzo. Españoles: hasta el 30 de junio. *Derechos de inscripción:* Ptas 146.000.

*Organizador:* Instituto de Agroquímica y Tecnología (CSIC)  
Jaime Roig 11  
46010 Valencia, España

### **Milling technology**

*General description:* Wheat, rye and maize milling technology (theoretical and practical courses); basic scientific subjects relating to milling technology (theoretical and practical courses); physics and mathematics with the main sub-units in pneumatics, electrotechnics and programmable control systems; course also covers brewing technology and oat milling techniques as well as technical drawing and plant management. *Commencing date:* 1st Monday in September. *Duration:* 10 months. *Qualifications:* Professional qualifications. German, English. *Deadline for application:* 1 year before commencing date. *Fees:* SwF 2,500 plus SwF 2,100.

*Organizer:* The Swiss School of Milling  
Tellstrasse 2  
9000 St. Gallen, Switzerland

### **Basic food microbiology**

*Short description:* Principles of food microbiology with particular reference to the role of microbiology in quality control. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Experience in microbiology, a related scientific discipline, or food technology. English. *Deadline for application:* 1 January. *Fees:* To be arranged.

*Organizer:* Natural Resources Institute  
Overseas Development  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

### **Post-harvest fruit, vegetable and root crop technology**

*Short description:* The course covers the principles of perishable crop handling and the application of these principles to commercial operation. *Commencing date:* Mid-April. *Duration:* 13-15 weeks. *Qualifications:* Degree or equivalent in biology, agriculture or engineering; relevant experience. *Deadline for application:* 31 January. *Fees:* To be arranged.

*Organizer:* Natural Resources Institute  
Overseas Development  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

### **Storage of durable agricultural products in the tropics**

*Short description:* The course deals with the principles, practices and management of the storage of cereals, pulses and other durable agricultural products at farmer and national levels. It aims to provide a technological understanding of the post-harvest characteristics of durable crops, the potential causes of deterioration and the methods of prevention and control. *Commencing date:* August. *Duration:* 4 months.

*Qualifications:* Degree or equivalent in chemistry; several years of experience.  
*Deadline for application:* 1 June. *Fees:* To be arranged.

*Organizer:* Natural Resources Institute  
Overseas Development  
Central Avenue  
Chatham Maritime  
Chatham, Kent ME4 4TB, United Kingdom

**Leather and leather products industries/  
Industrie du cuir et des articles en cuir/  
Industrias del cuero y de los productos de cuero**

**Chimie et technologie de la fabrication du cuir**

*Breve description :* Composition et structure de la peau, conservation, défauts, étude détaillée des travaux de rivière; tannages chrome, végétal, fourrure; opérations après tannage; finissage des cuirs, machines de tannerie, épuration des eaux; méthodes de fabrication des différents types de cuirs. Laboratoire d'analyses chimiques et d'essais physiques : produits utilisés en tannerie, eaux, cuirs, contrôle des opérations de fabrication des cuirs. Atelier de fabrication des principaux types de cuirs; préparation d'un mémoire sur une fabrication choisie par le stagiaire.  
*Début du cours :* Septembre. *Durée :* 9 mois. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* 25 juin. *Droits d'inscription :* FB 80 000.

*Organisateur :* Ecole belge de tannerie  
6, quai Gloesmer  
4020 Liège, Belgique

**Quality assessment in the leather and shoemaking industries**

*Short description:* Quality assessment and standardization; organization of quality inspection; test methods; computerized data processing. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Quality manager. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Hungarian Office for Standardization  
Üllői utca 25  
1091 Budapest, Hungary

**Leather quality control**

*Short description:* Theoretical and practical training in laboratories covering both the physical and chemical quality control of leather and leather goods, as well as environmental goods and environmental control activities. *Commencing date:* 2 April, 3 September 1990, 1 April, 2 September 1991. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree in chemical engineering or equivalent. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Leather and Shoe Research Institute  
P.O. Box 135  
5140 AC Waalwijk, Netherlands

## Leather technology

*Short description:* Technical training courses for work and department managers in leather-producing factories (tanneries). Practical training in manufacturing the desired types of leather, with emphasis on the chemico-technological aspect, mechanical operations and environmental problems. Attention is given to knowledge of sorting and judging hides and skins, and semi-manufactured and finished leather. Training in mechanical operations includes knowledge and maintenance of machines and safety measures. A theoretical course can also be taken. *Commencing date:* 2 April, 3 September 1990, 1 April, 2 September 1991. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Leather and Shoe Research Institute  
P.O. Box 135  
5140 AC Waalwijk, Netherlands

## Shoe designing and pattern cutting

*Short description:* Sizing systems, insole design and pattern cutting, upper design and pattern cutting, design and pattern cutting of different types of shoes, grading of upper and insole patterns, pattern cutting and the making of a shoe up to bottoming. *Commencing date:* 2 April, 3 September 1990, 1 April, 2 September 1991. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Leather and Shoe Research Institute  
P.O. Box 135  
5140 AC Waalwijk, Netherlands

## Mechanical and metalworking industries/ Industrie de construction mécanique et de transformation de métaux/ Industrias mecánicas y de transformación de metales

### Carrosserie

*Brève description :* Tôlerie : travail des tôles — traçage, découpage, marquage; dressage des tôles; cintrage, pliage et mise en forme des surfaces; non développables; emboutissage; rapiécage; débosselage; réglage, pinçage, carrossage, chasse; dégarnissage, regarnissage; sécurité. Peinture : hygiène du métier; préparation des surfaces; masticage, ponçage, surfacage, polissage; colorimétrie; défauts; peinture sur métaux non ferreux et éléments polyesters; peinture en cabine. *Début du cours :* Toute l'année sauf en juillet et août. *Durée :* —. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Construction métallique

*Brève description :* Evaluation de la formation de base; répétition éventuelle des connaissances de base; lecture de plans; métrologie; postes de travail; matériel;

contrôle du matériel; sécurité; entretien. *Début du cours* : A arranger. *Durée* : 3 mois. *Qualifications* : Qualifications professionnelles. Français, anglais ou néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Spoorvegmateriel en Metaalconstructies, BN  
Vaardijkstraat 5  
8200 Bruges, Belgique

### Construction métallique soudage

*Brève description* : Soudage oxyacétylénique; oxycoupage; soudo-brasage; soudage à l'arc et sous protection gazeuse; rechargement, remplissage, gougeage; soudage des matières plastiques; défaut et contrôle des soudures; ponts et charpentes : assemblages, poutres, colonnes; tuyauterie; chaudière et réservoirs; pliage, forage, grignotage; sécurité. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Machines-outils

*Brève description* : Prévention des accidents de travail; tour parallèle, travaux entre-pointes; travaux en l'air contrôle dimensionnel; centre d'usinage à commande numérique, programmation pour le fraisage, forage, lamage, taraudage, alésage. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Mécanique automobile

*Brève description* : Sécurité et hygiène au garage; pose et dépose, entretien, réglage et réparation des organes de véhicules automobiles à essence ou diesels; électricité automobile; allumage électronique; organisation du travail dans un garage; schémas d'implantation. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Mécanique d'entretien

*Brève description* : Sécurité, hygiène; utilisation correcte des outils à main; alésage, filetage, taraudage, grattage, forage, affûtage, tournage, fraisage; tolérancement;

traitements thermiques; contrôle dimensionnel et de qualité; métrologie, essais des matériaux; lubrification; montage et démontage d'ensembles mécaniques; utilisation, placement, extraction et réparation de goujons, de clavettes; entretien et remplacement de roulements à billes; commande hydraulique et pneu atique des machines. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

**Organisateur :** Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

#### **Hydraulic systems of tractors and self-propelling farm machinery**

*Short description*: Function diagnosis and repair of hydraulic systems of farm machinery. *Commencing date*: To be arranged. *Duration*: 1-2 months. *Qualifications*: English, German. *Deadline for application*: 3 months before commencing date. *Fees*: \$US 1,172 per month.

**Organizer:** Ingenieurschule für Landtechnik  
Weinberghof 3  
5500 Nordhausen, German Democratic Republic

#### **Welding technique and inspection**

*Short description*: Welding technique; repair and maintenance of farm machinery; checking the quality of welding. *Commencing date*: To be arranged. *Duration*: 6 weeks. *Qualifications*: English, German. *Deadline for application*: 5 months before commencing date. *Fees*: \$US 1,086 per month.

**Organizer:** Speziialschule für Landtechnik  
Strasse der mts 14  
8281 Grossehain, German Democratic Republic

#### **Gas welding (instructor)**

*Short description*: Gas welding of plain-carbon and low-alloy steels, cast iron, brazing and manual flame cutting. *Commencing date*: 1 April, 1 October 1990. *Duration*: 7 months. *Qualifications*: Basic training in metalworking, basic knowledge in welding; 24 years of age. German. *Deadline for application*: 4 weeks before commencing date. *Fees*: DM 21,300.

**Organizer:** Schweisstchnische Lehr- und Versuchsanstalt (SLV)  
Mannheim GmbH  
Käthe-Kollwitz-Strasse 19  
6800 Mannheim 1, Federal Republic of Germany

#### **Ingénieur soudage**

*Brève description* : Procédé de soudage; type de l'équipement; matériaux; produit d'apport; examens non destructifs; essais destructifs; construction; calcul; dimensionnement; prévention des accidents; rentabilité. *Début du cours* : Mai 1990. *Durée* :

9 mois. *Qualifications* : Allemand. *Date limite d'inscription* : Mars 1990. *Droits d'inscription* : A arranger.

**Organisateur :** SLV im Saarland GmbH  
Heuduckstrasse 91  
6600 Sarrebruck, République fédérale d'Allemagne

#### **MAG welding with industrial robots**

*Short description:* The rising use of industrial robots for metal-arc welding (MAG-welding) requires highly qualified operating personnel. The SLV Fellbach courses have been developed to enable welders to perform MAG-welding tasks with industrial robots from programming to the optimization of the process parameters. *Commencing date:* 7 May, 22 October 1990, 6 May, 21 October 1991. *Duration:* 3 weeks. *Qualifications:* German. *Deadline for application:* 2 weeks before commencing date. *Fees:* 1990, DM 4,610 (plus test); 1991, DM 4,740 (plus test).

**Organizer:** SLV Fellbach GmbH  
Fellbacher Strasse 86  
7012 Fellbach, Federal Republic of Germany

#### **Manual arc welding (instructor)**

*Short description:* Manual arc welding of plain-carbon, CrNi-steels, manual cutting. *Commencing date:* 1 April, 1 October 1990. *Duration:* 7 months. *Qualifications:* Basic metalworking and welding; about 25 years of age. German. *Deadline for application:* 4 weeks before commencing date. *Fees:* DM 24,200.

**Organizer:** SLV Fellbach GmbH  
Fellbacher Strasse 86  
7012 Fellbach, Federal Republic of Germany

#### **MIG/MAG welding (instructor)**

*Short description:* Inert-gas metal arc welding of plain-carbon, low-alloy and high-alloy steels, aluminium and aluminium alloys. *Commencing date:* 1 April, 1 October 1990. *Duration:* 7 months. *Qualifications:* Basic metalworking and welding; about 25 years of age. German. *Deadline for application:* 4 weeks before commencing date. *Fees:* DM 27,000.

**Organizer:** SLV Fellbach GmbH  
Fellbacher Strasse 86  
7012 Fellbach, Federal Republic of Germany

#### **Spécialiste soudage**

*Brève description :* Procédé de soudage; type de l'équipement; matériaux; produit d'apport; examens non destructifs; essais destructifs; construction; calcul; prévention des accidents; rentabilité. *Début du cours :* Mars 1990. *Durée :* 3 1/2 mois. *Qualifications :* Allemand. *Date limite d'inscription :* Janvier 1990. *Droits d'inscription :* A arranger.

**Organisateur :** SLV im Saarland GmbH  
Heuduckstrasse 91  
6600 Sarrebruck, République fédérale d'Allemagne

#### **TIG welding (instructor)**

*Short description:* TIG welding of plain-carbon, low-alloy and high-alloy steels, aluminium and aluminium alloys. *Commencing date:* 1 April, 1 October 1990.



*Duration:* 7 months. *Qualifications:* Basic metalworking and welding; about 25 years of age. German. *Deadline for application:* 4 weeks before commencing date. *Fees:* DM 31,000.

*Organizer:* SLV im Saarland GmbH  
Heuduckstrasse 91  
6600 Saarbrücken, Federal Republic of Germany

#### **Welding (engineer)**

*Short description:* Welding techniques; welding process, materials, construction, fabrication. *Commencing date:* January, September 1990, 1991. *Duration:* 3 months. *Qualifications:* Diploma or graduate engineer. German or English. *Deadline for application:* 3 months before commencing date. *Fees:* In German, DM 5,000; in English, to be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Duisburg  
Postfach 101267  
Bismarckstrasse 3  
4100 Duisburg 1, Federal Republic of Germany

#### **Welding (engineer)**

*Short description:* Welding processes and equipment; behaviour of materials during welding; construction and design; production, plant, applications engineering. *Commencing date:* 19 February, 20 August 1990. *Duration:* 11 weeks. *Qualifications:* Degree in engineering. German. *Deadline for application:* 4 weeks before commencing date. *Fees:* DM 4,500.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt (SLV)  
Mannheim GmbH  
Käthe-Kollwitz-Strasse 19  
6800 Mannheim 1, Federal Republic of Germany

#### **Welding (engineer)**

*Short description:* Course for engineers. Participants can take the welding engineer test after the course. *Commencing date:* 12 February, 10 September 1990, 11 February, 9 September 1991. *Duration:* 11 weeks. *Qualifications:* German. *Deadline for application:* 2 weeks before commencing date. *Fees:* 1990, DM 3,980 (plus test, DM 600); 1991, DM 4,100 (plus test, DM 620).

*Organizer:* SLV Fellbach GmbH  
Stuttgarter Strasse 86  
7012 Fellbach, Federal Republic of Germany

#### **Welding (expert)**

*Short description:* Advanced welding techniques. *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* Welding foreman, master or instructor. *Deadline for application:* 3 months before commencing date. *Fees:* In German, DM 1,500; in English, to be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Duisburg  
Postfach 101262  
Bismarckstrasse 85  
4100 Duisburg 1, Federal Republic of Germany

### **Welding (expert)**

*Short description:* The course is designed to prepare qualified master metalworkers, or skilled workers for the welding expert qualifying examination. *Commencing date:* 29 January, 27 June, 5 November 1990, 28 January, 26 June, 4 November 1991. *Duration:* 4 weeks. *Qualifications:* German. *Deadline for application:* 2 weeks before commencing date. *Fees:* 1990, DM 1,380, plus test DM 360; 1991, DM 1,420 plus test DM 370.

*Organizer:* SLV Fellbach GmbH  
Stuttgarter Strasse 86  
7012 Fellbach, Federal Republic of Germany

### **Welding (instructor)**

*Short description:* Gas welding; MMA-welding; TIG-welding; MAG/MIG welding. *Commencing date:* February, September 1990. *Duration:* 2 months. *Qualifications:* 5 years of experience in welding; about 25 years of age. English or German. *Deadline for application:* 3 months before commencing date. *Fees:* DM 3,000 for courses held in German in the Federal Republic of Germany.

*Organizer:* Schweisstechnik : Lehr- und Versuchsanstalt Duisburg  
Postfach 10 12 62  
Bismarckstrasse 85  
4100 Duisburg 1, Federal Republic of Germany

### **Agricultural machinery (fitter)**

*Short description:* Fitting technology of agricultural machinery and work tools; utilization of fitting tools and devices. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and meals).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

### **Flame and arc welding**

*Short description:* Connecting and hard facing welding; soldering; welding technologies and devices. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-1,200 per month (including accommodation and meals).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

### **Welding and inspection**

*Short description:* Welding techniques; non-destructive testing. *Commencing date:* April. *Duration:* 1 year. *Qualifications:* Welding technique of JIS (manual semi-auto class). Japanese. *Deadline for application:* March. *Fees:* ¥60,000 per month.

*Organizer:* The Japan Welding School  
Kawasaki-ku  
Kawasaki 210, Japan

### **Welding technology**

*Short description:* Various aspects of welding technology. *Commencing date:* To be arranged. *Duration:* 5 months. *Qualifications:* Degree in engineering, engaged in welding industry; between 25 and 35 years of age. English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Japan International Cooperation Agency (JICA)  
Training Affairs Department  
P.O. Box 216  
Shinjuku 2-chome, Shinjuku-ku  
Tokyo 160, Japan

### **Welding technology (advanced)**

*Short description:* Arc welding technology. *Commencing date:* To be arranged. *Duration:* 18 days. *Qualifications:* Foremen, engineers; 13 years of experience in welding. English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Kobe Steel Ltd.  
Marunouchi  
Chiyoda-Ku  
Tokyo, Japan

*Venue:* The Association for Overseas Technical Scholarship  
Senju-Azuma, Adachi-Ku  
Tokyo, Japan

### **Welding engineering**

*Short description:* Course leading to the New Zealand Institute of Welding (NZIW) certificate in welding engineering. *Commencing date:* May 1990. *Duration:* 3-4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* March 1990. *Fees:* \$NZ 1,500.

*Organizer:* New Zealand Welding Centre  
P.O. Box 76134  
Manukau City, New Zealand

### **Welding technology**

*Short description:* Course leading to the New Zealand Institute of Welding (NZIW) certificate in welding technology or NSIW welding supervisor's certificate. *Commencing date:* May 1990. *Duration:* 3 weeks. *Qualifications:* Tradesman level with welding experience. English. *Deadline for application:* March 1990. *Fees:* \$NZ 1,200.

*Organizer:* New Zealand Welding Centre  
P.O. Box 76134  
Manukau City, New Zealand

### **Computer-aided agricultural machinery design**

*Short description:* Basic and special purpose software used in designing machinery; computer systems used in analysing constructions; computer processing of information from the field. *Commencing date:* Throughout the year. *Duration:*

2-3 months. *Qualifications:* Degree in engineering; experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Institute of Agricultural Machinery  
Poznan, Poland

*Venue:* State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Ship construction**

*Short description:* Planning documentation for ship construction in shipyard; materials supply system. *Commencing date:* Throughout the year. *Duration:* 3 weeks. *Qualifications:* High or secondary technical education; experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Shipyard "Komuna Paryska"  
Gdynia, Poland

*Venue:* State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Ships hull erection at a shipyard dry dock**

*Short description:* Hull erection technology; ship construction block method; hull erection main stages. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* High or secondary technical education; experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Shipyard "Komuna Paryska"  
Gdynia, Poland

*Venue:* State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Avionics engineering**

*Short description:* Surveys modern airfield radar and radio aids to navigation and gives practical engineering training on ILS, DVOR, DME and NDB. *Commencing date:* 8 January 1990. *Duration:* 24 weeks. *Qualifications:* Graduate engineers. English. *Deadline for application:* —. *Fees:* £495 per week.

*Organizer:* Racal Training Services Ltd.  
Heckfield Place  
Heckfield, Hampshire RG27 0LD, United Kingdom

#### **Computer-aided welding technology and non-destructive testing**

*Short description:* This high technology course is designed to bring to the attention of fabrication, welding and NDT personnel the state-of-the-art developments in computer applications. Particular emphasis will be placed on software for welding technology, ultrasonic aspects of critical flaw sizing and expert systems. *Commencing date:* 24 September 1990. *Duration:* 4 weeks. *Qualifications:* Higher national

certificate, diploma or degree or equivalent; experience in fabrication, welding and quality control. English. *Deadline for application:* 24 August 1990. *Fees:* £1,000.

*Organizer:* Scottish School of Non-Destructive Testing  
Paisley College of Technology  
High Street, Paisley  
Renfrewshire PA1 2BE, Scotland, United Kingdom

#### **Computer numerical controlled machining**

*Short description:* Theory and practice of both CNC milling (3 axis) and turning (2 axis) machining. *Commencing date:* Throughout the year. *Duration:* 4-26 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Eng. GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

#### **Manufacturing systems and manufacturing management**

*Short description:* New manufacturing systems, technologies and management practices. *Commencing date:* To be arranged. *Duration:* As required. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Amtri  
Human Resources Division  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, United Kingdom

#### **Manufacturing systems and technology**

*Short description:* Computerized systems in manufacturing; computer technology; management; marketing research and development. *Commencing date:* Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* —.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon  
Warwickshire, United Kingdom

#### **Manufacturing technologies and management**

*Short description:* Design: quality management; production management; robotics; assembly automation; CAD, FMS, CIM. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* Some industrial experience. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Advanced Manufacturing Technology Research Institute (AMTRI)  
Human Resources Division  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, United Kingdom

### **Marine, shipbuilding and ship repair technology**

*Short description:* Manufacturing methods and procedures; computer applications in the marine industry; supervisory skills needed in the implementation of new methods and techniques; management training; cost estimating and material and cost control; manufacturing technology; production design; quality assurance and accuracy control; occupational health and safety. *Commencing date:* To be arranged. *Duration:* 14 weeks. *Qualifications:* Technical or professional qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Amarc (TES) Ltd.  
Ellison Street  
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

### **Railway engineering**

*Short description:* Part I of the programme is based at a United Kingdom academic institution and covers design and technology, production management manufacturing technology, cost control. Part II of the programme is based in British Rail and covers practical applications, maintenance management, quality management. *Commencing date:* 29 January 1990, 21 January 1991. *Duration:* 6 months. *Qualifications:* Degree or equivalent in mechanical or electrical engineering; at least 3 years of experience. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £15,100; 1991, £16,200.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Shipbuilding and ship repair**

*Short description:* Specialized courses offered in: advanced production methods; outfit and production technology; coating (paint) technology; integral design and production systems; regulations in plan preparation (Steelwork Drawings Development); ship repairs; ship surveying; clarification of society rules and regulations; hand, automatic and semi-automatic welding processes and techniques; modern pipework material and production methods; non-destructive testing; heat line forming techniques. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Technical or professional qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Amarc (TES) Ltd.  
Ellison Street  
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

### **Signalling technology (advanced)**

*Short description:* The programme covers the requirements for corporate membership of the Institute of Railway Signal Engineers. The modules are: 1. Signalling a layout, including practical preparation of scheme plans; 2. Practical attachments; 3. Modern signalling methods, hardware and software, for all categories of line. *Commencing date:* 7 May 1990, 6 May 1991. *Duration:* 6 weeks. *Qualifications:* Degree or equivalent in electrical or electronic engineering; at least 5 years of experience.

English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £3,600; 1991, £3,800.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

#### **Signalling technology (overseas)**

*Short description:* Signalling principles; development of signalling schemes; practice in checking schemes; modern signalling methods. *Commencing date:* 24 September 1990, 23 September 1991. *Duration:* 4 weeks. *Qualifications:* Degree or equivalent in electrical or electronic engineering; 2 years of experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* 1990, £2,600; 1991, £2,780.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

#### **Welding technology and inspection**

*Short description:* Course for senior and chief inspectors concerned with safety in welding industry covering the design, metallurgical processes and inspection aspects of welds. *Commencing date:* 8 January 1990, 7 January 1991. *Duration:* 6 weeks. *Qualifications:* Higher National certificate or equivalent; experience in the welding industry. English. *Deadline for application:* 9 December 1989, 21 December 1990. *Fees:* £1,400.

*Organizer:* Scottish School of Non-Destructive Testing  
Paisley College of Technology  
High Street, Paisley  
Renfrewshire, PA1 2BE, Scotland, United Kingdom

#### **Welding technology and inspection**

*Short description:* Syllabus to suit individual client's requirements. Courses can be run at The Welding Institute, Abington or in-plant. *Commencing date:* July. *Duration:* —. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

*Organizer:* The Welding Institute  
Abington Hall  
Abington, Cambridge CB1 6AL, United Kingdom

### **Metallurgical industries/Industrie métallurgique/ Industrias metalúrgicas**

#### **Foundry technology**

*Short description:* Melting processes of cast steel, cast-iron and non-ferrous metals; classical and modern foundry technologies; moulding and auxiliary materials; quality control of foundry processes; foundry control and measuring apparatus; environmental control activities. *Commencing date:* Throughout the year. *Duration:* 1-2 months. *Qualifications:* Degree in foundry or metallurgy or equivalent; practical

experience. English, French. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Foundry Research Institute  
Krakow, Poland

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Heat treatment of steel and cast-iron**

*Short description:* Principles of processes and their modifications; technological installations and control devices; structure properties and application of layers and coatings. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* Engineers, technical school graduates, skilled workers; experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Institute of Precision Mechanics  
Warsaw, Poland

*Contact address:*

State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Manufacture and design of cast spare parts**

*Short description:* Spare parts, their classification, manufacture, design. *Commencing date:* May. *Duration:* 10 weeks. *Qualifications:* Foundry engineers. English. *Deadline for application:* End of March. *Fees:* —.

**Organizer:** Foundry Research Institute  
Zakopiańska 73  
Kraków, Poland

#### **Metallurgy**

*Short description:* Extractive metallurgy; physical metallurgy, control and measurements; chemical analysis, technical and economic information. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* Degree in metallurgy or equivalent; practical experience. English (French, Italian and Spanish for selected areas). *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Institute of Ferrous Metallurgy  
Warsaw, Poland

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Modern electroplating processes**

*Short description:* Principles of corrosion protection, methods of surface preparation, electrolytic deposition of zinc, tin, cadmium, copper, nickel, chromium, silver, gold



and alloys, electroforming (galvanoplastics), chromating, phosphatizing, sewage treatment, measurement of coating thickness, control of porosity and adhesion, industrial safety in electroplating processes. *Commencing date:* Throughout the year. *Duration:* 4-6 months. *Qualifications:* Engineers having practical experience with electroplating processes. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Precision Mechanics  
Warsaw, Poland

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Modern heat treatment technologies**

*Short description:* Heat treatment processes, selected methods and problems encountered as well as related activities. *Commencing date:* Throughout the year. *Duration:* 2 months. *Qualifications:* Engineers and technical workers directly or indirectly concerned with problems of heat treatment of metals; practical experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Precision Mechanics  
Warsaw, Poland

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Non-ferrous metals processing**

*Short description:* Processing metallurgy of non-ferrous metals, metalworking, powder metallurgy and environmental control activities. *Commencing date:* Throughout the year. *Duration:* 1-3 months. *Qualifications:* Degree in non-ferrous metals processing; technical and practical experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Non-Ferrous Metals  
Warsaw, Poland

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Packaging industries/Industrie de l'emballage/ Industrias relacionadas con el embalaje**

**Application des matières plastiques dans l'emballage et le conditionnement (y compris les tuyaux)**

*Brève description:* Les polymères utilisables dans le conditionnement et l'emballage; leurs diverses propriétés chimiques, physiques, rhéologiques; le conditionnement des produits chimiques, bidons, fûts et réservoirs; le transport des eaux résiduaires, le

flaconnage alimentaire et industriel; travaux de laboratoire; visites d'usines et d'industries alimentaires; l'emballage alimentaire; notions de toxicologie; l'étude de la migration des adjuvants (méthodes et analyses); le transport de l'eau potable (contrôle de migration); l'élimination des déchets de l'emballage en matières plastiques (pollution de l'air et du sol — biodégradabilité). *Début du cours* : Toute l'année sauf juillet et août. *Durée* : 6 mois-1 an. *Qualifications* : Ingénieur chimiste, licencié en sciences pharmaceutiques. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

**Organisateur** : Centre d'études des matières plastiques  
Université de Liège  
2, rue Armand-Stevart  
4000 Liège, Belgique

### **Emballage**

*Breve description* : Les matières premières; le carton ondulé et son utilisation; le carton plat et son utilisation; les emballages en bois; les fûts, bidons, jerrycans, boîtes métalliques, rails; les films en matière plastique et les complexes; les sacs industriels; les sollicitations lors du transport; essais sur emballages; méthodes d'essais; appareils, normes, contrôle de la qualité; les accessoires d'emballages; le transport des marchandises dangereuses; la corrosion; les machines d'emballages; visites d'usines et canaux de distribution. *Début du cours* : A arranger. *Durée* : 3 mois en moyenne. *Qualifications* : Diplôme universitaire. Français ou anglais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

**Organisateur** : Institut belge de l'emballage  
15, rue Picard  
1020 Bruxelles, Belgique

### **Packaging technology**

*Short description*: Agricultural packaging; dangerous goods packaging; industrial packaging; retail packaging; packaging testing and research; quality control. *Commencing date*: To be arranged. *Duration*: —. *Qualifications*: Professional qualifications. English. *Deadline for application*: —. *Fees*: To be arranged.

**Organizer**: TNO Packaging Research Institute  
P.O. Box 169  
2600 AD Delft, Netherlands

## **Textile industries/Industrie textile/Industrias textiles**

### **Man-made fibres in textile processing**

*Short description*: Production of man-made fibres, blending and quality control. *Commencing date*: 24 September 1990, 1991. *Duration*: 5 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: 31 August 1990, 1991. *Fees*: —.

**Organizer**: Österreichisches Chemiefaser-Institut  
Plösslgasse 8  
1041 Vienna, Austria

## Industrie textile

*Breve description* : Fabrication : fibres, filature, bonneterie, tissage, examens de laboratoire, contrôle de la qualité en laboratoire, réparation et entretien des machines. Matières premières : fibres naturelles animales, végétales, fibres artificielles, fibres synthétiques. *Début du cours* : Toute l'année sauf juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : FB 20 000 par mois.

*Organisateur* : Centre de recherche et de contrôle lainier et chimique (CELAC)  
Zoning de Petit Rechain  
69H, avenue du Parc 4655 Chaineux, Verviers, Belgique

## Textiles

*Breve description* : Métrologie des caractéristiques des fibres, fils et tissus; filature de coton et de laine, processus de tissage; procédés de tricotage; examen de l'évolution des études en cours dans les laboratoires de recherche textile (coton, laine, lin, fibres chimiques); aide technique aux moyennes et petites entreprises textiles. *Début du cours* : Toute l'année sauf juillet et août. *Durée* : 3-6 mois. *Qualifications* : Qualifications professionnelles. Français, néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centexbel  
24, rue Montoyer  
1040 Bruxelles, Belgique

## Quality assessment in textile industry

*Short description*: Quality assessment and standardization; organization of the quality inspection; information and practice in modern and traditional test methods; computerized data processing. *Commencing date*: To be arranged. *Duration*: 3 months. *Qualifications*: Quality manager. English. *Deadline for application*: 3 months before commencing date. *Fees*: —.

*Organizer*: Hungarian Office for Standardization  
Üllői utca 25  
1091 Budapest, Hungary

## Clothing technology

*Short description*: Design and cutting techniques; assembling and finishing techniques; optimal use of new machinery; production control systems; quality assurance related to international standards. *Commencing date*: To be arranged. *Duration*: —. *Qualifications*: Personnel involved in the in-plant training of operators. English. *Deadline for application*: —. *Fees*: —.

*Organizer*: TNO Fibre Research Institute  
Clothing Department  
P.O. Box 671  
7500 AR Enschede, Netherlands

## Knitting and styling

*Short description*: Theoretical and practical training in the knitting styling workshop with up-to-date equipment consisting of microprocessor controlled flat and circular knitting machines. *Commencing date*: To be arranged. *Duration*: 13 weeks. *Qualifications*: Production managers and technical staff graduated from a textile

engineering college; at least 2 years of experience. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Fibre Research Institute  
P.O. Box 110  
2600 AC Delft, Netherlands

### Textile mill management

*Short description:* In-plant training, case-study related to industrial organization and management; costing maintenance; production control; quality control; statistics; trouble-shooting; operative selection and training. Textile manufacturing processes, cotton and synthetics; spinning, weaving, knitting, dyeing, finishing and printing. *Commencing date:* January, August. *Duration:* 4 months. *Qualifications:* Production managers and technical staff; at least secondary education; 2 years of experience in textile industry. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
P.O. Box 1075  
7500 BB Enschede, Netherlands

### Textiles

*Short description:* Testing methods and testing of fibres, yarns, fabrics, non-woven carpets and quality assurance. *Commencing date:* To be arranged. *Duration:* 5 days-3 months. *Qualifications:* Professional qualifications. English or German. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Fibre Research Institute  
P.O. Box 110  
2600 AC Delft, Netherlands

### Cotton fibre technology

*Short description:* Technology, testing and evaluation of cotton fibres and yarns; organizing, equipping and maintaining a fibre testing laboratory; basic information on cotton marketing. *Commencing date:* March/April 1990. *Duration:* 8 weeks. *Qualifications:* Technical qualifications in either agricultural subjects, preferably related to cotton production, or textile technology at least up to higher national diploma (or equivalent). *Deadline for application:* —. *Fees:* £1,200.

*Organizer:* International Institute for Cotton  
Kingston Road  
Didsbury, Manchester M20 8RD, United Kingdom  
*Contact address:*  
Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

*Venue:* Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

### Cotton textiles and management

*Short description:* Leadership; control data and procedure; work-force potential, selection and trainability testing; communications and human relations; training

diagnosis of needs, development of training policy; health and safety. *Commencing date:* June 1990. *Duration:* 4 weeks. *Qualifications:* Experience in textile industry. English. *Deadline for application:* March 1990. *Fees:* £850.

**Organizer:** International Institute for Cotton  
Kingston Road  
Didsbury, Manchester M20 8RD, United Kingdom

**Venue:** Fielden House Productivity Centre  
Didsbury, Manchester, United Kingdom

#### **Sizing and weaving of cotton yarns**

*Short description:* Cotton yarn technology; warp preparation; sizing; weaving mechanisms; machine setting; testing and quality control; fault identification, prevention and correction; planned maintenance; establishing, equipping and organizing a quality control unit. *Commencing date:* April, August 1990. *Duration:* 8-9 weeks. *Qualifications:* Basic qualifications in textile technology; experience. English. *Deadline for application:* February 1990. *Fees:* £1,200.

**Organizer:** International Institute for Cotton  
Kingston Road  
Didsbury, Manchester M20 8RD, United Kingdom

*Contact address:*  
Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

**Venue:** Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

#### **Textile technology**

*Short description:* Fundamentals of textile science and textile technology; properties of natural and synthetic fibres; testing and quality control; yarn manufacture; knitting; weaving; non-wovens; printing; dyeing and finishing. *Commencing date:* October 1990. *Duration:* 6 months. *Qualifications:* Degree or equivalent. English. *Deadline for application:* 1 September 1990. *Fees:* To be arranged.

**Organizer:** University of Leeds  
Department of Textile Industries  
Leeds LS2 9JT, United Kingdom

#### **Wet processing of cotton textiles**

*Short description:* De-sizing, scouring, bleaching, mercerizing, easy-care finishing; low pick-up systems; knitwear finishing; testing and evaluation. *Commencing date:* April, October 1990. *Duration:* 8 weeks. *Qualifications:* Technical qualifications; experience in the wet processing of textiles. English. *Deadline for application:* February 1990. *Fees:* £1,200.

**Organizer:** International Institute for Cotton  
Kingston Road  
Didsbury, Manchester M20 8RD, United Kingdom

*Contact address:*  
Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

**Venue:** Ahmedabad Textile Industry's Research Association  
P.O. Polytechnic  
Ahmedabad 380 015, India

**Wood processing and wood products industries/  
Industrie du bois et des produits du bois/  
Industrias de elaboración de la madera y de productos de madera**

**Menuiserie et ébénisterie**

*Brève description* : Sécurité sur machines à bois; entretien et affûtage des outils de coupe; utilisation des machines; travaux de corroyage, sciage, exécution, mortaises et enfourchements; assemblages avec battées, rainures et moulures; menuiserie du bâtiment; ébénisterie, marqueterie. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

**Technologie du bois**

*Brève description* : Panneaux de particules; utilisation des copeaux; techniques de fabrication des panneaux de particules; équipements employés; contrôle de qualité des panneaux. *Début du cours* : Toute l'année sauf juillet à septembre. *Durée* : 2 mois. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : FB 15 000 par mois.

*Organisateur* : Station de technologie forestière  
1, avenue du Maréchal-Juin  
5800 Gembloux, Belgique

**Formation des producteurs de bois des pays tropicaux**

*Brève description* : Connaissance du bois et des essences tropicales; connaissances techniques applicables dans l'industrie; technologie professionnelle; fabrication des produits de bois. *Début du cours* : Janvier. *Durée* : 5 mois. *Qualifications* : Français. *Date limite d'inscription* : Fin octobre. *Droits d'inscription* : FF 28 000.

*Organisateur* : Institut national du bois (INB)  
6, avenue de Saint-Mandé  
75012 Paris, France

**Formation de vendeurs de bois et produits dérivés**

*Brève description* : Connaissances techniques sur le bois, les panneaux et les produits dérivés; acquisition d'un argumentaire dynamique de vente, pour maîtriser la négociation. *Début du cours* : Janvier. *Durée* : 3 mois. *Qualifications* : Français. *Date limite d'inscription* : Fin octobre. *Droits d'inscription* : FF 20 000.

*Organisateur* : Institut national du bois (INB)  
6, avenue de Saint-Mandé  
75012 Paris, France

**Forest economy and primary wood processing**

*Short description*: Forestry; wood processing technology; operation of the machinery.  
*Commencing date*: 1990. *Duration*: 3 months. *Qualifications*: Professional qualifica-

tions. *Deadline for application*: —. *Fees*: \$US 1,000-1,200 per month (including accommodation and board).

*Organizer*: Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

**Other industrial branches and intersectoral programmes/  
Autres secteurs industriels et programmes intersectoriels/  
Otras ramas industriales y programas intersectoriales**

**Vibration control by balancing**

*Short description*: Statics and dynamics of unbalanced rigid rotors; method for dynamic measuring procedure; procedures for balancing; balancing quality; experimental determination of the required balance quality. *Commencing date*: Throughout the year except in July and August. *Duration*: 4-6 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: To be arranged. *Fees*: S 24,000 per week.

*Organizer*: Chemserv Consulting  
St. Peter Strasse 25  
4020 Linz, Austria

**Imprimerie**

*Breve description*: Techniques graphiques; matériel de composition; le papier; les encres; la phototitreuse; la photocomposition; les impositions en montage offset et photocomposition; les procédés d'impression: offset, héliographe, sérigraphie; les matériaux photosensibles et développements; les clichés; machines et accessoires; techniques de la couleur; le dessin et la lettre; esthétique, équilibre, créations; montage sur cello; travail sur ruban perforé en photocomposition; traitement ruban avec duplex. *Début du cours*: Toute l'année sauf en juillet et août. *Durée*: —. *Qualifications*: Qualifications professionnelles. Français. *Date limite d'inscription*: —. *Droits d'inscription*: A arranger.

*Organisateur*: Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

**Matériaux composites**

*Breve description*: Fabrication; évaluation des propriétés; applications. Le choix d'un ou de plusieurs matériaux provenant d'un pays en voie de développement déterminé est effectué sur place. Les matériaux choisis sont susceptibles d'être utilisés pour la fabrication de composites et présentent un intérêt économique pour le pays d'origine. *Début du cours*: A arranger. *Durée*: 5 mois. *Qualifications*: Qualifications professionnelles; expérience de la construction. Français ou anglais. *Date limite d'inscription*: —. *Droits d'inscription*: \$US 5 000.

*Organisateur*: CRIF  
200, rue du Chéra  
4000 Liège, Belgique

## Minéralogie

*Brève description* : Méthodes de séparation et d'identification des minéraux; techniques d'investigations utilisées dans les études de traitement des minerais; examens minéralogiques; essais minéralogiques et métallurgiques; analyses chimiques. *Début du cours* : 15 septembre. *Durée* : 3-9 mois. *Qualifications* : Ingénieur des mines et métallurgie. Français, anglais. *Date limite d'inscription* : —. *Droits d'inscription* : FB 30 000 par mois.

*Organisateur* : Laboratoire de traitement des minerais  
Université catholique de Louvain  
Bâtiment Réaumur  
2, place Ste Barbe  
1348 Louvain-la-Neuve, Belgique

## Technologies nouvelles

*Brève description* : Les technologies nouvelles comportant les technologies de mise en forme des matières plastiques, du moulage des alliages non ferreux, du travail du verre, de la fabrication des outillages; conception et dimensionnement de pièces en matériaux nouveaux; contrôle de la qualité; traitement des données technologiques par l'informatique. *Début du cours* : A arranger. *Durée* : 5 mois. *Qualifications* : Qualifications professionnelles. Français, anglais. *Date limite d'inscription* : —. *Droits d'inscription* : \$US 5 000.

*Organisateur* : CRIF  
200, rue du Chéra  
4000 Liège, Belgique

## Mesures, analyseurs industriels

*Brève description* : Cette nouvelle formule permet de suivre les stages PAI, QTM, TM, et MPC dans le cadre d'un cursus homogène. Ce stage s'adresse à des ingénieurs et techniciens souhaitant acquérir une très bonne maîtrise de l'ensemble des techniques de la mesure industrielle et devant apprécier la qualité des résultats. *Début du cours* : 25 mai. *Durée* : 6 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 29 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Perfectionnement en instrumentation et régulation

*Brève description* : Agents techniques de maintenance en instrumentation et régulation ayant quelques années d'expérience (niveau IV ou V). Il s'agit de compléter et d'améliorer les connaissances théoriques et pratiques en mesure et régulation. *Début du cours* : 27 février, 10 avril, 16 mai, 19 juin, 28 août, 25 septembre. *Durée* : 4 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 14 200.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Pratique de l'instrumentation et de la régulation

*Brève description* : Agents techniques débutants ou peu expérimentés en instrumentation et régulation (niveau IV ou V). Il s'agit d'apprendre à effectuer le réglage



des instruments de mesure et la mise au point des boucles de régulation simples.  
*Début du cours* : Toute l'année. *Durée* : 6 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 19 500.

*Organisateur* : Institut de régulation et automaton  
Chemin des Moines  
13644 Arles, France

#### Technique de la régulation

*Brève description* : Agents techniques expérimentés en instrumentation et régulation (niveau III ou IV : BTS, DUT ou BAC) ou ayant suivi un stage TC 1. Il s'agit de compléter les connaissances pratiques et théoriques en régulation industrielle et d'accéder aux possibilités offertes par les systèmes numériques de contrôle-commande. *Début du cours* : 9 janvier, 19 juin, 6 novembre. *Durée* : 3 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 12 300.

*Organisateur* : Institut de régulation et automaton  
Chemin des Moines  
13644 Arles, France

#### Technique de l'instrumentation et de la régulation

*Brève description* : Agents techniques débutants ou peu expérimentés en instrumentation et régulation (niveau III ou IV : BTS, DUT ou BAC). Il s'agit d'apprendre à effectuer le réglage des instruments de mesure et la mise au point des boucles de régulation. *Début du cours* : Toute l'année. *Durée* : 4 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 14 500.

*Organisateur* : Institut de régulation et automaton  
Chemin des Moines  
13644 Arles, France

#### Irrigation engineering

*Short description*: The objective of the course is to provide participants with knowledge and skills in irrigation engineering to enable them to settle technical, organizational and economic problems. *Commencing date*: 6 March. *Duration*: 13 weeks. *Qualifications*: Bachelor of Science or diploma or several years of experience. English, French. *Deadline for application*: 28 February. *Fees*: DM 11,835.

*Organizer*: Deutsche Lehranstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 34  
6100 Darmstadt 12, Federal Republic of Germany

#### Irrigation mechanics

*Short description*: Operation and maintenance of irrigation machines and devices. *Commencing date*: 1990. *Duration*: 2 months. *Qualifications*: Trained worker. *Deadline for application*: —. *Fees*: \$US 1,000-1,200 per month (including accommodation and board).

*Organizer*: Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

## Engineering (technician)

*Short description:* Engineering skills in the main disciplines ranging from basic craft to technician standard; "hands on" experience. *Commencing date:* To be arranged. *Duration:* 4-12 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 700-800 per week.

*Organizer:* Esmil Engineering and Contracting  
P.O. Box 7811  
B.V. de Boelelaan 1  
1008 AA Amsterdam, Netherlands

## Dimensional metrology training laboratory

*Short description:* The establishment of a dimensional metrology training laboratory is to be conducted at clients' premises by Swedec International metrologist. All necessary learning material, measuring instruments and workpieces are supplied, except for heavy equipment. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Experience. English, Portuguese. *Deadline for application:* 10 weeks before commencing date. *Fees:* \$US 41,700.

*Organizer:* Swedec International AB  
P.O. Box 7044  
10386 Stockholm, Sweden

## Ergonomics

*Short description:* Man as the vital component in the man-machine-environment system; harmony between technology, environment and the human operator. *Commencing date:* August 1990. *Duration:* 1½ years (3 semesters). *Qualifications:* Bachelor's degree in a Science or equivalent. English. *Deadline for application:* 15 January 1990. *Fees:* SKr 34,500 per semester.

*Organizer:* Swedish International University Consortium  
The National Board of Universities and Colleges  
P.O. Box 45501  
104 30 Stockholm, Sweden

## Biosensor technology

*Short description:* Design, construction and applications of biosensors. *Commencing date:* 1 October 1990. *Duration:* 1 year. *Qualifications:* Bachelor's degree in a relevant science or engineering subject. English. *Deadline for application:* —. *Fees:* EEC students £1,800 per year; non-EEC students £11,250 per year.

*Organizer:* Cranfield Biotechnology Centre  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

## Community water supply and sanitation for developing countries

*Short description:* Subjects covered are: 1. Social science: data, survey techniques and social appraisal; health and community; population and development; 2. Technology: rural water supply; sanitation; water treatment and distribution; 3. Management for implementation: development policy and planning; projects and programmes; training and administration. *Commencing date:* 30 April 1990, 29 April

1991. *Duration:* 10 weeks. *Qualifications:* Degree or equivalent. English. *Deadline for application:* 28 February. *Fees:* £4,000 (including residence and all meals).

*Organizer:* Water, Engineering and Development Centre (WEDC)  
Loughborough University of Technology  
Loughborough, Leicestershire LE11 3TU, United Kingdom

### **Earthquake engineering**

*Short description:* Theoretical, experimental and design aspects of the behaviour of building structures, designed to resist earthquake actions. *Commencing date:* October. *Duration:* 1 year. *Qualifications:* Bachelor's degree in civil, mechanical or aeronautical engineering or relevant experience. *Deadline for application:* May. *Fees:* Overseas participants £5,800, United Kingdom and EEC participants £1,700.

*Organizer:* Imperial College  
Civil Engineering Department  
London SW7 2BU, United Kingdom

### **Engineering training programmes**

*Short description:* Tailor-made courses for engineers and engineering management covering all aspects of engineering (metallurgy, rubber and plastics, textiles and automotive technology). *Commencing date:* To be arranged. *Duration:* 25 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* \$US 500-\$US 3,000 per week.

*Organizer:* British Centre for Engineering and Scientific Training  
Puttenham Priory  
Puttenham, Surrey GU3 1AR, United Kingdom

### **Infrastructure for low-income urban housing**

*Short description:* Preparation and management of housing projects; water, supply, sanitation and solid waste management; site preparation, access and other services; low cost buildings. *Commencing date:* 17 September 1990, 23 September 1991. *Duration:* 12 weeks. *Qualifications:* Degree or equivalent; appropriate professional experience. English. *Deadline for application:* 31 July. *Fees:* £4,500 (including residence and all meals).

*Organizer:* Water, Engineering and Development Centre (WEDC)  
Loughborough University of Technology  
Loughborough, Leicestershire LE11 3TU, United Kingdom

### **Legal metrology**

*Short description:* Practical course for weights and measures inspectors, trainee inspectors and metrologists who wish to obtain first-hand experience of legal metrology practice in the United Kingdom. *Commencing date:* Spring. *Duration:* 3 weeks. *Qualifications:* Metrology or weights and measures background. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* National Weights and Measures Laboratory  
Department of Trade and Industry  
Stanton Avenue  
Teddington, Middlesex TW11 0JZ, United Kingdom

### **Low-cost housing**

*Short description:* Scheme design, unit detailing and technology; building materials and building technology; low cost infrastructure layout; sanitation, water supply, sewage treatment and disposal; project and construction management; programming and monitoring of construction; site staffing and contract administration. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Technical and professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

### **Management for executives in the water sector**

*Short description:* Essential requirements for managing the continuing operations and maintenance of the total water system. *Commencing date:* 14 May 1990. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Urwick Management Centre  
Price Waterhouse  
Baylis House  
Stoke Poges Lane  
Slough, Berkshire SL1 3PF, United Kingdom

### **Practical water supply and sanitation for low-income communities in developing countries**

*Short description:* Blockwork and cement; mechanical and electrical plant; excavation and pipework. *Commencing date:* 9 July 1990, 8 July 1991. *Duration:* 6 weeks. *Qualifications:* Holding a suitable professional appointment in a developing country. English. *Deadline for application:* 15 June. *Fees* (provisional): £2,000 (including residence and all meals).

*Organizer:* Water, Engineering and Development Centre (WEDC)  
Loughborough University of Technology  
Loughborough, Leicestershire LE11 3TU, United Kingdom

### **Road maintenance management**

*Short description:* Moisture control and drainage methods; bridges and structures; contractual procedures; supply and materials management planning and organization; principles of management; training and staff development. *Commencing date:* 5 March, 10 September 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

### **Science and technology policy and development**

*Short description:* Problems envisaged in the choice, transfer and development of technology; policy options for dealing with the technology constraint of development. *Commencing date:* April, September 1990. *Duration:* 3 months. *Qualifications:* Bachelor's degree or equivalent; experience in agricultural or industrial project

management, planning and investment decision making. English. *Deadline for application:* December 1989, June 1990. *Fees:* £5,000.

*Organizer:* David Livingstone Institute  
University of Strathclyde  
16 Richmond St.  
Glasgow G1 1XQ, United Kingdom

#### **Science laboratory instrumentation**

*Short description:* The course is designed to provide a practical understanding of the modern instrumentation used in scientific laboratories, e.g. spectrophotometry, chromatography. It provides the trainee with the ability to use the equipment more effectively, to maintain it, to locate faults, and to repair the most common faults. *Commencing date:* January. *Duration:* 6 months. *Qualifications:* Experience. English. *Deadline for application:* End of November. *Fees:* to be arranged.

*Organizer:* Bristol Polytechnic  
Department of Science  
Coldharbour Lane  
Bristol BS16 1QY, United Kingdom

#### **Soil mechanics and engineering seismology**

*Short description:* Solution of engineering problems connected with the study of seismic ground movements. *Commencing date:* October 1990, 1991. *Duration:* 1 year. *Qualifications:* Honours degree in engineering or geology or equivalent. English. *Deadline for application:* August 1990, 1991. *Fees:* About £1,900 for UK or EEC students; about £6,500 for others.

*Organizer:* Imperial College  
Department of Civil Engineering  
London SW7 2BU, United Kingdom

## 2. INDUSTRIAL FUNCTIONS/FONCTIONS INDUSTRIELLES/ FUNCIONES INDUSTRIALES

### Automation and data processing/Automatisation et traitement des données/ Automatización y procesamiento de datos

#### Computer process control system

*Short description:* Introduction; electronic and pneumatic components; transmitters; operation amplifiers; transistor transducers; digital data conversion units; arrangement of process control units; computer process control manual; safety equipment; alarm system. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### Material management by computer

*Short description:* Electronic data processing; on-line stock management; automatic print-out of demand orders and material arrivals; inquiry processing and maintenance system; forecast module; coding/numbering system; defining of stocking levels; system to predict failure rates; material classification code. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### Work order processing

*Short description:* Survey of the computer system; issue of work orders; processing a single order; processing a main order, including partial orders and sub-orders; processing a service order; processing a general long-term order; processing an investment order; decision on placing orders; filing; registration of working time. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### Electronique — informatique

*Brève description :* Mise en œuvre de capteur; utilisation des amplificateurs opérationnels; multiplexage et commutations analogiques; commande des machines; isolation galvanique des circuits de commande; automates programmables; concept de

robotique; anatomie d'un robot; langages de programmation; microprocesseurs mémoires, entrées/sorties; acquisition des données analogiques et numériques; mise en œuvre d'un clavier, d'un système afficheur, d'un moniteur vidéo, d'une imprimante, d'interfaces cassette, disquette, d'une table traçante, d'interfaces de puissance; interconnexion d'ordinateurs; programmes tests; dépannage. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Niveau de qualification professionnelle. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

#### **Automatisation des processus industriels**

*Breve description* : Cette formation s'adresse à des ingénieurs ou universitaires (maîtrise, MST, DEA, Doctorat) qu'elle spécialise en automatisation des processus industriels. Elle est pratique et de haut niveau : informatique, éléments de procédés, mesure, régulation, automatisme, informatique industrielle, gestion de production, qualité, gestion, projet, stage en entreprise, séminaires. *Début du cours* : Début octobre. *Durée* : 9 mois. *Qualifications* : Français. *Date limite d'inscription* : Mi-août. *Droits d'inscription* : A arranger.

*Organisateur* : Isaii  
Chemin du Temple, ZI nord  
13645 Arles Cedex, France

#### **Automatismes, réseaux industriels**

*Breve description* : Ce cursus s'adresse à un vaste public d'ingénieurs, techniciens ou agents techniques devant rapidement acquérir la maîtrise des automates programmables. La composition de ce cursus (LO61, LO62, LO621 et LO622) n'impose pas de prérequis à l'entrée. *Début du cours* : 28 août. *Durée* : 8 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 38 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

#### **Informatique de production**

*Breve description* : Cette formation s'adresse à des techniciens supérieurs qu'elle spécialise en informatique de production. Elle leur permet d'approfondir les techniques d'automatisation et d'organisation de la production : automatisme, informatique, informatique industrielle, robotique et traitement d'images, réseaux téléinformatique, gestion de production, gestion et création d'entreprise, qualité, bureautique, communication et organisation. *Début du cours* : Fin février. *Durée* : 5 mois. *Qualifications* : Français. *Date limite d'inscription* : Début février. *Droits d'inscription* : Etudiants ou demandeurs d'emploi, FF 12 500; salariés en congé individuel de formation, FF 36 500.

*Organisateur* : Isaii  
Chemin du Temple, ZI nord  
13645 Arles Cedex, France

## Microprocesseurs et systèmes temps réel

*Brève description* : Ingénieurs et techniciens des services électronique ou automatique ayant de bonnes connaissances en logique (LOG 1) et désirant parfaitement maîtriser les microprocesseurs 8 bits, les circuits intégrés numériques et ayant à développer des applications temps réel sur microsystèmes. Ce cursus est composé de stages LOG 3, LOG 4, LOG 41. *Début du cours* : 27 février. *Durée* : 6 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 29 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Régulation numérique et automatique

*Brève description* : Ce cursus s'adresse à des ingénieurs et techniciens supérieurs ayant acquis une expérience en régulation analogique et souhaitant parfaitement maîtriser les techniques de la régulation numérique. Se succèdent dans ce cursus les stages TC2, BRN, IRN, RPM et OPI. *Début du cours* : 6 novembre. *Durée* : 7 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 36 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Spécialistes en automatisation des processus industriels

*Brève description* : Ce cycle d'un an s'adresse à des ingénieurs ou diplômés de l'université désireux de valoriser leur formation d'origine. Il est destiné aux cadres en congé individuel de formation ou demandeurs d'emploi. L'enseignement, pratique et de haut niveau, traite des méthodes et techniques de l'automatique et de l'informatique industrielles. *Début du cours* : Octobre. *Durée* : 1 an. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : —.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Techniciens supérieurs spécialistes en informatique de production

*Brève description* : Ce stage s'adresse à des techniciens supérieurs (BTS ou DUT) ayant au moins 2 ans d'expérience en entreprise, demandeurs d'emploi ou en congé individuel de formation. L'enseignement est orienté vers l'approfondissement des techniques d'automatisation et d'organisation de la production. *Début du cours* : A arranger. *Durée* : 5 mois. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : —.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

## Utilisateurs du multitâche temps réel

*Brève description* : Ce cursus est destiné à des ingénieurs et techniciens, informaticiens, électroniciens ou automaticiens désirant une parfaite maîtrise du MTR et devant développer des projets en langage C sous OS9. Les stages ITR, C/OS9 et PTR



composent ce cursus. *Début du cours* : 6 novembre. *Durée* : 5 semaines.  
*Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* :  
FF 28 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

#### **Personal computer for engineers**

*Short description*: Electronic spreadsheet; data base management; developing a proto-  
type application for one's own company; future trends and developments.  
*Commencing date*: June 1990. *Duration*: 3 months. *Qualifications*: Engineers.  
English. *Deadline for application*: May 1990. *Fees*: HKMA member, HK\$ 1,450;  
non-member, HK\$ 1,550.

*Organizer*: The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive, Central  
Hong Kong

#### **Automated office**

*Short description*: All aspects of the computerized office including word processing,  
payroll, spreadsheets, electronic mail. *Commencing date*: Throughout the year.  
*Duration*: 3 months. *Qualifications*: Secretaries who need upgrading to senior-level  
administrators. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Irish Labour Training Services Ltd.  
FAS, The Training and Employment Authority  
27/33 Upper Baggot Street  
Dublin 4, Ireland

#### **Computer technology for managers**

*Short description*: An introductory course for managers in industry covering spread-  
sheets, financial analysis, computerization of stores and office systems, creation of  
data bases. *Commencing date*: Throughout the year. *Duration*: 4-12 weeks.  
*Qualifications*: Management/supervising positions. English. *Deadline for applica-  
tion*: —. *Fees*: To be arranged.

*Organizer*: Irish Labour Training Services Ltd.  
FAS, The Training and Employment Authority  
27/33 Upper Baggot Street  
Dublin 4, Ireland

#### **Computer use in business operations**

*Short description*: Essentials of computer programming, systems analysis and specific  
software designed to solve major problems in accounting, finance, planning,  
marketing, production and quality control. *Commencing date*: May, October 1990,  
1991. *Duration*: 2 months. *Qualifications*: Bachelor's degree or equivalent experience  
in a relevant field. English. *Deadline for applications*: 3 months before commencing  
date. *Fees*: f. 10,000.

*Organizer*: International Centre for Quality and Management Sciences  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

## **Second-generation expert systems: principles of design and implementation**

*Brief description:* Principles of creating second-generation expert systems based on inductive learning; formalization of data and knowledge, knowledge engineering and principles of knowledge-bases design. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* University graduates engaged in the design of expert systems both in knowledge engineering and in software support. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 8.200 (including accommodation and board).

*Organizer:* All-Union Institute of Scientific and Technical Information  
Usiyevicha 20A  
Moscow, Union of Soviet Socialist Republics

## **Advanced computer aided design**

*Short description:* CAD course structured to give good theoretical and practical experience to architects, electrical, mechanical and civil engineers; 2D and 3D design; bill of materials preparation, construction and implementation of CAD data bases; graphics input/output devices and plotting techniques. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Architects and engineers. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

## **Autolisp programming**

*Short description:* Artificial intelligence language, which enables the AUTOCAD system to be customized for individual needs; continuation for experienced AUTOCAD users. *Commencing date:* Throughout the year. *Duration:* 2-4 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Engineering GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

## **Computer aided design (CAD)/computer aided manufacturing (CAM)**

*Short description:* A balanced course from traditional design techniques through the application of CAD and post processor to CAM. *Commencing date:* Throughout the year. *Duration:* 4-8 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Engineering GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

## **Computers and financial modelling**

*Short description:* A range of financial software customized to assist financial modeling. *Commencing date:* Throughout the year. *Duration:* 2-6 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Engineering GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

### **Computers in railway management**

*Short description:* The programme, which is designed for line managers, gives an overview of the varied applications of computer systems to railway management, showing how systems can be interlinked to form an integrated whole. It includes practical "hands on" experience and visits to installations. *Commencing date:* 12 March 1990, 5 March 1991. *Duration:* 4 weeks. *Qualifications:* No previous experience of computing is required. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £2,950; 1991, £3,150.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Computer subjects**

*Short description:* Introduction, lectures and "hands-on" training in writing programmes for industrial and commercial applications in the popular programming languages. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

### **Data base systems**

*Short description:* Industrial standard introductory to advanced Dbase programming. *Commencing date:* Throughout the year. *Duration:* 2-4 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Engineering GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

### **Smart software and programming**

*Short description:* Smart programming language to aid professionals wishing to employ the multi-user package for financial modelling, statistical analysis. *Commencing date:* Throughout the year. *Duration:* 2-8 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £250 per week plus VAT.

*Organizer:* East Kilbride and District Engineering GTA Ltd.  
Nerston Industrial Estate  
3 Law Place  
East Kilbride, Scotland, United Kingdom

### **Computer applications in management**

*Short description:* Designed for government officers, managers of businesses, and directors of development projects, this course includes DOS system software, word processing, spreadsheet accounting with LOTUS 1-2-3, data base management with dbase III, communications software, and project management software. *Com-*

*commencing date:* 9 March, 3 July 1990. *Duration:* 8 weeks. *Qualifications:* English.  
*Deadline for application:* 30 days before commencing date. *Fees:* \$US 5,500.

**Organizer:** International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

#### **Computer programmer**

*Short description:* Systems analysis and design; problem solving for COBOL programmers; structured COBOL programming I and II with lab.; IBM system 370 interface; structured COBOL programming III with lab.; job control language.  
*Commencing date:* 22 January, 24 September 1990. *Duration:* 11 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 4,500.

**Organizer:** International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

#### **Development of sample designs and sampling frames**

*Short description:* The course is designed to enable participants to adapt and apply probability sampling theory and methods in data collection, processing, publication and evaluation programmes when, as is usual, real-life constraints on time, funding and other resources are limiting factors. Emphasis is given to developing and evaluating sampling frames so that potentially prohibitive travel and related costs are minimized. Microcomputers are introduced. *Commencing date:* September. *Duration:* 4 months. *Qualifications:* Participants should have at least 1 year of experience in national statistical programmes and a basic knowledge of algebra. A minimum score of 450 (TOEFL), 75/60/65 (ALI/EPE) or the equivalent is required. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** International Statistical Programs Center  
Training Branch  
Bureau of the Census  
Washington, DC 20233, United States of America

#### **Sistemas de procesamiento electrónico de datos**

*Breve descripción:* Al terminar este curso, los participantes estarán capacitados para trabajar como programadores y analistas de sistemas. El programa se ha preparado principalmente para las personas que se dedican al procesamiento electrónico de datos de censos y encuestas. Sin embargo, los conocimientos básicos y aplicaciones prácticas que se enseñan también son pertinentes para el trabajo que se realiza en organizaciones no estadísticas que recogen, procesan y analizan datos. *Fecha de iniciación:* Septiembre 1990. *Duración:* 7 meses (programas cortos de 2, 3, 4 o 5 meses). *Calificaciones:* La capacitación se lleva a cabo en español; sin embargo, los participantes deben poder leer bien el inglés. *Fecha límite de inscripción:* 30 días antes del comienzo del curso. *Derechos de inscripción:* De \$US 2,100 a \$US 10,100 según duración del curso.

**Organizador:** International Statistical Programs Center  
Training Branch  
Bureau of the Census  
Washington, DC 20233, United States of America

## Energy/Energie/Energia

### Chauffage

*Brève description* : Sécurité; installations de circuits de chauffe; tuyauteries; installation des chaudières; réglage, entretien et contrôle des rendements des chaudières; dimensionnement du chauffage, choix du circulateur; chauffage électrique; chauffage solaire; pompe à chaleur; conditionnement de l'air. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Energies renouvelables

*Brève description* : Disponibilité et mesure des sources des énergies renouvelables : solaire, éolienne, hydraulique; description des équipements, techniques commerciales, performances, champ d'application, cas pratiques; calculs technico-économiques des équipements utilisant les énergies renouvelables en fonction des besoins; réalisation de projets concrets; visite des installations existant en Belgique; possibilité de production de ces équipements dans les pays en développement, transfert de technologie, coentreprise. *Début du cours* : A arranger. *Durée* : 2 mois. *Qualifications* : Ingénieur industriel. Français ou anglais. *Date limite d'inscription* : A arranger. *Droits d'inscription* : A arranger.

*Organisateur* : Science  
98, avenue de Tervueren  
1040 Bruxelles, Belgique

### Utilisation rationnelle de l'énergie

*Brève description* : Energétique et thermodynamique; appareils de transformation des énergies primaires; transport d'énergie et vecteurs énergétiques; principaux appareils utilisateurs de l'énergie; contrôle et régulation; principaux points faibles des systèmes énergétiques et les équipements existants pour les pallier; principaux équipements de mesure d'un auditeur; principes de la comptabilité énergétique dans une entreprise; schéma théorique d'un audit énergétique; principaux remèdes; calcul des économies et des investissements; programmes informatiques légers pour l'audit, rapport d'audit. Participation à l'audit de 5 entreprises différentes. Visite de 2 ou 3 entreprises modèles. *Début du cours* : A arranger. *Durée* : 2 mois. *Qualifications* : Niveau ingénieur industriel. Français ou anglais. *Date limite d'inscription* : A arranger. *Droits d'inscription* : A arranger.

*Organisateur* : Inix  
200, rue du Chéra  
4000 Liège, Belgique

### Energy management in non-metallic industries

*Short description*: The technical workshop will emphasize the most important aspects of energy management, regarding a proper choice of energy consuming equipment and efficient technologies with regard to locally available raw materials. It will

demonstrate the application of mobile means in energy auditing. *Commencing date:* October. *Duration:* 3 weeks. *Qualifications:* University degree or equivalent. *Deadline for application:* 31 May. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme  
Non-metallic Industries  
Pražská 12  
305 11 Pilsen, Czechoslovakia

#### **Renewable sources of energy and the transfer of know-how**

*Short description:* Technical knowledge and economic evaluation of the various forms of renewable energy in nature; utilization of energy in agriculture; the transfer of know-how. *Commencing date:* To be arranged. *Duration:* 16 weeks. *Qualifications:* Experts in renewable energy techniques in agriculture. English. *Deadline for application:* 60 days before commencing date. *Fees:* To be arranged.

*Organizer:* Cori SpA  
Centro Studi Agricoli  
Borgo a Mozzano  
Via Colonia Agricola  
55060 Mutigliano, Italy

#### **Distribution engineering for graduates**

*Short description:* A very intensive programme of formal and on-job modules covering all aspects of distribution engineering for recently qualified graduates. *Commencing date:* August. *Duration:* 48 weeks. *Qualifications:* Degree or diploma in electrical engineering. *Deadline for application:* —. *Fees:* £9,770.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

#### **Domestic and commercial installation inspection**

*Short description:* A short on-job programme designed to give participants an appreciation of technology and knowledge of the inspection processes in this function. *Commencing date:* 15 January 1990. *Duration:* 6 weeks. *Qualifications:* Engineers and technicians with a degree or diploma. *Deadline for application:* October. *Fees:* £1,600.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

#### **Network operators (up to 132 kV)**

*Short description:* Formal and workshop modules covering cables, overhead lines, plant and equipment, electricity supply systems and protection, safe systems of working, system operations. *Commencing date:* September. *Duration:* 13 weeks. *Qualifications:* Operators and junior technicians with little or no experience who know how to carry out simple basic calculations. *Deadline for application:* June. *Fees:* £3,185.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

### **Power station engineering for technician engineers**

*Short description:* Course with on-job experience, using an operations simulator covering plant and equipment with reference to operations, maintenance and planning functions. *Commencing date:* August. *Duration:* 48 weeks. *Qualifications:* Degree in engineering or a higher diploma. English. *Deadline for application:* May. *Fees:* £9,225.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

### **Power station operation (coal or oil fired)**

*Short description:* An advanced course using a power station operations simulator covering all aspects of shift operations including management of safety and operational systems. *Commencing date:* October. *Duration:* 10 weeks. *Qualifications:* Engineers and technicians currently engaged in power station work. *Deadline for application:* June. *Fees:* £2,800.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

### **System operations**

*Short description:* Operational planning; control procedures; network switching and system analysis; load forecasting; plant scheduling and load dispatching; voltage and frequency control; system economics. *Commencing date:* 5 May 1990. *Duration:* 8 weeks. *Qualifications:* Engineers and technicians currently employed in system control. *Deadline for application:* 4 November. *Fees:* Approximately £2,600.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

## **Environment/Environnement/Medio ambiente**

### **Environmental protection, energy management and optimization**

*Short description:* Energy control; safety aspects; air pollution; water pollution. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

### **Dépollution des effluents de l'industrie textile**

*Breve description :* La pollution engendrée par l'industrie textile; les sous-produits; la récupération de la chaleur. *Début du cours :* 1er mars; 1er avril. *Durée :* 2 mois. *Qualifications :* Ingénieur chimiste ou textile; licencié en chimie; ingénieur civil.

Français. *Date limite d'inscription* : 2 mois avant la date de début du séminaire.  
*Droits d'inscription* : FB 100 000 par mois.

*Organisateur* : Laboratoire CELAC  
Zoning de Petit Rechain  
69 A, avenue du Parc  
4655 Chaineux, Belgique

#### **Environmental control in the chemical and pharmaceutical industries**

*Short description*: Study of the natural and human environment; analysis of the principal sources of air, water and soil pollution; effects of pollutants on human health; methods of prevention and control. *Commencing date*: Beginning of August. *Duration*: 6 weeks. *Qualifications*: Civil engineers, pharmacists, biologists, chemical engineers. Course held in alternate years in English and French. *Deadline for application*: —. *Fees*: Approximately BF 40,000.

*Organizer*: State University of Ghent  
Department of Toxicology  
Hospitaalstraat 13  
9000 Ghent, Belgium

#### **Anaerobic waste water treatment**

*Short description*: Basic knowledge in microbiology, chemistry and process engineering; feasibility analysis; design and construction of anaerobic treatment plants. *Commencing date*: To be arranged. *Duration*: 8 weeks. *Qualifications*: Civil, chemical and agricultural engineers, chemists and specialists in other fields related to environmental and sanitary engineering; at least 1 year of relevant experience in waste treatment. English. *Deadline for application*: 1 month before commencing date. *Fees*: f. 4,000.

*Organizer*: International Institute for Hydraulic and Environmental Engineering (IHE)  
P.O. Box 3015  
Oude Delft 95  
2601 DA Delft, Netherlands

#### **Environmental science and technology**

*Short description*: Chemistry; biology; ecology; environmental process technology; water quality; ecotoxicology; statistics; computer operations; environmental modelling; air; soil and water quality management; environmental impact assessment; waste utilization; public health; energy resources; integrated pest control; individual study project. *Commencing date*: October 1990, October 1991. *Duration*: 11 months for the diploma; 6 months of additional study for Master of Science possible. *Qualifications*: Degree in biology, chemistry or chemical engineering or related science. English. *Deadline for application*: 15 August 1990, 15 August 1991. *Fees*: f. 7,000.

*Organizer*: International Institute for Hydraulic and Environmental Engineering (IHE)  
P.O. Box 3015  
Oude Delft 95  
2601 DA Delft, Netherlands



### **Low-cost water supply and sanitation**

*Short description:* The choice of technology; community participation; health education; organization and management; cost recovery; plan of operations. *Commencing date:* June 1990, June 1991. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent; 1 year of relevant experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* f. 4,000.

*Organizer:* International Institute for Hydraulic and Environmental Engineering (IHE)  
P.O. Box 3015  
Oude Delft 95  
2601 DA Delft, Netherlands

### **Water analysis and quality**

*Short description:* Bacteriological analysis; chemical and physical analysis; field and on-site testing; ground water and surface water pollution; laboratory management and design; waste-water analysis; water pollution control and legislation; water quality and health; water treatment and distribution. *Commencing date:* 22 April 1990, 21 April 1991. *Duration:* 12 weeks. *Qualifications:* Appropriate degree or equivalent. English. *Deadline for application:* 28 February 1990, 1991. *Fees (provisional):* £5,000 (including residence, all meals and transport for field work).

*Organizer:* Water, Engineering and Development Centre (WEDC)  
Loughborough University of Technology  
Loughborough LE11 3TU, United Kingdom

### **Water treatment**

*Short description:* Training and industrial experience in water treatment technology for processing; chemical fertilizer industries. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Proficiency in a relevant discipline. English. *Deadline for applications:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Services  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

## **Industrial design/Design industriel/Diseño industrial**

### **Fashion design**

*Short description:* Study of the Italian fashion system including all aspects of this discipline from the initial drawing/sketch to production, marketing, distribution and sale; lecture series in marketing, socio-economic forecasting, design economics. *Commencing date:* 9 January 1990. *Duration:* 11 months. *Qualifications:* English, Italian. *Deadline for application:* 15 November 1989. *Fees:* Lit 15,000,000 plus 19 per cent VAT.

*Organizer:* Domus Academy  
Edificio I/C  
Milanofiori  
20090 Assago, Milan, Italy

### **Industrial design**

*Short description:* Study of industrial design; design, professional and interdisciplinary seminars; field trips. *Commencing date:* 9 January 1990. *Duration:* 11 months. *Qualifications:* English, Italian. *Deadline for application:* 15 November 1989. *Fees:* Lit 15,000,000 plus 19 per cent VAT.

*Organizer:* Domus Academy  
Edificio 1/C  
Milanofiori  
20090 Assago, Milan, Italy

### **Industrial design**

*Short description:* The purpose of the course is to introduce the development process of industrial design for industrial/export promotion in developing countries. *Commencing date:* September. *Duration:* 2 months. *Qualifications:* At least 5 years of experience; under 35 years of age. English. *Deadline for application:* June. *Fees:* —.

*Organizer:* Japan International Cooperation Agency (JICA)  
Shinjuku Mitsui Building, 48th Floor  
2-1-1, Nishishinjuku, Shinjuku-ku  
Tokyo 160, Japan

*Given by:*

Japan Industrial Design Promotion Organization (JIDPO)  
World Trade Center Building Annex, 4th Floor  
2-4-1, Hamamatsucho, Minato-ku  
Tokyo 105, Japan

### **Automotive engine and vehicle design technology**

*Short description:* Design for low noise and vibration for engine and vehicle and emissions. *Commencing date:* Beginning of October. *Duration:* 1 year for Master of Science, 7 months for diploma or certificate. *Qualifications:* Degree in engineering, physical science or mathematics. English. *Deadline for application:* 31 July. *Fees:* To be arranged.

*Organizer:* Institute of Sound and Vibration Research  
University of Southampton  
Highfield, Southampton SO9 5NH, United Kingdom

### **Design engineering**

*Short description:* Design office management in the fields of mechanical, electrical/electronic engineering; design and drafting techniques, manufacturing methods, planning and project control. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

### **Structural steel design**

*Short description:* The behaviour and design of steel structures in both the offshore and onshore fields, leading to Master's degree and a diploma of membership of the

Imperial College. Aspects of the course are taught in collaboration with the United Kingdom Steel Construction Institute. *Commencing date:* Beginning of October. *Duration:* 9 months. *Qualifications:* The equivalent of a good honours degree from a British university. English. *Deadline for application:* 1 April. *Fees:* EEC students £1,800; overseas students £6,300.

*Organizer:* Imperial College  
Civil Engineering Department  
London SW7 2BQ, United Kingdom

**Industrial information and documentation/  
Information et documentation industrielles/  
Información y documentación industriales**

**Informatique**

*Breve description:* Initiation au traitement de l'information; collecte et transmission de l'information; organisation des fichiers; systèmes d'exploitation; formation informatique des dirigeants de petites et moyennes entreprises; informatique appliquée aux différentes spécialités techniques rencontrées. *Début du cours:* Toute l'année sauf en juillet et août. *Durée:* —. *Qualifications:* Qualifications professionnelles. Français. *Date limite d'inscription:* —. *Droits d'inscription:* A arranger.

*Organisateur:* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

**Data communications for systems engineers**

*Short description:* Data communications basics; hardware elements; common link layer protocols; common network layer protocols; connection via emulators; local area networks; performance prediction; information theory basis. *Commencing date:* April 1990. *Duration:* 3 months. *Qualifications:* Middle-level data processing professionals. English. *Deadline for application:* March 1990. *Fees:* HKMA members, HK\$ 1,350; non-members, HK\$ 1,450.

*Organizer:* The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive, Central  
Hong Kong

**Automated document searches in multilingual data bases**

*Short description:* Logical and linguistic methodologies of document searches in multilingual data bases on subject queries in the user's language; ways of representing machine glossaries of words and word combinations (monolingual and multilingual) in computer memory; principles of designing a system of automatic indexing of Russian texts representing results of indexing in various foreign languages. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* University degree; engaged in automatic information processing. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 4,000.

*Organizer:* All-Union Institute of Scientific and Technical Information  
Usiyevicha 20A  
Moscow, Union of Soviet Socialist Republics

### **Information technology for the rural sector**

*Short description:* The aim of the course is to provide participants with the particular skills required to work in information technology for the rural sector. After the course they will act as the interface between hardware/software suppliers and the rural industries. *Commencing date:* October. *Duration:* 1 year. *Qualifications:* Honours degree. English. *Deadline for application:* September. *Fees:* To be arranged.

*Organizer:* Student Recruitment Executive  
Silsoe College  
Silsoe, Bedford MK45 4DT, United Kingdom

### **New technology**

*Short description:* A special development programme for key managers and specialist project leaders concerned with the implementation of technological change, particularly information technology and management information systems, within organizations. *Commencing date:* 30 April 1990. *Duration:* 10 weeks. *Qualifications:* Members of senior management responsible for the development of managerial strategies concerning the use of new technology or management information systems and specialist project managers responsible for implementing new technology. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Services Ltd (ITS)  
Overseas Division  
43 Market Place  
Wetherby, West Yorkshire LS22 4LN, United Kingdom

### **Interpreting data and measuring data reliability**

*Short description:* Application of linear and multiple regression and correlation in interpreting and analysing data, in establishing time series, and in sample design planning and evaluation; procedures for estimating the reliability of sample survey data. *Commencing date:* 2 January 1990. *Duration:* 11 weeks. *Qualifications:* At least 1 year of experience in national statistical programmes and a basic knowledge of algebra; a minimum score of 450 (TOEFL), 75/60/65 (ALI/EPE) or equivalent is required. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* International Statistical Programs Center  
Training Branch  
U.S. Bureau of the Census  
Washington, DC 20233, United States of America

### **Managerial statistics**

*Short description:* Study of statistics; sources of statistics; organizing data with frequency distributions; averages and their uses; variability; scientific sampling; basic principles of sampling; sampling error and risk; probability; forecasting. *Commencing date:* 2 January, 13 August 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Statistical Programs Center  
Training Branch  
U.S. Bureau of the Census  
Washington, DC 20233, United States of America

## **Industrial planning and programming/Planification et programmation industrielles/ Planeamiento y programación industrial**

### **Industrial location and development**

*Short description:* Comprehensive overview of industrial location and development, including all theoretical and practical aspects. *Commencing date:* October. *Duration:* 1-2 years. *Qualifications:* English. *Deadline for application:* October. *Fees:* BF 11,500 per academic year.

*Organizer:* Vrije Universiteit Brussel  
Faculty ESP  
Pleinlaan 2  
1050 Brussels, Belgium

### **Planification industrielle**

*Brève description :* Planification; prévisions et réalisations en matière de développement; relation entre la micro et la macro économie; l'appareil conceptuel de la prévision économique et de la planification; les comptes et statistiques; le calcul de la rentabilité interne des projets; l'analyse critique des postes du bilan; les prix de revient, méthodes de calcul; analyse des coûts. *Début du cours :* Toute l'année sauf juillet et août. *Durée :* —. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* —. *Droits d'inscription :* FB 15 000-FB 40 000 par mois.

*Organisateur :* Société coopérative MISIFA  
67, rue Tenbosch  
1050 Bruxelles, Belgique

### **Transport oriented location planning**

*Short description:* National economy and managerial economy; location planning; transport expenditure as a location factor. *Commencing date:* March/June, September/November. *Duration:* 3 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

*Organizer:* TCIB/TCAC University of Transport and Communication  
"Friedrich List"  
Friedrich-List-Platz 1  
8010 Dresden, German Democratic Republic

### **Agricultural extension and rural development**

*Short description:* Agricultural extension service; preliminary studies for the establishment of intervention; planning and programming; evaluation of results; communication and training. *Commencing date:* To be arranged. *Duration:* 7 weeks. *Qualifications:* Experts and agents involved in agricultural extension and rural development projects. English. *Deadline for application:* 60 days before commencing date. *Fees:* To be arranged.

*Organizer:* Cori SpA  
Centro Studi Agricoli  
Borgo a Mozzano  
Via Colonia Agricola  
55060 Mutigliano, Lucca, Italy

### **Industrial planning and development**

*Short description:* Lecture-cum-discussion seminar. *Commencing date:* To be arranged.  
*Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* International Development Center  
Shuwa Daini Toranomom Building 21-19  
Toranomom 1-chome, Minato-ku  
Tokyo, Japan

### **Regional development planning**

*Short description:* Meaning of development; theories, concepts and approaches; regional planning process; economic, social and demographic analysis; planning for strategic sectors: land-use planning; environmental planning; regional social planning; local-level planning; regional planning and budget interfacing and co-ordination. *Commencing date:* April 1990, 1991. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent experience in local/regional development and planning. English. *Deadline for application:* 31 December 1990, 1991. *Fees:* \$US 6,500.

*Organizer:* United Nations Centre for Regional Development (UNCRD)  
Nagono 1-47-1, Nakamura-ku  
Nagoya 450, Japan

### **Community technology for rural development**

*Short description:* Agriculture and water; building design for social infrastructure; building material; improved low-cost housing; integrated rural development; power and industry; roads and bridges; water supply and sanitation. *Commencing date:* 17 September 1990, 23 September 1991. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent; appropriate professional experience; holding senior professional appointment. English. *Deadline for application:* 31 July. *Fees:* £4,500 (including residence and all meals).

*Organizer:* Water, Engineering and Development Centre (WEDC)  
Loughborough University of Technology  
Loughborough, Leicestershire LE11 3TU, United Kingdom

### **Industrial development planning and developing countries**

*Short description:* Analysis of national strategic policy and of local development policy to equip local authorities of the developing countries and appropriate national ministries and agencies to formulate and implement more effective policies. *Commencing date:* January 1990. *Duration:* 3 months. *Qualifications:* Experience in relevant fields. English. *Deadline for application:* —. *Fees:* £2,950 (field trip, £160).

*Organizer:* University College, London  
Development Planning Unit  
9 Endsleigh Gardens  
London WC1H 0ED, United Kingdom

### **Planning and appraisal of agro-industrial projects**

*Short description:* The identification, design, appraisal, management and implementation of agro-industrial projects; the co-ordination of agricultural, industrial and

commercial aspects of such projects. *Commencing date:* September 1990. *Duration:* 12 weeks. *Qualifications:* University degree; several years of relevant experience. *English.* *Deadline for application:* —. *Fees:* To be arranged.

*Orga. ser:* Development and Project Planning Centre  
University of Bradford  
Bradford BD7 1DP, United Kingdom

#### **Economic concepts for statisticians**

*Short description:* The course will show participants how the collection and analysis of economic data fit into the larger context of micro- and macroeconomic theory. By gaining an understanding of the way in which individual markets, and ultimately the entire economy functions, participants will become well prepared to perform analyses appropriate for data users. Microcomputer use will also be introduced. *Commencing date:* 5 September. *Duration:* 4 months. *Qualifications:* At least 1 year of experience in national statistical programmes and a basic knowledge of algebra; a minimum score of 450 (TOEFL), 75/60/65 (ALI/EPE) or equivalent. *Deadline for application:* 1 month before commencing date. *Fees:* —.

*Organizer:* International Statistical Programs Center  
Training Branch  
U.S. Bureau of the Census  
Washington, D.C. 20233, United States of America

#### **Economic development statistics**

*Short description:* Participants will become familiar with the principles and concepts of economic development and will learn how the economic data that they collect and analyse can play a central role in improving the prospects for development in their own countries. Participants with intermediate knowledge of LOTUS 1-2-3 and WORDSTAR will learn more advanced techniques for solving problems involving alternative projections, cost/benefit analyses, income distributions and the Lorenz Curve. *Commencing date:* 19 March 1990. *Duration:* 2 months. *Qualifications:* At least 1 year of experience in national statistical programmes and a basic knowledge of algebra; a minimum score of 450 (TOEFL), 75/60/65 (ALI/EPE) or equivalent. *Deadline for application:* 1 month before commencing date. *Fees:* —.

*Organizer:* International Statistical Programs Center  
Training Branch  
U.S. Bureau of the Census  
Washington, D.C. 20233, United States of America

#### **Estadísticas para el desarrollo económico**

*Breve descripción:* El objetivo del curso es proporcionar a los participantes los conocimientos y aptitudes necesarios para la planificación y ejecución de una variedad de encuestas y censos económicos y para analizar los datos recolectados. Este curso está dirigido a los profesionales que trabajan en instituciones responsables de la recolección y el uso de estadísticas económicas. Esto puede incluir una gran variedad de organismos gubernamentales u otros organismos como universidades, centros. *Fecha de iniciación:* Septiembre. *Duración:* 7 meses (programas cortos de 2, 3, 4 o 5 meses de duración). *Calificaciones:* La capacitación se lleva a cabo en español; sin embargo, los participantes deben poder leer bien el

inglés. *Fecha limite de inscripción*: 30 días antes del comienzo del curso. *Derechos de inscripción*: Matrícula y gastos relacionados varían de \$US 2.100 a \$US 10.100 según duración del curso.

*Organizador*: International Statistical Programs Center  
U.S. Bureau of Census  
Washington, D.C. 20233, United States of America

**Investment promotion and industrial financing/  
Promotion des investissements et financement industriel/  
Promoción de las inversiones y financiación industrial**

**International promotion and foreign investment**

*Short description*: Market research; market penetration; international trade promotion; exportation means and techniques; international distribution; export finance and pricing; foreign investment. *Commencing date*: To be arranged. *Duration*: 4 months. *Qualifications*: University degree. English, French. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: International Trade Invest Institute  
2, avenue de Broqueville, boîte 7  
1150 Brussels, Belgium

**Projets industriels**

*Breve description*: Séminaire comprenant des exposés et des études de cas en relation avec la genèse, la sélection et la décision de réalisation de projets industriels: les marchés en amont et en aval; les plans de développement; la faisabilité; le financement; les interventions du secteur public; les techniques d'organisation et de gestion des entreprises. Le séminaire peut être complété par des séjours guidés dans des organismes belges publics et privés. Les participants sont assistés dans la constitution de leur documentation personnelle. Le programme du séminaire est réglé en fonction de la formation, de l'expérience et du plan de carrière des participants. *Début du cours*: A arranger. *Durée*: —. *Qualifications*: Formation universitaire plus expérience professionnelle minimum de 2 ans. Français. *Dernier délai pour la soumission des candidatures*: —. *Droits d'inscription*: A arranger.

*Organisateur*: Bureau d'ingénieurs-conseils Gombert Cadic-Gombert S.A.  
123a, chaussée de Charleroi, boîte 7  
1060 Bruxelles, Belgique

**Zones franches et développement industriel**

*Breve description*: Exposé introductif et visite du port d'Anvers; étude et prospection; prise en charge par la capitainerie du port afin d'être confronté dans la pratique avec les systèmes appliqués; séances d'information complémentaires à la Direction des Douanes et Accises à Bruxelles. *Début du cours*: Toute l'année sauf en juillet et août. *Durée*: 1 semaine-2 mois. *Qualifications*: Niveau universitaire. Français, anglais. *Dernier délai pour la soumission des candidatures*: —. *Droits d'inscription*: —.

*Organisateur*: Havenbedrijf van de Stad Antwerpen  
Stadhuis  
2000 Anvers, Belgique



### **Project management**

*Short description:* Basic concepts of projects; technical concept and procurement; construction, erection and start-up; project organization and staffing; project budget and financing; managing the contracts; project planning and control tools; cost planning and control, performance control, scheduling, documentation; know-how transfer and training; co-operation and project meetings; leadership and conflict management; project finishing and evaluation. *Commencing date:* July. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Blanz Corporate Advisers Ltd.  
Mannerheimintie 8  
00100 Helsinki, Finland

### **Investment engineering**

*Short description:* Management and planning of projects; co-ordinating investments into the economic structure; technical issues of plant design. *Commencing date:* September 1990. *Duration:* 4 weeks. *Qualifications:* Degree in engineering. English. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* "Otto von Guericke" University of Technology  
P.O. Box 124  
3010 Magdeburg, German Democratic Republic

### **Project management**

*Short description:* Organizational structures; evaluation; problems in project management; effective project planning; human resources management; working with the customer; computer projects; construction and civil engineering; projects. *Commencing date:* April, September 1990. *Duration:* 3 months. *Qualifications:* Project executives. English. *Deadline for application:* March, August 1990. *Fees:* HKMA member \$HK 1,495; non-member \$HK 1,595.

*Organizer:* The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive, Central  
Hong Kong

### **Construction project management**

*Short description:* Project planning; tendering and contracting; construction supervision and cost management; site control; quality control. *Commencing date:* September 1990. *Duration:* 4 weeks. *Qualifications:* Engineers, architects dealing with project management. English. *Deadline for application:* 20 December 1989. *Fees:* To be arranged.

*Organizer:* ÉGSZI, Institute for Building Economics and Organization  
Csalogány utca 9  
1027 Budapest, Hungary

### **Financial management**

*Short description:* Cost and financial accounting, reporting; accounting information systems; financial ratios; working capital management; investment appraisal and capital budgeting; financial markets in developing countries; financial planning; assignment. *Commencing date:* 10 September 1990. *Duration:* 3 months. *Qualifica-*

tions: Degree in accounting, economics, business administration or related science; 3-5 years of experience. English. *Deadline for application:* 15 June 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

#### **Industrial project cycle**

*Short description:* National, regional and sectoral planning; industrialization policies; stages of the project development cycle; market analysis and plant capacity; technical analysis; financial analysis; social and economic analysis; elements of industrial promotion; project implementation; project management, control and evaluation; computer simulation model (COMFAR); practical assignments. *Commencing date:* 17 April 1990. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Deadline for application:* 15 January 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

#### **Technology acquisition and project preparation**

*Short description:* The objective of the workshop is to provide participants with a unique combination of skills related to financial analysis of project variables, on the one hand, and to contract preparation and negotiation, on the other hand, as a tool for an efficient and profitable technology transfer transaction. *Commencing date:* September 1990. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 15 June 1990. *Fees:* —.

*Organizer:* Central School of Planning and Statistics  
Niepodleglosci 162  
02-554 Warsaw, Poland

#### **Development finance institutions (management and design)**

*Short description:* A thorough training for middle- and higher-level officials of commercial and development banks in the design, appraisal, supervision and evaluation of lending programmes, in particular those aimed at small businesses and small farmers. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent. *Deadline for application:* March. *Fees:* £4,550 (including accommodation and field-work).

*Organizer:* Institute for Development Policy and Management  
University of Manchester  
Crawford House  
Oxford Road  
Manchester M13 9QS, United Kingdom

#### **Investment planning and appraisal for development finance institutions**

*Short description:* The principles and practice of project identification, promotion, appraisal and implementation from the viewpoint of the private and public sectors;

social cost-benefit analysis; investment analysis, portfolio management, project financing; management of financial institutions and contacts with manufacturing industry and agriculture. *Commencing date:* 23 April 1990. *Duration:* 12 weeks. *Qualifications:* University degree; several years of relevant experience. English. *Deadline for application:* —. *Fees:* £5,550 (including accommodation).

*Organizer:* Development and Project Planning Centre  
University of Bradford  
Bradford, Yorkshire BD7 1DP, United Kingdom

#### **Planning and appraisal of industrial projects**

*Short description:* The principles and practice of project identification and appraisal; the role of finance, markets, technology and management in establishing industrial projects; the techniques of social cost-benefit analysis; wider issues and problems of industrial strategy, planning and development. *Commencing date:* 8 January 1990. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent in any relevant subject; several years of relevant experience. English. *Deadline for application:* —. *Fees:* £5,550 (including accommodation).

*Organizer:* Development and Project Planning Centre  
University of Bradford  
Bradford, Yorkshire BD7 1DP, United Kingdom

#### **Project management**

*Short description:* The objective of the course is to update participants experience in project management and improve their abilities to identify the critical success factors for successful management of projects. *Commencing date:* 4 June 1990. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Price Waterhouse  
The Urwick Management Centre  
Baylis House  
Stoke Poges Lane  
Slough, Berkshire SL1 3PF, United Kingdom

#### **Project management**

*Short description:* The course is intended for officers who will plan, implement and control a defined project or a set of projects. It presents a systematic approach to project management that seeks to achieve the maximum effect with the minimum expenditure of time, money and material. *Commencing date:* 23 April 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 31 March 1990. *Fees:* £3,425.

*Organizer:* Royal Institute of Public Administration International Services  
Regent's College, Inner Circle  
Regent's Park  
London NW1 4NS, United Kingdom

#### **Financial management**

*Short description:* Financial analysis and planning; working capital management; capital budgeting process; long-term financing; expanding the perspective of corporate finance. *Commencing date:* 2 January, 13 August 1990. *Duration:* 3 weeks.

*Qualifications:* English. *Deadline for application:* 30 days before commencing date.  
*Fees:* \$US 1,500.

**Organizer:** International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Investment appraisal and management**

*Short description:* Techniques for conducting financial, economic and social evaluations of projects; use of microcomputers to make financial and economic decisions; organization and planning of projects. *Commencing date:* 25 June 1990, 24 June 1991. *Duration:* 8 weeks. *Qualifications:* Degree in economics/finance or accounting or a related field; formal training in economics or finance (minimal requirements); 5-10 years of professional experience. English. *Deadline for application:* 1 April. *Fees:* To be arranged.

**Organizer:** Harvard Institute for International Development  
1 Eliot Street  
Cambridge, Massachusetts 02139, United States of America

### **Project analysis**

*Short description:* Participants will develop the knowledge and skills to: analyse projects; identify critical factors; estimate benefits and costs; distinguish between financial and economic analysis; estimate financial and economic impacts; identify risks, complications and methods for their inclusion in the analysis; present data on alternative projects for comparison. *Commencing date:* 26 March, 9 July 1990. *Duration:* 4 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 2,500.

**Organizer:** International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Suite 134  
Washington, DC 20024, United States of America

### **Project management**

*Short description:* Project identification; establishing project priorities; planning design; implementation; monitoring and evaluation. *Commencing date:* 5 March, 18 June 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

**Organizer:** International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

## **Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación**

### **Maintenance of electrical equipment and installation**

*Short description:* Maintenance and repair of electrical equipment; preventive maintenance; field maintenance system; trouble-shooting; spare parts system. *Commencing*

*date:* Throughout the year except in July and August. *Duration:* 4-6 weeks.  
*Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv/Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### **Maintenance of instrumentation**

*Short description:* The pneumatic transmitter; temperature measurements and calibration; electrical and electronic measuring devices; trouble shooting, repair and calibration; pneumatic computers; pneumatic logical system; dry and wet gas-meters and calibration. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv/Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### **Maintenance planning**

*Short description:* Staff organization; work order processing; scheduling; preventive maintenance; definition of recommended code numbers; survey of cost centres. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 24,000 per week.

*Organizer:* Chemserv/Consulting GmbH  
St. Peterstrasse 25  
4021 Linz, Austria

#### **Maintenance industrielle**

*Brève description :* Séminaire sur les systèmes de gestion de maintenance adaptés aux conditions d'exploitation dans les pays en développement, en particulier la problématique des pièces de rechange, la documentation technique, l'organisation et la planification de la maintenance ainsi que les mesures à prendre lors de l'achat d'équipement. Atelier de maintenance. Stage pratique complété par des visites d'usines. *Début du cours :* Toute l'année sauf en juillet et août. *Durée :* 1-3 mois. *Qualifications :* Technicien supérieur ou ingénieur. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* DGS international SA  
Jubilaumlaan 75  
9000 Gand, Belgique

#### **Maintenance management in metallurgy and engineering**

*Short description:* Organization and management of maintenance, system analysis, design and technology, principles of computer hardware and software; planning of preventive maintenance and repairs, including spare parts and material requirements, capacity planning and scheduling. *Commencing date:* June 1990. *Duration:*

3 weeks. *Qualifications:* Managers/planners/engineers with a degree in engineering or management and experience in maintenance. English. *Deadline for application:* 15 April 1990. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme for Co-operation  
Metallic Industries  
Inorga Institute  
Letenská 17  
118 06 Prague 1, Czechoslovakia

#### **Diagnosis of the technical conditions of tractors and other farm machines**

*Short description:* The objective of the course is to enable participants to ascertain the technical conditions of tractors and other farm machines and to carry out preventive maintenance and repair. *Commencing date:* —. *Duration:* 6 weeks. *Qualifications:* German. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,035 per month.

*Organizer:* Betriebsakademie des Kombinates für Landtechnik Gera  
6712 Triptis, German Democratic Republic

#### **Maintenance**

*Short description:* Regeneration of defective parts; material testing methods; diagnosis; agricultural economics; design to facilitate maintenance. *Commencing date:* June/July 1990. *Duration:* 3 weeks. *Qualifications:* Engineers and technical staff in the field of agricultural machines and equipment. English. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* Berlin-Wartenberg University of Engineering  
Dorfstrasse  
DDR-1127 Berlin, German Democratic Republic

#### **Management of repair shops and enterprises for farm machinery**

*Short description:* Experience in managing small repair enterprises for farm machinery as well as other kinds of garages. *Commencing date:* May, September. *Duration:* 2 months. *Qualifications:* English, German. *Deadline for application:* 5 months before commencing date. *Fees:* \$US 1,310 per month.

*Organizer:* Ingenieurschule für Landtechnik  
5500 Nordhausen, German Democratic Republic

#### **Farm machinery**

*Short description:* Operation, maintenance and repair of farm machinery for crop production: tools, component parts; lubrication; transmission of power; tillage implements; seeding and planting equipment; crop protection equipment; workshop organization; parts management; training of personnel. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Diploma or Bachelor of Science or several years of experience. English, French, Portuguese, Spanish. *Deadline for application:* February. *Fees:* DM 10,335.

*Organizer:* Deutsche Lehranstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 24  
6100 Darmstadt 12, Federal Republic of Germany

### **Maintenance of internal combustion engines and farm tractors**

*Short description:* Maintenance and repair of internal combustion engines, farm tractors and commercial vehicles; tractor terminology; power performance; preventive maintenance; diagnosis and testing; repair of engines, hydraulics, electrical system, transmission; parts management; training of personnel. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Diploma or Bachelor of Science or several years of experience. English, French, Portuguese, Spanish. *Deadline for application:* February. *Fees:* DM 10,335.

*Organizer:* Deutsche Lehranstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 34  
6100 Darmstadt 12, Federal Republic of Germany

### **Maintenance and fitting of the electrical parts of vehicles**

*Short description:* Basic knowledge of electricity and mechanical construction; practical experience necessary for the maintenance and repair of the electrical equipment of vehicles. *Commencing date:* To be arranged. *Duration:* 2½ months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-\$US 1,200 (including accommodation and board).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

### **Maintenance and repair of instruments**

*Short description:* Repair and maintenance work in several service laboratories specialized in various types of instruments. *Commencing date:* 1 January. *Duration:* 6 months. *Qualifications:* Bachelor of Science or a degree in engineering; at least 3 years of experience. English. *Deadline for application:* 30 September. *Fees:* SwF 4,410 per month (including accommodation and board).

*Organizer:* MTA/MMSZ  
P.O. Box 58  
Szakasits A.-ut. 59-61  
1502 Budapest, Hungary

*Venue:* TESCO  
P.O. Box 5/101  
Rosenberg hp.-utca 21  
1367 Budapest, Hungary

### **Maintenance of agricultural machinery**

*Short description:* The necessity, requirements and systems of the maintenance of agricultural machinery; instrumental diagnostics. *Commencing date:* To be arranged. *Duration:* 4 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-\$US 1,200 per month (including accommodation and board).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

### **Maintenance of gas and oil transportation systems and units**

*Short description:* Maintenance of gas and oil transportation systems and the related telecommunication, remote control, telemetric and signal generation systems.

*Commencing date:* January. *Duration:* 6 weeks. *Qualifications:* Engineers or skilled workers in the field of gas and oil transportation. English. *Deadline for application:* 1 October. *Fees:* —.

*Organizer:* Gas and Oil Transportation Company, Siófok  
8600 Siófok, Hungary

#### **Operation and maintenance of agricultural machinery**

*Short description:* Operation of agricultural machinery; maintenance of agricultural machinery, diagnostics and repair. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-\$US 1,200 per month (including accommodation and board).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

#### **Tractor maintenance and driving**

*Short description:* Plant production, basic technical knowledge; agricultural power machines and implements; traffic, labour safety and environmental protection. *Commencing date:* To be arranged. *Duration:* 9 months. *Qualifications:* Basic qualifications. English. *Deadline for application:* To be arranged. *Fees:* \$US 1,000-\$US 1,200 per month.

*Organizer:* International Training Centre, Vép  
Felszabadulás utca 36-38  
9751 Vép, Hungary

#### **Maintenance**

*Short description:* Maintenance organization and maintenance management for all kinds of industrial, agricultural and service-industrial purposes; machine maintenance, bearings, lubricating oils and greases, cleaning and finishing metals, machining processes, welding and soldering, all kind of engines; mathematics and statistics, organization; external courses and excursions, in collaboration with Dutch industry. *Commencing date:* January, August 1990. *Duration:* 16 weeks. *Qualifications:* Junior and senior maintenance officers involved in company training courses and teachers of technical institutes; education at secondary school level at least; 2 years of relevant job experience; between 25 and 35 years of age. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
P.O. Box 1075  
7500 BB Enschede, Netherlands

#### **Management of maintenance**

*Short description:* Fluid power systems; electrical and electronic maintenance; mechanical repair and maintenance; planned maintenance; computerized maintenance; condition monitoring; problem solving; interpersonal communication skills; action centred leadership; job instruction; training skills; appraisal; job analysis; *Commencing date:*



May, September. *Duration*: 14 weeks. *Qualifications*: English. *Deadline for application*: 1 month before commencing date. *Fees*: —.

*Organizer*: Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

### **Railway civil engineering**

*Short description*: Track inspection, maintenance and renewals; manual and mechanized maintenance methods; bridge assessment, inspection and repair techniques. *Commencing date*: 22 January 1990, 21 January 1991. *Duration*: 12 weeks. *Qualifications*: Degree in civil engineering or equivalent; at least 5 years of experience. English. *Deadline for application*: 8 weeks before commencing date. *Fees*: 1990, £5,850; 1991, £6,250.

*Organizer*: British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Track maintenance and rehabilitation**

*Short description*: Development and planning of track maintenance programmes; practical resource allocation; common track defects; appropriate man management skills. *Commencing date*: 29 October 1990, 28 October 1991. *Duration*: 6 weeks. *Qualifications*: Degree in civil engineering or equivalent; 2 years of experience. English. *Deadline for application*: 3 months before commencing date. *Fees*: 1990, £3,900; 1991, £4,180.

*Organizer*: British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Management and industrial administration/Gestion et administration industrielle/ Gestión y administración industrial**

#### **Connaissances de gestion**

*Breve description*: Les obligations du chef d'entreprise; les cotisations sociales; les charges professionnelles; l'amortissement; la vente; débit, crédit; les systèmes bancaires; le crédit de caisse; l'escompte; financement des investissements; seuil de la rentabilité; taux de rotation des stocks; incidence de la variation des stocks sur le résultat. *Début du cours*: Toute l'année sauf en juillet et août. *Durée*: —. *Qualifications*: Qualifications professionnelles. Français. *Date limite d'inscription*: —. *Droits d'inscription*: A arranger.

*Organisateur*: Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Conseiller opérationnel en gestion d'entreprises

*Brève description* : Formation en comptabilité, comptabilité analytique, gestion financière (informatisée), organisation commerciale, suivie d'un stage de 3 mois.  
*Début du cours* : Février, août. *Durée* : 4 1/2 mois. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : FB 90 000.

*Organisateur* : Institut des affaires publiques  
1B, avenue G. Michel  
6000 Charleroi, Belgique

### Diagnostics d'entreprises ou de départements

*Brève description* : Diagnostics généraux d'entreprises, départements ou de services; analyse des fonctions, validité des outils de gestion; fiabilités des informations, systèmes et procédures; rentabilité; stratégie d'entreprise; études de marchés. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Helping SA  
. 38, avenue Montjoie  
1180 Bruxelles, Belgique

### Expertise comptable

*Brève description* : Pratique du droit fiscal; organisation et rendement des entreprises; économie politique; plans et monographies comptables des bilans; techniques du contrôle comptable. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

### Gestion des entreprises

*Brève description* : Séminaire organisé par des ingénieurs-conseils spécialisés en organisation et gestion des entreprises. Exposés et études de cas suivant un programme réglé d'après les domaines d'intérêt des participants, par exemple : gestion du personnel; comptabilité, recherche opérationnelle, gestion budgétaire; organisation des approvisionnements et gestion des stocks; organisation de la production; étude du travail; entretien des équipements, choix des investissements, organisation des ventes. Le séminaire peut être complété par des séjours guidés dans des entreprises et organismes publics belges. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Formation universitaire plus expérience professionnelle minimum de 2 ans. Français. *Date limite d'inscription* : 2 mois avant la date de début du cours. *Droits d'inscription* : A arranger.

*Organisateur* : Bureau d'ingénieurs-conseils. Cadix-Gombert SA  
123a, Chaussée de Charleroi, boîte 7  
1060 Bruxelles, Belgique

### **Gestion des ressources humaines**

*Brève description* : Sélection, analyse de postes, définition et classification des fonctions; politiques d'évaluation, de formation, de motivation et de rémunération du personnel; relations industrielles. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Helping SA  
38, avenue Montjoie  
1180 Bruxelles, Belgique

### **Organisation et gestion des entreprises**

*Brève description* : Stage individuel organisé par des ingénieurs-conseils spécialisés en organisation et gestion des entreprises. Comprend des exposés et discussions, des lectures dirigées d'ouvrages généraux et de rapports d'études, des séjours guidés dans des entreprises et organismes publics belges, la constitution d'une documentation personnelle, la rédaction du rapport de stage. Programme du stage fixé de commun accord en fonction de la formation et de l'expérience du stagiaire ainsi que de son plan de carrière. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Formation universitaire; expérience professionnelle minimum de 2 ans. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Bureau d'ingénieurs-conseils Cadic-Gombert SA  
123a, chaussée de Charleroi, boîte 7  
1060 Bruxelles, Belgique

### **Management of workshops**

*Short description*: Workshop planning; parts management; health, safety and environmental measures; personnel management; economic performance of machinery. *Commencing date*: To be arranged. *Duration*: 11 weeks. *Qualifications*: Managers and other workshop professionals. English, French. *Deadline for application*: To be arranged. *Fees*: DM 12,032.

*Organizer*: Deutsche Lehranstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 34  
6100 Darmstadt 12, Federal Republic of Germany

### **Effective communication skills for engineers**

*Short description*: Communication theory; presentation skills; interviewing skills; conducting meetings; letter, memo and report writing. *Commencing date*: May 1990. *Duration*: 3 months. *Qualifications*: Engineers. English. *Deadline for application*: April 1990. *Fees*: HKMA members, HK\$ 1,300; non-members, HK\$ 1,400.

*Organizer*: The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive, Central  
Hong Kong

### **Management development for engineers**

*Short description*: General management concepts; principles of staff motivation; leadership style and skills; communication techniques; target setting and its application in performance evaluation; application of personal computer in

management. *Commencing date:* January 1990. *Duration:* 3 months. *Qualifications:* Middle-level engineers. English. *Deadline for application:* December 1989. *Fees:* HKMA members, HK\$ 1,365; non-members, HK\$ 1,465.

*Organizer:* The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive, Central  
Hong Kong

#### Management development

*Short description:* The nature of management; the management of environment; planning and organizing; people in organizations; communications; control, problem-solving; personal skills and management techniques. *Commencing date:* September. *Duration:* 10 weeks. *Qualifications:* Officers of the administrative and technical branches of the public service including parastatal bodies who have management responsibility for important areas of work. English. *Deadline for application:* August. *Fees:* £Ir 3,100.

*Organizer:* Institute of Public Administration  
57/61 Landsdowne Road  
Dublin 4, Ireland

#### Design management

*Short description:* All aspects of design management including marketing, production (industrial), corporate management, legal issues, personnel and financial issues. *Commencing date:* 9 January, 24 November 1990. *Duration:* 11 months. *Qualifications:* Italian. *Deadline for application:* 15 November 1989. *Fees:* Lit 15,000,000 plus VAT.

*Organizer:* Domus Academy  
Edificio I/C  
Milanofiori  
20090 Assago, Milan, Italy

#### Mecanización agrícola para directores de parques de maquinaria agrícola

*Breve descripción:* Sensibilizar a los participantes hacia el análisis y evaluación de todas las problemáticas relacionadas con la mecanización; desarrollar las capacidades de gestión y organización, en cuanto a aspectos técnicos y económicos, del personal destinado a la administración de los parques de maquinaria. *Fecha de iniciación:* Para ser acordado. *Duración:* 15 semanas. *Calificaciones:* Técnicos que se ocupan de mecanización agrícola en el marco de proyectos de desarrollo rural. Español, francés. *Fecha límite de inscripción:* 60 días antes del comienzo del curso. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Cori SpA  
Centro Studi Agriooli  
Borgo a Mozzano  
Via Colonia Agricola  
55060 Mutigliano, Lucca, Italia

#### Corporate management

*Short description:* Production; marketing; financing; personnel management; Japanese experience; human aspects of corporate management, such as motivation, leader-

ship, education and training. *Commencing date:* November 1990, 1991. *Duration:* 2 weeks. *Qualifications:* Senior executives/directors responsible for overall management of organizations in developing countries. English. *Deadline for application:* 5 months before commencing date. *Fees:* ¥ 327,000.

*Organizer:* The Association for Overseas Technical Scholarship  
30-1, Senju Azuma 1-chome, Adachi-ku  
Tokyo, Japan

#### **Cross-cultural management**

*Short description:* The objective of the course is to enable participants with different cultural backgrounds to develop new management styles by comparing the Japanese management system with theirs; tours and discussions with lecturers and Japanese managers. *Commencing date:* May, October 1990, February 1991. *Duration:* 3 weeks. *Qualifications:* Junior and senior managers from developing countries with at least 5 years of experience; between 27 and 45 years of age. English. *Deadline for application:* 5 months before commencing date. *Fees:* ¥ 327,000.

*Organizer:* The Association for Overseas Technical Scholarship  
30-1, Senju Azuma 1-chome, Adachi-ku  
Tokyo, Japan

#### **Production management**

*Short description:* The process of production management; production efficiency; in-plant training. *Commencing date:* February 1990, 1991. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff in charge of production control or factory management in developing countries. English. *Deadline for application:* 5 months before commencing date. *Fees:* ¥ 550,000.

*Organizer:* The Association for Overseas Technical Scholarship  
30-1, Senju Azuma 1-chome, Adachi-ku  
Tokyo, Japan

#### **Advanced consultancy skill**

*Short description:* Analysis of own problem areas; tools for consultancy work; behavioural skills of consultancy; organizational setting of consultancy work; guided group-exercise in consultancy activities; preparation of a plan for future action. *Commencing date:* 17 April 1990. *Duration:* 2 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject; 5 years of creditable practical experience in a relevant field. English. *Deadline for application:* 15 January 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

#### **Co-operative management and consultancy**

*Short description:* Introduction to the general and functional areas of management; exposure to co-operative thinking and modes; exposure to the processes involved in consultancy work; field-work where a given "case" is identified and left to the participant to tackle. *Commencing date:* January. *Duration:* 3 months. *Qualifications:*

Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Deadline for application:* October. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

### General management for state enterprises

*Short description:* Analysis of the socio-economic environment with a view to socio-economic objectives; pricing; marketing management, financial management, sources of finance, public investment analysis; human resource management; strategic planning and design; management guidance and control; alternative methods of public ownership; practical assignments. *Commencing date:* 10 September 1990. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Deadline for application:* 15 June 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

### Industrial estates and complexes

*Short description:* Management and planning aspects of industrial estates and complex development. The training programme provides for a series of personalized introductions on development planning of industry and infrastructure, physical planning, location aspects, environmental planning, investment and costs, layout development, optimization. The programme will include further study of selected literature and field observations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University degree in engineering, economics or business administration, preferably with experience in industry. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Centre for Management and Industrial Development (CBO)  
Exchange Building  
Coolsingel/Meent  
P.O. Box 30042  
3001 DA Rotterdam, Netherlands

### Management and finance

*Short description:* The role of the manager; planning and control; presentation skills; decision-making; development and motivation of staff. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Managers or newly appointed managers. English. *Deadline for application:* —. *Fees:* \$US 2,500.

*Organizer:* Esmil Engineering and Contracting B.V.  
P.O. Box 7811  
De Boelelaan 7  
1008AA Amsterdam, Netherlands

## **Management and industrial development**

*Short description:* Principles of operational management in industry. The training programme provides for a series of personalized introductions on the development of the product programme and market potentials, production management, technology development, investment planning and costing, operations research, licensing and international industrial collaboration. The programme will further include study of selected literature and field observations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University graduates in engineering, economics or business administration, preferably with experience in industry. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Centre for Management and Industrial Development (CBO)  
Exchange Building  
Coolsingel/Meent  
P.O. Box 30042  
3001 DA Rotterdam, Netherlands

## **Management for general managers**

*Short description:* Defining and analysing managerial problems; quantitative tools for decision-making; business conditions analysis; environmental scanning; the management of organizations; introduction to business policy and strategic management; functional areas of policy formulation, i.e. marketing policies, finance policies, manpower policies, production policies, research and development policies; integrated policy and strategy formulation; communication; organization; development; managerial control; practical assignments. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Deadline for application:* October. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

## **Managerial control and management information systems**

*Short description:* Managerial control systems: cost accounting, managerial control systems, financial reporting standards and practice, internal control systems, behavioural aspects of control; management information systems: organization and information, techniques of information processing, information systems analysis and design, internal control in computer-based systems, financial modelling and decision support, implementation of computerized information systems, workshop microcomputer; practical assignments. *Commencing date:* 17 April 1990. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, accounting or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Deadline for application:* 15 January 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

## **Sector technology and management: food and metal products manufacturing**

*Short description:* General and production management technology of the sector concerned, including factory visits; technology; management; in-plant application; plan of action. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. *English.* *Deadline for application:* October. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft,  
Netherlands

## **Gestión básica empresarial**

*Breve descripción:* Favorecer el desarrollo de la formación profesional y gerencial es uno de los objetivos básicos y permanentes de la Oficina Internacional del Trabajo tendente a aportar una mayor racionalidad y eficacia a la gestión empresarial como base indispensable de diálogo y entendimiento de los factores sociales del mundo de la producción. *Fecha de iniciación:* Octubre. *Duración:* 9 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* 31 mayo. *Derechos de inscripción:* Ptas 150.000.

*Organizador:* Departamento Formación Cede  
Alcántara 20  
28006 Madrid,  
España

## **Industrial management for developing countries**

*Short description:* The objective of the course is to provide participants with the theory of industrial management and to prepare them for managerial work in their home countries. *Commencing date:* August 1990. *Duration:* 1½ years. *Qualifications:* Degree in industrial engineering or business administration or equivalent. *Deadline for application:* 15 January 1990. *Fees:* SKr 32,000 per semester.

*Organizer:* Swedish International University Consortium  
The National Board of Universities and Colleges  
P.O. Box 45501  
104 30 Stockholm,  
Sweden

## **Management**

*Short description:* IMI organizes short and long courses: international executive programmes, international advanced management programme. It also runs short programmes in the field of technology, marketing and management development. *Commencing date:* Throughout the year. *Duration:* 4 weeks. *Qualifications:* All programmes are for middle to senior managers, executives and board members, working for an international organization. *English.* *Deadline for application:* 4 weeks before commencing date. *Fees:* SwF 16,000.

*Organizer:* International Management Institute (IMI)  
4, chemin de Conches  
1231 Conches-Geneva,  
Switzerland



### **Advanced logistics management**

*Short description:* The objective of the course is to give senior managers the skills and knowledge required to control effectively logistics activities. Topics covered include corporate strategies and materials management, management of capital equipment, procurement, international purchasing and contracting, negotiation, planning strategies and techniques, inventory management and control systems. *Commencing date:* 2 April 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents  
Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

### **Computerized materials and production management**

*Short description:* The role of production manager; organization of production control; materials management (MRP); objectives of computerization; microcomputers. *Commencing date:* Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon  
Warwickshire, United Kingdom

### **Construction site management**

*Short description:* The course is for those managers who hold or are about to take up positions in site management. It aims to help participants develop their managerial knowledge and skills, to improve their performance and to increase their awareness of the commercial implications of their managerial decisions. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Price Waterhouse  
Urwick Management Centre  
Baylis House  
Stoke Poges Lane  
Slough, Berkshire SL1 3PF  
United Kingdom

### **Distribution and logistics**

*Short description:* The objective of the course is to provide graduate and management trainees with a basic introduction to logistics and distribution planning and operations. The course covers the main concepts behind distribution and logistics, including transport, warehousing, information systems and links this learning experience with practical projects. *Commencing date:* April 1990, 1991. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* End of February. *Fees:* £1,500-£2,000 (including accommodation).

*Organizer:* Cranfield Institute of Technology  
Distribution Studies Unit  
Cranfield, Bedford MK43 0AL  
United Kingdom

### **Distribution technology and management**

*Short description:* Transport, warehousing, inventory, strategy and information technology. *Commencing date:* October 1990, 1991. *Duration:* 12 months. *Qualifications:* University degree. English. *Deadline for application:* July 1990, 1991. *Fees:* £7,500 (£1,900 EEC countries).

*Organizer:* Cranfield Institute of Technology  
Distribution Studies Unit  
Cranfield, Bedford MK43 0AL, United Kingdom

### **General management for specialists**

*Short description:* Engineering and research; financial management and administration; computing; personnel; sales and marketing. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £3,485 (accommodation plus VAT, £864).

*Organizer:* Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Human resource management**

*Short description:* Manpower policies and strategies; employment conditions; employee relations; recruitment and selection; records and systems; introduction of new technology; training and development. *Commencing date:* 27 August 1990. *Duration:* 12 weeks. *Qualifications:* Personnel managers/advisers and line managers who have the development of human resources as part of their responsibilities. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Service Ltd.  
Overseas Division  
43 Market Place  
Wetherby, West Yorkshire LS22 4LN, United Kingdom

### **Human resource management (overseas)**

*Short description:* The course covers the core skills and knowledge requirements for personnel management, with particular reference to employee relations. *Commencing date:* 5 February 1990, 4 February 1991. *Duration:* 4 weeks. *Qualifications:* About 3 years of experience in line management or recently appointed graduates in personnel management. English. *Deadline for application:* 3 months before commencing date. *Fees:* 1990, £2,550; 1991, £2,750.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Human resource management (UK based)**

*Short description:* Industrial relations; application of behavioural sciences; training and development; manpower planning. *Commencing date:* 14 May 1990, 13 May 1991. *Duration:* 8 weeks. *Qualifications:* 5 years of experience in line management. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £3,950; 1991, £4,250.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Improving efficiency**

*Short description:* A project based intensive course for pairs of delegates, designed to achieve tangible beneficial change in their organization. Delegates apply their training and consultancy skills to a problem they bring with them. *Commencing date:* 1 May. *Duration:* 12 weeks. *Qualifications:* Senior management, usually a line manager and a trainer. English. *Deadline for application:* 31 January. *Fees:* £4,400 (including accommodation).

*Organizer:* International Resource Development  
University of Leeds International Services  
Woodhouse Lane  
Leeds LS2 9JT, United Kingdom

### **Industrial relations**

*Short description:* Legal background to industrial relations; industrial democracy; communications systems in organizations; collective bargaining; internationally; financial information for industrial relations; interviewing and negotiating skills; redundancy policy and procedures; discipline and grievance procedures; effective clause drafting; industrial and commercial visits. *Commencing date:* April, August. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

### **International programme in personnel management**

*Short description:* Basic training in the principles and practice of personnel management. *Commencing date:* January, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £3,500.

*Organizer:* Management Consultancy  
Thames Valley College  
Wellington Street  
Slough, Berkshire SL1 1YG, United Kingdom

### **Management and maintenance of physical assets**

*Short description:* Communication skills; planning the maintenance function; role of managers in asset management; the role of condition based monitoring. *Commencing date:* 2 April, 24 September 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton, Surrey SM1 1EL, United Kingdom

### **Management development**

*Short description:* This programme offers a major development experience to successful managers who are currently undergoing, or who are on the threshold of, significant work transitions. The programme gives managers an opportunity to widen their business horizons, to understand management as a process of judgment

and to improve their executive skills. *Commencing date:* September. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £6,000 (accommodation, £1,500 plus VAT).

*Organizer:* Cranfield School of Management  
Cranfield, Bedford MK43 0AL  
United Kingdom

#### **Management for engineers and scientists**

*Short description:* The programme is designed to enable engineers and scientists to make the transition from specialist to manager. Topics include: understanding organizations; determining the manager's role; solving problems; communication skills and systems; managing people; new technology; finance and managing change. *Commencing date:* October 1990. *Duration:* 3 weeks. *Qualifications:* Graduate level in a relevant field. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Service Ltd.  
Overseas Division  
43 Market Place  
Wetherby, West Yorkshire LS22 4LN  
United Kingdom

#### **Management skills**

*Short description:* Finance, organization and planning, effective leadership, information technology. *Commencing date:* January, June. *Duration:* 10-14 weeks. *Qualifications:* Management/supervisory experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* £300 per week.

*Organizer:* Teesside Transport Training Association Ltd.  
Hamilton House  
Cargo Fleet Lane  
Middlesbrough, Cleveland TS3 8DJ, United Kingdom

#### **Management today**

*Short description:* General management for middle- and senior-level managers; management systems and functions; interpersonal communication skills; training; appraising your staff; industrial relations; leadership; marketing; health and safety; visits to commercial organizations. *Commencing date:* January, April, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN  
United Kingdom

#### **Materials management (postgraduate diploma)**

*Short description:* Stage 1: Essential management concepts and techniques; Stage 2: In-depth study of the activities and process of production control; Stage 3: Understanding the production management systems concept. *Commencing date:*

Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon, Warwickshire, United Kingdom

#### **Operating and commercial management**

*Short description:* The first part of the programme deals with modern operating methods for both double and single lines, operating resource management, quality control, staff recruitment and training. The second part deals with marketing and sales management. The programme includes practical work and periods of attachment to British Rail. *Commencing date:* 2 January 1990, 15 January 1991. *Duration:* 10 weeks. *Qualifications:* About 5 years of experience in operating/commercial department. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £5,950; 1991, £6,350.

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

#### **Personnel management**

*Short description:* Industrial relations; manpower planning; finance; personnel records systems; information technology; leadership; communication at work; training; recruitment and selection; organizational development; interpersonal communication skills; industrial and commercial visits. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

#### **Port management**

*Short description:* Transport; economics; port planning principles; management services covering work and method study; study visits to ports in the United Kingdom and in Northern Europe. *Commencing date:* 20 August 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

#### **Procurement for development projects**

*Short description:* The course is designed for officers in government departments and ministries, public and private corporations concerned with the management of the procurement aspects of major projects. It covers: corporate strategies and materials management; management of capital equipment procurement; international purchasing and contracting; negotiation planning strategies and techniques. *Com-*

*Commencing date:* 23 March 1990. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SM1 1EL, United Kingdom

#### **Production management**

*Short description:* The objective of the course is to develop a detailed understanding of current production management techniques, the more effective use of people and the range of intervention techniques used by technical advisers to management. In addition to formal training there are visits and project attachments to a wide range of industrial, commercial and service organizations. *Commencing date:* 10 September 1990. *Duration:* 12 weeks. *Qualifications:* Policy-makers within national training organizations and directors and senior managers from public and private-sector organizations responsible for setting up a vocational training facility. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Service Ltd.  
Overseas Division  
43 Market Place  
Wetherby, West Yorkshire LS22 4LN, United Kingdom

#### **Production management and control**

*Short description:* The role of production managers; work scheduling; sales forecasting; computer software packages. *Commencing date:* Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon, Warwickshire, United Kingdom

#### **Production management and control (postgraduate diploma)**

*Short description:* Material flow systems theory; operational programming of manufacture; computerized systems in manufacturing; the management of materials procurement; dispatch (machine loading); computer loading and the use of materials management packages. *Commencing date:* Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon, Warwickshire, United Kingdom

#### **Production planning and control**

*Short description:* The corporate plan; production scheduling; stock control; stores management; materials inspection; purchasing; interfacing between purchasing and other company functions; case-study of purchasing and expediting; man manage-

ment; motivation. *Commencing date:* Throughout the year. *Duration:* 4-20 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Institute of Production Control  
Elmcroft House  
Tiddington Road  
Tiddington, Stratford-on-Avon, Warwickshire, United Kingdom

#### **Public enterprise management**

*Short description:* Policy and strategy; specific nature of public enterprises; relationship with government and public sector; special experiences of public enterprise management. *Commencing date:* 1 May. *Duration:* 12 weeks. *Qualifications:* Directors, senior executives. English. *Deadline for application:* 31 January. *Fees:* £4,400 (including accommodation).

*Organizer:* International Resource Development  
University of Leeds  
Woodhouse Lane  
Leeds, United Kingdom

#### **Senior managers programme**

*Short description:* The programme is designed to enable senior managers to: enhance their personal leadership styles; develop their understanding of the interfunctional nature of management; update their knowledge of current management thinking and practice; sharpen their interpersonal skills and tailor them to senior management responsibilities; focus on strategic issues in their own companies. *Commencing date:* January, May, October. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £3,995 (accommodation, £882 plus VAT).

*Organizer:* Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **Site management (certificate)**

*Short description:* Practical training in construction project management, assessment, monitoring and control of sub-contractors; industry and management; site safety; contractual procedures; planning and organization; productivity techniques; site surveying and levelling. *Commencing date:* 2 July 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

#### **Site management (diploma)**

*Short description:* Practical training at an advanced level in construction project management; legal responsibilities; quality control; quantity surveying; maintenance management. *Commencing date:* 21 September 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

### **Social planning and management**

*Short description:* Social development and social planning; approaches to planning; making plans; resource management techniques; cost benefit analysis; managing people; staff development and training; project planning, attachment; project administration; project evaluation. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

### **Strategic management**

*Short description:* The objective of the programme is to enable senior managers, who will probably have reached the top of a functional ladder, to develop the broader perspectives and techniques required for the overall management and control of a transport organization, with some special reference to railways. *Commencing date:* 22 October 1990, 21 October 1991. *Duration:* 6 weeks. *Qualifications:* Senior managers expected to progress at an early date to the highest levels in the industry. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* 1990, £6,300; 1991, £6,750 (including accommodation).

*Organizer:* British Rail  
Transmark Training Division  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Supply and materials management**

*Short description:* The course is designed for managers who work in the supply systems of both public and private sector organizations. It comprises finance, stock control, purchasing and contracts management, information systems, storage methods, materials handling and distribution. *Commencing date:* 8 January, 2 April 1990, 2 July, 21 September 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Crown Agents Training Services  
St. Nicholas House  
Sutton SMI 1EL, United Kingdom

### **Technical management**

*Short description:* An advanced programme of formal and on-job modules to provide an overview in technical management by developing techniques for problem solving and decision-making. *Commencing date:* 5 February 1990. *Duration:* 8 weeks. *Qualifications:* Engineers and managers who have a degree, diploma or equivalent. *Deadline for application:* 12 November 1989. *Fees:* Approximately £3,200.

*Organizer:* British Electricity International  
Westminster Tower  
3 Albert Embankment  
London SE1 7SP, United Kingdom

### **Work-study techniques**

*Short description:* Participants will be trained to introduce and apply basic work-study techniques in their companies, making positive improvements in efficiency and



productivity possible. *Commencing date:* March. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Pera  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

#### **Young managers programme**

*Short description:* The programme provides early career training and personal development in an intensive course aimed at young, emerging managers. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £2,700 (accommodation plus VAT, £864).

*Organizer:* Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **Global manufacturing "Maquiladora" workshop**

*Short description:* Short intensive workshop designed to prepare participants to face present realities of offshore manufacturing. Topics include manufacturing management, production issues, country strategy, labour views. A visit to Mexican maquiladoras. *Commencing date:* 2 January 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 15 December 1989. *Fees:* \$US 975 (application fee, \$US 20).

*Organizer:* American Graduate School of International Management  
Glendale, Arizona 85306, United States of America

#### **Human resource development**

*Short description:* Participants will: establish the relationship between human resource development and organization productivity; understand the principles of staff development; provide the resources for an organization's strategic planning effort; plan programmes to meet specific requirements; identify criteria and support programmes for establishing and maintaining a human resource development programme with their organizations. *Commencing date:* 4 June 1990. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 3,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

#### **International business: a Pacific focus**

*Short description:* Cross-cultural environments of international business; marketing in Asia and the Pacific; comparative management; financial practices and institutions in Asia; multinational business strategies. *Commencing date:* 2 July 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 1 April 1990. *Fees:* \$US 3,600 (including accommodation).

*Organizer:* Pacific Asian Management Institute  
Center for Executive Development  
College of Business Administration  
University of Hawaii at Manoa  
2404 Maile Way, B101  
Honolulu, Hawaii 96822, United States of America

### **International management development**

*Short description:* This intensive programme is for senior and mid-level administrators. Successful completion of the programme results in a master's degree in administrative sciences from The George Washington University. In addition to a core curriculum, participants select a specialty track in organizational management or management information systems. Participants are taught the essential statistical and quantitative methods for analysis of policy and management problems and an introduction to computers, programming and information systems. *Commencing date:* January, August. *Duration:* 12 months. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 13,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

### **Leadership and management development**

*Short description:* Nature of the management process; basic supervisory skills; communication; decision-making; planning; delegation; leadership; time management; personnel administration; evaluation. *Commencing date:* 2 January, 13 August 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

### **Management analyst**

*Short description:* Systems analysis; report writing; conducting meetings; position description development; records management; forms design and analysis; making presentations; task analysis; conducting interviews; introducing organizational change; motivation; feedback; communication; organizations visits. *Commencing date:* 29 January 1990. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 7,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

### **Management and decision-making**

*Short description:* Planning; organizing; motivating; staffing; controlling; the integration of the personal computer into the management process. *Commencing date:* 18 June 1990, 17 June 1991. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 5,000 (including accommodation).

*Organizer:* Northern Illinois University  
Office of International Training and Consultation  
DeKalb, IL 60115, United States of America

### **Management economics**

*Short description:* Determination of prices and outputs in a market economy; models of consumer behaviour; determinants of market demand; theories of firm behaviour; determinants of supply conditions; for different markets, including perfect competition, oligopoly and monopoly. *Commencing date:* 26 March, 14 May 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

### **Management roles for women in development**

*Short description:* The objective of the course is to enable participants to: use executive skills in planning, decision-making, and interpersonal communication; anticipate, analyse and manage special problems that may occur when women are leaders in predominantly male organizations; articulate and provide leadership to help women assume a greater role in development; be creative and objective; and implement changes within their organizations. *Commencing date:* 30 April 1990. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue S.W., Room 134  
Washington, DC 20024, United States of America

### **Marketing and export promotion/Marketing et promotion des exportations/ Comercialización y promoción de las exportaciones**

#### **Cycle de commerce international du bois**

*Brève description :* Commerce international, marketing; droit international et contrats; financements internationaux, transport et logistique; connaissance commerciale des bois et dérivés; pratiques du commerce, réception; anglais commercial. *Début du cours :* 15 septembre. *Durée :* 8 mois. *Qualifications :* Français. *Date limite d'inscription :* 15 juin. *Droits d'inscription :* FF 10 000.

*Organisateur :* Institut national du bois  
6, avenue de Saint-Mandé  
75012 Paris, France

#### **Public policy and export marketing**

*Short description:* This intensive top-level programme is designed for senior public-sector policy-makers who are concerned with export development and promotion. *Commencing date:* August. *Duration:* 1 month. *Qualifications:* Senior personnel with organizations involved in the development of export promotion policy. English. *Deadline for application:* May. *Fees:* £5,000.

*Organizer:* Coras Trachtala/Irish Export Board  
Technical Assistance Programme  
Merrion Hall  
Strand Road  
Sandymount  
Dublin 4, Ireland

## Marketing and export trade development

*Short description:* The development of the marketing function, with special emphasis on export trade development. The training provides for a series of personalized introductions on market analysis, international trade relations, quality assurance, marketing, pricing and costing. The programme will further include study of selected literature and market documentations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University graduates in engineering, economics or business administration, preferably with experience in industry. *English.* *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Centre for Management and Industrial Development (CBO)  
Exchange Building  
Coolsingel/Meent  
P.O. Box 30042  
3301 DA Rotterdam, Netherlands

## Marketing development

*Short description:* Marketing; organization and management; financial control; cost accounting; social skills; negotiation techniques; case-studies; study tours. *Commencing date:* August 1990. *Duration:* 16 weeks. *Qualifications:* At least secondary school; 2 years of relevant experience. *English.* *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
P.O. Box 1075  
7500 BB Enschede, Netherlands

## Marketing management and physical distribution

*Short description:* Marketing concept; marketing management; marketing research; finance for marketing; physical distribution; practical assignments. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. *English.* *Deadline for application:* October. *Fees:* f 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

## International industrial marketing

*Short description:* The objective of the course is to prepare participants for advanced professional work in international marketing functions of industrial companies. The programme provides an understanding of the interdependence between technology, political, social environment and economic situations within which international marketing managers must operate. *Commencing date:* August 1990. *Duration:* 1½ years. *Qualifications:* Degree in engineering or business administration. *Deadline for application:* 15 January 1990. *Fees:* SKr 34,000.

*Organizer:* Swedish International University Consortium  
The National Board of Universities and Colleges  
P.O. Box 45501  
104 36 Stockholm, Sweden

## Marketing

*Short description:* The role of marketing as a tool of management; the total marketing mix; selection of appropriate elements of the mix market research, desk and field; preparation of long- and short-term marketing plans, budgeting; targeting, advertising techniques; sales management and administration, marketing aids and customer contact; public relations. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Relevant experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Chattaway (UK) Training Services  
Pool Chambers  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

## Marketing

*Short description:* The course focuses on understanding marketing and its role in the economy. Following a macro-approach, it emphasizes the social and economic aspect of marketing and introduces prevailing concepts, functions, institutions and terminology. *Commencing date:* 2 January, 13 August 1990. *Duration:* 3 weeks. *Qualifications:* Public and private sector managers. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

## Marketing management

*Short description:* Theory of current marketing; corporate visitation programme. *Commencing date:* June. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 9,290.

*Organizer:* International Marketir : Institute  
314 Hammond Street  
Chestnut Hill, MA 02167, United States of America

## Quality control and standardization/Contrôle de la qualité et normalisation/ Control de calidad y normalización

### Contrôle et assurance de la qualité

*Breve description :* Métrologie; essais mécaniques des matériaux ferreux et non ferreux; métallographie; chimie industrielle. *Début du cours :* Toute l'année sauf en juillet et août. *Durée :* —. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

## Normalisation

**Brève description :** Examen de la loi de base en matière de normalisation ainsi que des règles pour l'élaboration des normes; collaboration avec les institutions spécialisées, notamment le Comité électronique belge; visite du laboratoire qui octroie la marque CEPEC; organisation des services techniques; création et fonctionnement des commissions, missions des comités de coordination technique, travaux internationaux (ISO, CEN, CENELEC, CECA), marque de conformité. Visite au Comité européen de normalisation; visite des services d'exécution de l'IBN; questions d'intérêt général : construction, feu, sécurité, éclairage, fabrications métalliques, soudure, énergie nucléaire, gaz naturel, transport, papiers et cartons; centre d'information de l'IBN. *Début du cours :* A arranger. *Durée :* —. *Qualifications :* Niveau universitaire. Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

**Organisateur :** Institut belge de normalisation (IBN)  
29, avenue de la Brabançonne  
1040 Bruxelles, Belgique

## Quality control

**Short description:** Participants will study various basic quality control techniques through lectures, classroom discussions and in-plant exercises and learn how to apply quality control techniques in an actual production site. *Commencing date:* July 1990, 1991. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff of developing countries responsible for quality control, production control or factory management. English. *Deadline for application:* 5 months before commencing date. *Fees:* ¥ 550,000.

**Organizer:** The Association for Overseas Technical Scholarship  
30-1, Senju Azuma 1-chome, Adachi-ku  
Tokyo, Japan

## Quality management

**Short description:** The Japanese approach for company-wide quality control through lectures, plant visits, in-plant exercises and discussions to develop suitable measures for participants to promote quality and productivity improvement. *Commencing date:* June, November 1990, 1991. *Duration:* 3 weeks. *Qualifications:* Senior managers from developing countries responsible for quality and productivity improvement. English. *Deadline for application:* 5 months before commencing date. *Fees:* ¥ 327,000.

**Organizer:** The Association for Overseas Technical Scholarship  
30-1, Senju Azuma 1-chome, Adachi-ku  
Tokyo, Japan

## Quality systems: installation, auditing and improvement

**Short description:** Quality control functions; types of quality control systems; organization for quality assurance; introducing a quality control system; setting up for inspection; sampling plans and their use; analysing a quality system; quality auditing; quality motivation and improvement programmes and quality requirements for export to developed countries. *Commencing date:* January, August, 1990, 1991. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent; ex-

perience in quality control or a related field. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 9,000.

*Organizer:* International Centre for Quality and Management Sciences  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Statistical quality control: a computer-oriented approach**

*Short description:* The nature and impact of the computer; flow diagrams for statistical analysis; probability and probability distributions; sampling theory and techniques; tests of significance; control charts; experimental design and regression and correlation analysis. *Commencing date:* February, August 1990, 1991. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent; experience in quality control or a related field. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 9,000.

*Organizer:* International Centre for Quality and Management Sciences  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Total quality control**

*Short description:* Basic concepts; quality specifications; policy, planning and motivation; economics of quality; inspection and sampling; process capability; quality improvement; statistical tools in quality control; visits to plants. *Commencing date:* January, August 1990, 1991. *Duration:* 3 months. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 14,000.

*Organizer:* International Centre for Quality and Management Sciences  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Water quality management**

*Short description:* Water quality monitoring and assessment; water chemistry and microbiology; environmental process technology; water and waste water treatment; pollution prevention; mathematical modelling; legislation; engineering economy; environmental impact assessment; watershed management. *Commencing date:* October 1990, 1991. *Duration:* 11 months (diploma); additional 6 months (Master of Science). *Qualifications:* Degree in civil, sanitary, chemical engineering or a related field. English. *Deadline for application:* 15 August 1990, 1991. *Fees:* f. 5,000 (field trips, f. 2,000).

*Organizer:* International Institute for Hydraulic and Environmental Engineering (IHE)  
P.O. Box 3015  
Oude Delft 95  
2601 DA Delft, Netherlands

#### **Quality engineering**

*Short description:* Quality management systems; management communication; materials, fabrication and quality; quality appraisal by measurement; project; statistical quality control; information technology, computer aided design; computer and manufacture; reliability; engineering; non-destructive testing; condition monitoring.

*Commencing date:* October. *Duration:* 9 months. *Qualifications:* Degree in engineering, management, science or mathematics. English. *Deadline for application:* September. *Fees:* £4,000.

**Organizer:** Scottish School of Non-Destructive Testing  
Paisley College of Technology  
High Street  
Paisley, Renfrewshire PA1 2BE, Scotland, United Kingdom

### Quality practice

*Short description:* The course is designed to acquaint engineers, managers and supervisors with current quality practice requirements as defined in British Standard BS5750. The course combines the management of quality with the utilization of information technology; the interpretation and use of international standards and the criteria for acceptance levels. *Commencing date:* 30 April 1990. *Duration:* —. *Qualifications:* Higher certificate or diploma; experience. *Deadline for application:* 1 April 1990. *Fees:* £1,400.

**Organizer:** Scottish School of Non-Destructive Testing  
Paisley College  
High Street  
Paisley, Renfrewshire PA1 2BE, Scotland, United Kingdom

### Small-scale industries and entrepreneurship/Petites industries et entrepreneurs/ Pequeñas industrias y los empresarios

#### Entrepreneur development training

*Short description:* The training course comprises both classroom sessions covering essential business concepts for effective management as well as practical exposure through industrial attachments at relevant firms, on-site observation, visits to trade fairs and exhibitions, business meetings with relevant business collaborators and discussions with trade associations and chambers of commerce. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* May. *Fees:* To be arranged.

**Organizer:** International Training and Contact (ITC)  
Velodroomstraat 68  
2600 Antwerp, Belgium

#### Formation à l'aide aux petites et moyennes entreprises

*Brève description :* Evaluation d'un projet de création; formation du candidat entrepreneur; mise à disposition des infrastructures nécessaires; recherche du ou des financements possibles; déploiement ou redéploiement économique par la création d'un tissu de petites et moyennes entreprises; relations petites et moyennes entreprises-écoles. *Début du cours :* Toute l'année sauf en juillet et août. *Durée :* —. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

**Organisateur :** Centre de coopération et de recherche pédagogique et technique  
(CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique



### **Préparation aux responsabilités dans des petites et moyennes entreprises du bois**

*Brève description :* Stage d'insertion professionnelle pour des jeunes destinés à exercer des responsabilités de tous ordres (comptabilité, commerce, ressources humaines) avec tout ce qui est spécifique au secteur bois; préparation à la succession du chef d'entreprise. *Début du cours :* Octobre. *Durée :* 1 an. *Qualifications :* Français. *Date limite d'inscription :* Juillet. *Droits d'inscription :* FF 30 000.

*Organisateur :* Institut national du bois  
6, avenue de Saint-Mandé  
75012 Paris, France

### **Small-scale rural manufacturers**

*Short description:* Production technologies; cost accounting and product pricing; marketing; management. *Commencing date* April. *Duration:* 26 weeks. *Qualifications:* Diploma or Bachelor of Science or several years of experience. English. *Deadline for application:* February. *Fees:* DM 24,169.

*Organizer:* Deutsche Lehranstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 34  
6100 Darmstadt 12, Federal Republic of Germany

### **Small industrial packaging of agricultural products**

*Short description:* Up-to-date packaging technology and equipment; marketing. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 1,000-\$US 1,200 per month (including accommodation and meals).

*Organizer:* Mezőgazdasági Szakmunkásképző és Munkástovábbképző Intézet  
Felszabadulás utca 36-38  
9751 Vép, Hungary

### **Small-scale industries and entrepreneurship**

*Short description:* Product development; customer services; communications in business; selling skills and sales planning; reporting; patents and copyrights; site visits. *Commencing date:* Throughout the year. *Duration:* 3-4 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Irish Labour Training Services Ltd.  
FAS, The Training and Employment Authority  
27/33 Upper Baggot Street  
Dublin 4, Ireland

### **Organización de pequeñas y medianas empresas agro-alimentarias**

*Breve descripción:* Sensibilizar a los participantes hacia el conjunto de problemáticas organizativas, productivas, de transformación y comercialización de las empresas alimentarias y respectivos aspectos económicos — elevar la capacidad de desarrollo de iniciativas concretas individuales y/o asociativas de pequeño o mediano tamaño. *Fecha de iniciación:* Para ser acordado. *Duración:* 12 semanas. *Calificaciones:* Funcionarios técnicos con responsabilidades en la promoción y organización de pequeñas y medianas empresas agro-alimentarias. Español y/o portugués. *Fecha límite de inscripción:* 60 días antes del comienzo del curso. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Cori SpA  
Centro Studi Agricoli  
Borgo a Mozzano  
55060 Mutigliano, Italia

### **Energy management in small- and medium-scale industries**

*Short description:* Analysis of the role of energy; efficient use of energy; formulation of policy options. *Commencing date:* October. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree or equivalent; 2 years of experience. English. *Deadline for application:* July. *Fees:* f. 10,000.

*Organizer:* University of Twente, Enschede  
in collaboration with  
Netherlands International Institute for Management, Delft  
*Contact address:*  
University of Twente  
Technology and Development Group (VOK)  
P.O. Box 217  
7500 AE Enschede, Netherlands

### **International marketing and export for small- and medium-sized firms**

*Short description:* Principles and basic concepts (economic, political and cultural environment); strategic decisions in international marketing research; products; distribution; pricing; communications; international marketing; exporting; case-studies; plant visits. *Commencing date:* May, October 1990, 1991. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent experience in a relevant field. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 9,000.

*Organizer:* International Centre for Quality and Management Sciences  
(ICQMS)  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

### **Small entrepreneurship promotion**

*Short description:* Small-scale industry; small-scale industry management; consultancy; training; technological assistance; entrepreneurship development; organization of institutional support systems. *Commencing date:* 10 September 1990. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Deadline for application:* 15 June 1990. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
P.O. Box 143  
Mijnbouwplein 11  
2600 AC Delft, Netherlands

### **Management and organization of production in small- and medium-scale enterprises**

*Short description:* Principles of management, marketing, planning and organization of production process; quality control; elaboration of technical documentation; designing and technology of production. *Commencing date:* Throughout the year. *Duration:* 1-6 months. *Qualifications:* Degree in economics, business administration

or equivalent; experience. English or French. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Central Union of Work Co-operatives

*Contact address:*

Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna 1/3  
00-529 Warsaw, Poland

#### **Organization and management in industrial co-operatives**

*Short description:* Legal organization and structure; basic concepts of management and self-government; case-study. *Commencing date:* Throughout the year. *Duration:* 1-6 months. *Qualifications:* Degree in economics, business administration or equivalent experience. English, French. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Central Union of Work Co-operatives  
Warsaw, Poland

*Contact address:*

State Office for Scientific and Technological Development  
Wspolna 1/3 00-529 Warsaw, Poland

#### **Finance for enterprise**

*Short description:* A programme designed specifically for senior and mid-level staff of financial institutions who are already or will soon be involved in lending to new, micro, small and medium enterprises. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £2,700 (including accommodation).

*Organizer:* The Enterprise Development Centre  
Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **New and small enterprise promotion**

*Short description:* The objective of the course is to enable participants responsible for small business development to design and implement integrated assistance programmes, including finance, training, the provision of infrastructure and the framing and monitoring of overall government policy. *Commencing date:* July 1990. *Duration:* 8 weeks. *Qualifications:* At least one year of involvement in some aspect of small business development and intention to continue being involved. English. *Deadline for application:* —. *Fees:* £5,550 (including accommodation and meals).

*Organizer:* Enterprise Development Centre  
Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **Co-operative development**

*Short description:* This intensive programme will enable participants from developing countries and representatives from United States government and private voluntary agencies involved in development to assess the value of co-operative business enterprises. The objective is to expose participants to information and experience in

the form of case-studies, which will help in duplicating successes and preventing mistakes. *Commencing date:* 30 July 1990. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Trainer development/Formation de formateurs/ Perfeccionamiento de profesionales de capacitación**

#### **Sélection et formation d'instructeurs**

*Brève description :* Préparation des techniciens au rôle d'instructeurs en leur enseignant les connaissances et techniques didactiques voulues afin qu'ils puissent assurer à leur tour cette formation à d'autres techniciens de la même branche, et ce, valablement et de la manière la plus efficace. *Début du cours :* Toute l'année sauf de juillet au 15 septembre. *Durée :* —. *Qualifications :* Technicien apte à remplir le rôle de formateur et ayant au moins le niveau de contremaître dans son secteur d'activité ou sa profession et possédant une expérience professionnelle ou plusieurs années dans sa spécialisation. Français, anglais. *Date limite d'inscription :* 3 mois avant la date de début du cours. *Droits d'inscription :* A arranger.

*Organisateur :* International Executives Benelux SA "INTEX"  
5, rue de la Science  
1040 Bruxelles, Belgique

#### **Audio-visual training aids**

*Short description:* Human perception and learning; communication skills; stating teaching objectives; production of models; production of hand-outs; production of transparencies; production of slide series; production of film/video strip; operational skills and maintenance of technical equipment. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Diploma or Bachelor of Science or several years of experience. French. *Deadline for application:* February. *Fees:* DM 8,995.

*Organizer:* Deutsche Lehnanstalten für Agrartechnik (DEULA)  
P.O. Box 12 01 34  
6100 Darmstadt 12, Federal Republic of Germany

#### **Designing and developing your own training material**

*Short description:* Attitudes to change in adults; factors affecting motivation of adults; skills of effective discussion leading in senior training courses; preparation and use of training aids; preparation and use of training package; action-learning and project-based training. *Commencing date:* May. *Duration:* 10 weeks. *Qualifications:* Trainers with at least 2 years of experience. English. *Deadline for application:* April. *Fees:* £Ir 3,100.

*Organizer:* Institute of Public Administration  
57/61 Lansdowne Road  
Dublin 4, Ireland

### **Management of industrial and vocational training**

*Short description:* Sound understanding of training and its role in the development of an economy; detailed knowledge of training at management, supervisory, craft and operative level; manpower planning; analytical and presentation skills; training methods and equipment. *Commencing date:* Throughout the year. *Duration:* 8 weeks. *Qualifications:* Trainers in public, industrial and commercial sectors, senior personnel from labour, education, industry and manpower ministries. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Irish Labour Training Services Ltd.  
FAS, The Training and Employment Authority  
27/33 Upper Baggot Street  
Dublin 4, Ireland

### **Training and instructional techniques**

*Short description:* The training function and its role in the organization; approaches to identification of training needs; setting course objectives and design of training programmes (including on-the-job training); approaches to evaluation of training; communication skills. *Commencing date:* August. *Duration:* 10 weeks. *Qualifications:* Candidates who have recently been appointed to training posts or are likely to receive appointment. English. *Deadline for application:* July. *Fees:* £1r 3,100.

*Organizer:* Institute of Public Administration  
57/61 Lansdowne Road  
Dublin 4, Ireland

### **Training educators of rural development extension agents**

*Short description:* Participants will be given problems to settle: the function of training, its organization, modes of implementation, effectiveness of various methods. They will analyse training needs and prepare training programmes using didactic aids. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Agronomists, economists, rural sociologists, psychologists. English. *Deadline for application:* 60 days before commencing date. *Fees:* To be arranged.

*Organizer:* Cori S.p.A.  
Centro Studi Agricoli  
Borgo a Mozzano  
Via Colonia Agricola  
55060 Mutigliano, Lucca, Italy

### **Training in rural extension and teaching**

*Short description:* Rural development, curriculum development; teaching methodologies. *Commencing date:* August. *Duration:* 10 months. *Qualifications:* Degree in agriculture and preferably training in education; at least 3 years of experience in teaching or training of personnel. *Deadline for application:* April. *Fees:* f. 7,160.

*Organizer:* Larenstein International Agricultural College  
P.O. Box 7  
7400 AA Deventer, Netherlands

### **Developing income generating enterprise**

*Short description:* A programme designed for staff of local or international private voluntary organizations that are or will be assisting income generating activities on

a group or individual basis. The objective is to enable participants to design and implement effective and eventually self-sustaining programmes of assistance for enterprise, within the context of overall community development. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £3,500 (including accommodation).

*Organizer:* The Enterprise Development Centre  
Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **Enterprise education and training**

*Short description:* The programme covers the full range of enterprise activities from enterprise education in schools and higher education to new enterprise development and growth. *Commencing date:* To be arranged. *Duration:* 12 weeks (of study at Durham) plus 6 months (project in home environment). *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

#### **Industrial and commercial training**

*Short description:* Assessing training needs; designing learning; selecting training methods; delivering training and setting up a training facility. *Commencing date:* August 1990. *Duration:* 12 weeks. *Qualifications:* Training officers and advisers, and line managers with responsibility for training. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £5,000.

*Organizer:* Industrial Training Service Ltd.  
43 Market Place  
Wetherby LS22 4LN, West Yorkshire, United Kingdom

#### **Management and methods of training**

*Short description:* Interpersonal communication skills; information technology; identifying training needs; job instruction; organizational communication; preparation and use of training aids; group training methods; attachments to training departments of United Kingdom organizations; design of training proposals and programmes; team building and individual development; commercial and industrial visits. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

#### **Small and medium enterprises in newly industrialized and developing countries**

*Short description:* The objective of the course is to develop skills required to design and implement integrated programmes for the promotion and development of small businesses. Emphasis is placed on encouraging participants to produce action plans for implementation in their home countries. *Commencing date:* 7 May 1990, 6 May 1991. *Duration:* 10 weeks. *Qualifications:* Experience in supporting and

promoting the development of small businesses. English. *Deadline for application:* February 1990, 1991. *Fees:* £4,400.

*Organizer:* Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

#### **Small business advisers and counsellors in developing countries**

*Short description:* The objective of the programme is to give small-business advisers and counsellors in developing countries first-hand experience of the small-business support network in the north-east of England. Participants are attached to small business support agencies and produce, at the end of the programme, an action plan for implementation in their home country. *Commencing date:* 4 June, 3 September 1990, 3 June, 2 September 1991. *Duration:* 4 weeks. *Qualifications:* At least 1 year of involvement in some aspect of small-business development and intention to continue being involved. English. *Deadline for application:* March, June 1990, March, June 1991. *Fees:* £1,850.

*Organizer:* Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

#### **Trainer development**

*Short description:* The programme places great emphasis on practical rather than theoretical approaches and includes case-studies, projects, simulations and presentation. It combines in-company work with an intensive 10-day and two 5-day residential periods. *Commencing date:* January, May, September. *Duration:* 20 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £2,300.

*Organizer:* Engineering Industry Training Board (EITB)  
Webton Court  
Allerton Park  
Leeds LS7 4ND, United Kingdom

#### **Training for enterprise**

*Short description:* The programme is intended for teachers, educators and trainers who work with existing and potential entrepreneurs. Its objective is to enhance participants' ability to design and conduct effective training, at any level, to produce training material for use by others and by themselves and to manage and evaluate self-sustaining training activities. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Participants must be currently or intend to be primarily involved in designing, conducting and/or managing training or education for enterprise. English. *Deadline for application:* —. *Fees:* £2,700 (including accommodation).

*Organizer:* Enterprise Development Centre  
Cranfield School of Management  
Cranfield, Bedford MK43 0AL, United Kingdom

#### **Training managers**

*Short description:* A training for trainers course covering the management aspects of training. *Commencing date:* February, June, November. *Duration:* 7 weeks.

*Qualifications:* English. *Deadline for application:* 4 weeks before commencing date.  
*Fees:* £2,100.

*Organizer:* Thames Valley College  
Management Consultancy  
Wellington Street  
Slough, Berkshire SL1 1YG, United Kingdom

#### **Training officers**

*Short description:* A training for trainers course for recently appointed trainers seeking a basic foundation of practical training skills. *Commencing date:* January, April, September. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £2,500.

*Organizer:* Thames Valley College  
Management Consultancy,  
Wellington Street  
Slough, Berkshire SL1 1YG, United Kingdom

#### **Training of trainers**

*Short description:* Development and utilization of training materials; effective use of audio-visual aids and video equipment; design of course curriculum; basic principles of adult education; evaluation techniques; participant preparation and presentation of training lessons. *Commencing date:* October. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Occupational safety/Prévention des accidents du travail/Seguridad profesional**

#### **Health and safety management**

*Short description:* Health and safety; accident prevention and resulting costs; attitudes and policy; machine guarding and personal protection; transport safety; lifting, construction hazards; fire prevention and fighting; surveys and sampling; espionage and security; wellness; health and hygiene; first aid; chemical hazards; loss control. *Commencing date:* 4 June, 13 August 1990, 3 June, 12 August 1991. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £3,995.

*Organizer:* British Safety Council  
National Safety Centre  
Chancellors Road  
London W6 9RS, United Kingdom

#### **Occupational hygiene**

*Short description:* The protection of hearing at work; worker education in noise; practical noise control; introduction to basic noise measurement; entry into confined spaces/naked light certification; repetitive strain injury; office environ-



ments/sick buildings; personal protection, its selection and use; occupational hygiene; health risks, a guide to workplace assessment; health and safety in welding; working with man-made mineral fibres; asbestos: its uses, hazards, bulk and fibre sampling, personal protection. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* Technical or professional qualifications at any level of industry. English. *Deadline for application:* 1-2 months before commencing date. *Fees:* To be arranged.

**Organizer:** Amarc (Tes) Ltd.  
Ellison Street  
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

### **Risk management**

*Short description:* Hazard and loss; security; arson; bomb threats; disaster phases; protection of cash and goods; insurance; liability for personal injury; notices to warn; product liability; identification of risk; measurement; frequency; near misses; statistics; advanced techniques for analysis and controlling risks. *Commencing date:* 13 August, 22 October 1990, 12 August, 21 October 1991. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £2,350.

**Organizer:** British Safety Council  
National Safety Centre  
Chancellors Road  
London W6 9RS, United Kingdom

### **Safety advisers**

*Short description:* The objective of the course is to acquaint delegates with an appreciation of safety, health and hygiene matters. *Commencing date:* January. *Duration:* 6 weeks. *Qualifications:* Safety advisers and those engaged in managing the safety function. English. *Deadline for application:* November. *Fees:* £2,200.

**Organizer:** Royal Society for the Prevention of Accidents  
22 Summer Road  
Acocks Green  
Birmingham B27 7UT, United Kingdom

### **Safety engineering**

*Short description:* Health and safety legislation; shipbuilding/ship-repair safety for managers and supervisors; self-audit and hazard spotting; ionising radiators; confined spaces; access and a safe place of work; storage and use of solvents, flammable liquids; industrial health and safety; abrasive wheels; fire extinguishers; safe manual handling/kinetics; safe lifting; basic appreciation for managers/supervisors; safety in slinging; safe craning operations; statutory requirements and systems lifting appliances; statutory requirements and systems for lifting tackle. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* Technical or professional qualifications. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** Amarc (Tes) Ltd.  
Ellison Street  
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

**B. DEVELOPING COUNTRIES/PAYS EN DÉVELOPPEMENT/  
PAÍSES EN DESARROLLO**

**1. INDUSTRIAL BRANCHES/SECTEURS INDUSTRIELS/  
RAMAS INDUSTRIALES**

**Chemical industries/Industrie chimique/Industrias químicas**

**Las incrustaciones en los evaporadores: su eliminación y prevención**

*Breve descripción:* Conocer las características y mecanismos de formación de las incrustaciones; estudiar opciones de nuevos agentes químicos y procedimientos para disminuir las incrustaciones; mecanismos de formación. *Fecha de iniciación:* Enero. *Duración:* 2 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

**Producción de enzimas por vía fermentativa**

*Breve descripción:* Contempla el estudio de diferentes cultivos empleados en la producción de enzimas, crecimiento microbial, mecanismos regulatorios, factores ambientales que afectan la producción de enzimas; cinética y su actividad; experiencia de planta piloto. *Fecha de iniciación:* Septiembre. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 junio. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

**Laboratory techniques**

*Short description:* Training is offered in the following fields: analytical testing, physical testing, quality control of fertilizers, corrosion measurement, beneficiation of phosphate rock, phosphoric acid production, fertilizer granulation. It is useful for personnel engaged in research and development. Training is offered at the Fertilizer Research and Development Institute at Faisalabad. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 500 per month.

*Organizer:* National Fertilizer Corporation of Pakistan Ltd.  
Alfalah Building, 1st floor Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

**Training of operators/technicians in chemical and fertilizer industries**

*Short description:* The purpose of the course is to train operators and technicians in chemical and fertilizer industry to ensure safe and efficient operation of the plant.

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*Commencing date:* 1 September. *Duration:* 1 year. *Qualifications:* High school or diploma in associate engineering. English. *Deadline for application:* 31 July. *Fees:* \$US 5,000 (including board and lodging).

*Organizer:* National Fertilizer Corporation of Pakistan Ltd.  
Alfalah Building, 1st floor  
Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

#### **Genetic engineering in the production of drugs and pharmaceuticals**

*Short description:* Nucleic acid chemistry; RNA biochemistry; protein biochemistry and immunology; enzyme preparations; microbiology; theory and practice of fermentation technology. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Graduates of chemistry, physical chemistry, biology, medicine, pharmacy, biotechnology. English. *Deadline for application:* End of June. *Fees:* To be arranged.

*Organizer:* Centre for Genetic Engineering and Biotechnology  
Vojvode Stepe 283  
Belgrade, Yugoslavia

*Contact address:*  
Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
Belgrade, Yugoslavia

#### **Electrical and electronic industries/Industries électriques et électroniques/ Industrias eléctricas y electrónicas**

##### **Sensores en la industria**

*Breve descripción:* Sensores industriales; principios de medición; aplicación de nuevos materiales como elemento sensor; elementos de transducción; interfase y transmisores industriales; sistemas de comunicación; seguridad intrínseca; criterios de selección de sensores; aplicaciones específicas; tendencias tecnológicas. *Fecha de iniciación:* 24 septiembre 1990. *Duración:* 1 semana. *Calificaciones:* Español. *Fecha límite de inscripción:* 24 julio 1990. *Derechos de inscripción:* \$US 380.

*Organizador:* Citei  
Avenida Gral. Paz y Nazca  
1650 San Martín  
Buenos Aires, Argentina

##### **Industrial electronics**

*Short description:* Principles of electronics as applied to industrial operations; diagnosing the causes of faults in electronics equipment and circuits; semiconductor devices; digital techniques; microprocessor; electronic circuits, optoelectronics. *Commencing date:* April, October 1990, 1991. *Duration:* 9 months. *Qualifications:* Secondary school certificate or "O" level. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

## Telecommunication

*Short description:* Principles of telecommunication; analog and digital communication and networking and trouble shooting in telecommunication equipment. *Commencing date:* January 1990, 1991. *Duration:* 1 year. *Qualifications:* Higher secondary certificate or 'A' level. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
ENAR Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

## Computer hardware

*Short description:* Z80 microprocessor construction and applications. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Boğaziçi University  
Electronics Programme  
Bebek PK2  
Istanbul, Turkey

## Integrated circuit (IC) development and production

*Short description:* Postgraduate-level course on: IC type engineering; mask design and production; all relevant lines; IC quality and reliability. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English. *Deadline for application:* Throughout the year. *Fees:* To be arranged.

*Organizer:* Faculty of Electronics  
Beogradska 14  
18000 Niš, Yugoslavia

### *Contact address:*

Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
Belgrade, Yugoslavia

## Food processing industries/Industrie alimentaire/Industrias alimentarias

### Aplicaciones de los radioisótopos en la industria azucarera

*Breve descripción:* Aplicación de los radioisótopos, tanto en calidad de trazadores como de fuente de radiaciones ionizantes en la solución de diversos problemas en el proceso industrial: evaluación de instalaciones, esclarecimiento de ciertas reacciones químicas. *Fecha de iniciación:* Diciembre. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español e inglés. *Fecha límite de inscripción:* 31 octubre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivacán (Código 33 500)  
La Habana, Cuba

## **Corrosión y protección para la industria azucarera**

*Breve descripción:* Conocer factores de que depende la velocidad de corrosión por el jugo y otros fluidos; nuevos materiales en el proceso de fabricación de azúcar; los recubrimientos temporales; la pintura; métodos de control de la calidad del recubrimiento. *Fecha de iniciación:* Enero. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

## **Disminución del tiempo de obtención de azúcar por la aplicación de agentes**

*Breve descripción:* Conocer las técnicas y equipos utilizados para acelerar el flujo de los materiales azucareros en el esquema tecnológico; temas sobre el uso y control de microbicidas, floculantes, enzimas y agentes tensoactivos; nuevas tecnologías en el área de cristalización. *Fecha de iniciación:* Enero. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

## **Entrenamiento en productos fermentados y producción de quesos**

*Breve descripción:* Actualizar a los participantes en la tecnología de quesos y productos lácteos fermentados, así como en la elaboración del diagrama de flujo; evaluación del rendimiento, calidad y costos de la producción. *Fecha de iniciación:* —. *Duración:* 4 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 3er. trimestre 1989. *Derechos de inscripción:* \$US 100.

*Organizador:* Instituto de Investigaciones para la Industria Alimenticia de la República de Cuba  
Calle 41  
4455 Playa  
Ciudad D  
La Habana, Cuba

## **Tecnología de la producción de azúcar de caña**

*Breve descripción:* Ganar experiencia en las diversas operaciones actuales del proceso fabril de forma acelerada. Se contempla trabajo teórico-práctico sobre las distintas áreas del centro azucarero. Se estudiará el aspecto energético y el de tratamiento de residuos. *Fecha de iniciación:* Enero. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Inglés y español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

## Planning and promotion of agro-industries

*Short description:* Preparation of feasibility studies; alternate technologies; formulation of action plans; sharing the Indian experience in developing agro-industries. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Personnel associated with policy formulation, promotion and development of agro-industries in the traditional cottage and small industry sector. English. *Deadline for application:* 15 July. *Fees:* \$US 2,540.

*Organizer:* National Institute of Small Industry Extension Training (NISIET)  
Yousufguda  
Hyderabad-500 045, India

## Processing and utilization of animal by-products

*Short description:* By-products emanating from slaughterhouses meat processing plants and fallen animals and their utilization as various end-products in the fields of medical, veterinary and other industries; field visits to various plants. *Commencing date:* August. *Duration:* 1 month. *Qualifications:* Degree in science; some practical experience in processing and utilization of various animal by-products. *Deadline for application:* At least 3 months before commencing date. *Fees:* Rs 5,000 per month.

*Organizer:* Central Leather Research Institute  
Adyar  
Madras-600 020, India

## Cycle de formation en technologie sucrière

*Brève description :* Ce cycle subdivisé en 6 cours traitera dans chacun un aspect spécifique au processus de production dans une sucrerie : extraction, épuration, évaporation, cristallisation, laboratoire avec en préliminaire à ces cours une formation de base en physique-chimie. *Début du cours :* Janvier 1990. *Durée :* 21 jours. *Qualifications :* Minimum baccalauréat scientifique ou technique. Français. *Date limite d'inscription :* 1 mois avant la date de début du cours. *Droits d'inscription :* DH 850.

*Organisateur :* Institut sucrier d'études de recherche et de formation  
67, rue Jaafar As-Saddik  
Agdal  
Rabat, Maroc

## Céréales et légumineuses

*Brève description :* Techniques de panification (pâtisserie, viennoiseries à base de farines composées); transformations primaires; gestion d'une boulangerie. *Début du cours :* 2 février. *Durée :* 3-4 semaines. *Qualifications :* Français. *Date limite d'inscription :* 30 janvier. *Droits d'inscription :* \$US 1 400.

*Organisateur :* ITA  
B.P. 2765  
Route des Pères Maristes  
Hann  
Dakar, Sénégal

## Leather and leather products industries/Industrie du cuir et des articles en cuir/ Industrias del cuero y de los productos de cuero

### Leather goods

*Short description:* Design, pattern and manufacture of heavy and light leather goods, such as purses, wallets, suitcases. *Commencing date:* Throughout the year. *Duration:*

3 months-1 year. *Qualifications:* English. *Deadline for application:* At least 3 months before commencing date. *Fees:* Rs 5,000 per month.

*Organizer:* Central Leather Research Institute  
Adyar  
Madras-600 020, India

#### **Leather processing technology**

*Short description:* Manufacturing leather according to the particular interests of the trainees, e.g. upper leathers, garment leathers. *Commencing date:* Throughout the year. *Duration:* 1 month-1 year. *Qualifications:* English. *Deadline for application:* At least 3 months before commencing date. *Fees:* Rs 5,000 per month.

*Organizer:* Central Leather Research Institute  
Adyar  
Madras-600 020, India

#### **Técnicas de curtición peletera**

*Breve descripción:* Brindar una tecnología apropiada en base a la utilización de insumos nacionales para el curtido de pieles con pelo. El curso es teórico práctico y la tecnología utilizada puede ser empleada para curtir pieles de alpaca, ovino, conejo, caprino. *Fecha de iniciación:* 2do. bimestre 1990. *Duración:* 60 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* 1er. bimestre 1990. *Derechos de inscripción:* —.

*Organizador:* Senati  
Apartado 1769  
Autopista Lima  
San Martín de Porres, Perú

#### **Analyse des colles et adhésifs employés en chaussures**

*Breve description :* Analyse des colles et adhésifs employés en chaussure et leur application. *Début du cours :* Juillet. *Durée :* 1 mois. *Qualifications :* Anglais, français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Fabrication des chaussures de sécurité**

*Breve description :* Chaussure destinée à protéger le pied contre les risques d'accidents par écrasement, choc, perforation; renforts divers embouts en acier, semelle imperforable ou antidérapante. *Début du cours :* Juin 1990. *Durée :* 2-3 mois. *Qualifications :* Anglais, français, italien. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Nature et composition chimique des colorants utilisés en tannerie**

*Breve description :* Paramètres influençant la teinture du cuir; emploi d'auxiliaires et leur influence sur le pouvoir tinctorial du support cuir; recherche de teinte. *Début du*

*cours* : Janvier 1990. *Durée* : 1 mois. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Techniques de fabrication de la forme pour chaussures**

*Brève description* : Stage dans une entreprise spécialisée dans la fabrication de formes pour chaussures, avec cours théorique et pratique. *Début du cours* : A arranger. *Durée* : 2 mois. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Techniques de fabrication du syndérme**

*Brève description* : Stage sur la technique de fabrication du syndérme (matière utilisée dans l'industrie de la chaussure) dans une entreprise spécialisée, avec cours théorique et pratique. *Début du cours* : A arranger. *Durée* : 2 mois. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Travaux pratiques physicomécaniques**

*Brève description* : Analyse des élastomères employés en chaussure, en maroquinerie et en ameublement. *Début du cours* : 15 mars. *Durée* : 3 semaines. *Qualifications* : Anglais, français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

#### **Advanced-level leather technology**

*Short description*: Recent technological developments in the production of different types of leather; modern machinery systems and new chemicals. *Commencing date*: 1 June 1990. *Duration*: 4 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: 1 May 1990. *Fees*: \$US 200.

*Organizer*: Leather Research Institute  
P.O. Box 26  
Pendik  
Istanbul, Turkey

#### **Leather technology and production techniques**

*Short description*: Basic principles of leather making; process phases and production methods of shoe upper, suede, clothing, sole, double-face leathers; practical demonstrations on industrial scale. *Commencing date*: 1 October 1990. *Duration*:



8 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 September 1990. *Fees:* \$US 1,600.

*Organizer:* Leather Research Institute  
P.O. Box 26  
Pendik  
Istanbul, Turkey

#### **Process control in leather industry**

*Short description:* The course is primarily designed for leather technologists and deals with the production of different types of leather. Laboratory training related to relevant chemical analysis and physical tests will also be included. *Commencing date:* 1 April, 1 June, 1 November 1990. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 March, 1 May, 1 October 1990. *Fees:* \$US 200.

*Organizer:* Leather Research Institute  
P.O. Box 26  
Pendik  
Istanbul, Turkey

#### **Production methods of clothing leather**

*Short description:* Sources of raw material and evaluation of the quality; theoretical information on all process phases from soaking to the end of finishing. *Commencing date:* 1 April, 1 June, 1 October 1990. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 March, 1 May, 1 September 1990. *Fees:* \$US 200.

*Organizer:* Leather Research Institute  
P.O. Box 26  
Pendik  
Istanbul, Turkey

#### **Production methods of shoe upper leather**

*Short description:* Raw material and evaluation of its quality; all process phases from soaking to finishing; practical demonstrations. *Commencing date:* 1 April, 1 June, 1 October 1990. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 March, 1 May, 1 September 1990. *Fees:* \$US 200.

*Organizer:* Leather Research Institute  
P.O. Box 26  
Pendik  
Istanbul, Turkey

### **Mechanical and metalworking industries/ Industrie de construction mécanique et de transformation de métaux/ Industrias mecánicas y de transformación de metales**

#### **Construcciones soldadas**

*Breve descripción:* Especializar técnica y pedagógicamente en construcciones soldadas a instructores y técnicos de alto nivel, supervisores e ingenieros de la especialidad de soldadura. *Fecha de iniciación:* Febrero 1990. *Duración:* 11 meses. *Calificaciones:* Ser

ingeniero en áreas industriales o metalmecánicas o experto en soldadura con 1 y 3 años de experiencia respectivamente en el área de estudio. o ser supervisor o instructor en construcciones soldadas con más de 3 años de experiencia; tener de 22 a 35 años. Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* —.

*Organizador:* Oficina de Cooperación Técnica Internacional SENA  
Apartado Aéreo 53329  
Bogotá, Colombia

### **Welding**

*Short description:* Postgraduate course for mechanical engineers on all aspects related to welding. *Commencing date:* Beginning of October. *Duration:* 1 year. *Qualifications:* Portuguese. *Deadline for application:* 15 September. *Fees:* Esc 150.000.

*Organizer:* IST  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

### **Formation professionnelle : ouvrier/agent de maîtrise, toutes spécialités**

*Breve description :* Ouvrier/agent de maîtrise, toutes spécialités, y compris : mécanique d'entretien; mécanique moteur; électromécanique; hygiène et sécurité. *Début du cours* Octobre 1989. *Durée :* 9 mois. *Qualifications :* Français. *Date limite d'inscription :* 15 juin 1989. *Droits d'inscription :* FF 36 000.

*Organisateur :* Centre de formation  
B.P. 438  
Dakar marine  
Dakar, Sénégal

### **Aviation and aeronautical engineering**

*Short description:* I: Training of pilots, flight engineers, airline technicians, commercial, airport and cabin staff. II: Full-time studies in aerodynamics, aircraft structure and construction and aircraft and rocket propulsion; postgraduate studies and specializations. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Secondary school. English. *Deadline for application:* Throughout the year. *Fees:* To be arranged.

*Organizer:* Aviation Training Centre  
Belgrade  
*Contact address:*  
Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
11000 Belgrade, Yugoslavia

### **Industrial production and sterilization**

*Short description:* Production of disposable medical devices, industrial sterilization, radiational sterilization practised in Yugoslavia. *Commencing date:* 1 October.

*Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* End of April.  
*Fees:* To be arranged.

*Organizer:* Institute of Nuclear Sciences "Boris Kidric"  
Laboratory for Solid State Physics and Radiational Chemistry  
P.O. Box 522  
11000 Belgrade, Yugoslavia

*Contact address:*  
Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
11000 Belgrade, Yugoslavia

## **Metallurgical industries/Industrie métallurgique/Industrias metalúrgicas**

### **Curso de posgrado en siderurgia**

*Breve descripción:* Destinado a profesionales de nivel terciario en especialidades afines a la siderurgia, recientemente egresados o con no más de dos años en la industria. El objetivo es brindar los conocimientos de ciencia básica y tecnológicos de reducción, aceria y laminación, analizando detalladamente los procesos y operaciones que se emplean en siderurgia. Comprende un módulo teórico y uno práctico a desarrollarse en diferentes plantas siderúrgicas, sobre un total de 1.200 horas de clases teóricas y prácticas. *Fecha de iniciación:* Primera semana de abril 1990. *Duración:* 9 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* 10 marzo 1990. *Derechos de inscripción:* Para ser acordado.

*Organizador:* IAS  
Carlos María Della Paolera 226. Piso 20  
1406 Buenos Aires, Argentina

### **Pilot processing of refractory metals**

*Short description:* The programme aims at upgrading the knowledge and skills of engineers in the processing of refractory metals (Nb, Ti, Mo, Ta, Zr etc.), their alloys and correlated ceramics. Its scope is multidisciplinary and integrated, from extractive metallurgy to the manufacturing of end-products. *Commencing date:* 1 March, 1 September. *Duration:* 6 months-1 year. *Qualifications:* Degree in engineering (metallurgy, mechanics, electricity and chemistry). *Deadline for application:* 31 December, 30 June. *Fees:* —.

*Organizer:* Fundação de Tecnologia Industrial (FTI)  
Centro de Materiais Refratários (CEMAR)  
Polo Urbo-Industrial, s/no, Gleba AI-6  
Bairro Mondezir  
12.600 Lorena, SP, Brazil

### **Blast furnace operations**

*Short description:* Raw materials for pig-iron production, its preparation and blending; layout of iron-making plant, blast furnace construction and auxiliary equipment, iron-making process, products of blast furnace, its uses; safety and industrial

hygiene. *Commencing date:* 1st week of August. *Duration:* 1 year. *Qualifications:* English. *Deadline for application:* 30 May. *Fees:* \$US 12,000.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

#### **Coke oven and by-product technology**

*Short description:* Purpose and structure of coke oven and by-product plant; raw material base for coking; preparing coal for coking; technology of process plant. *Commencing date:* 1st Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

#### **Continuous casting of steel**

*Short description:* Main and auxiliary equipment of continuous casting line; raw material and its requirements; limitations of the process; billets, blooms and slabs; defects of casting; quality control in casting; safety and industrial hygiene. *Commencing date:* 1st week of August. *Duration:* 6 months. *Qualifications:* English. *Deadline for application:* 30 May. *Fees:* \$US 6,000.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

#### **Converter operator**

*Short description:* Raw materials for steel making; layout of converter shop; converter construction and auxiliary equipment; steel making process; products of steel making, its uses; safety and industrial hygiene. *Commencing date:* 1st week of August. *Duration:* 1 year. *Qualifications:* English. *Deadline for application:* 30 May. *Fees:* \$US 12,000.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

#### **Foundry practice**

*Short description:* Layout of the shop; auxiliary equipment; technological aspects in blue print section; pattern making, molding, fettling, finishing; heat treatment of castings; quality control in foundry shop; safety and industrial hygiene. *Commencing date:* 1st week of August. *Duration:* 6 months. *Qualifications:* English. *Deadline for application:* 30 May. *Fees:* \$US 6,000.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

### **Pickling and acid regeneration technology**

*Short description:* Purpose and construction of pickling and acid regeneration plant; raw material base for acid regeneration; technological process of pickling plant; emulsion decomposition. *Commencing date:* 1st Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

### **Refractory and lime production**

*Short description:* Purpose and structure of refractory and lime production; refractory installation complex; raw material base for lime and refractory production; technology of refractory and lime production. *Commencing date:* 1st Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

### **Rolling operator (hot and cold)**

*Short description:* Metalworking; plastic deformation; mechanical properties of steel; layout of rolling shop; construction of main and auxiliary equipment; rolling process; defects; quality control in rolling; safety and industrial hygiene. *Commencing date:* 1st week of August. *Duration:* 1 year. *Qualifications:* English. *Deadline for application:* 30 May. *Fees:* \$US 12,000.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasiom  
Karachi-50, Pakistan

### **Basic oxygen furnaces and continuous slab casting operations**

*Short description:* Furnace operation; slab caster; ingot teeming. *Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

### **Blast furnace operations**

*Short description:* Casthouse practice; hot-blast stoves; raw materials; blast furnace burdening; burden distribution; furnace operating parameters; new instrumentation; rogue elements; stable furnace operation. *Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

### **Cold rolling mill and finishing lines operations**

*Short description:* Pickling process; acid generation by vacuum crystallization; 4 high 5 stand tandem cold mill; alkali cleaning line; batch annealing line; temper rolling; electrolytic tinning 4 PC; operations of 60" cold roller shearing line with side trimming; 42" hot rolled slitting line. *Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

### **Hot rolling mills operation**

*Short description:* Heating of ingots and slabs; soaking pits; slab reheat furnace; slab rolling and combination mill; hot strip mill; plate shear; hydraulic and lubrication systems; 66" semi-continuous hot strip mill; technology of metal heating; heating process and operational practices; roll charge procedure and rolling; programmes, practices on flat production; calculation of finishing settings. *Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

## **Textile industries/Industrie textile/Industrias textiles**

### **Cotton textile**

*Short description:* Course for 8 to 10 participants covering: raw material; technology of spinning, weaving, printing and dyeing; process control techniques in cotton textile. *Commencing date:* September/October 1990. *Duration:* 26 days. *Qualifications:* Textile or mechanical engineers; at least 3 years of experience in textile industry. English. *Deadline for application:* 31 May 1990. *Fees:* \$US 50 per day (including room and board).

*Organizer:* Sümerbank Araştırma  
Geliştirme ve Eğitim Müessesesi  
Bursa, Turkey

## **Wood processing and wood products industries/ Industrie du bois et des produits du bois/ Industrias de elaboración de la madera y de productos de madera**

### **Cabinet-making**

*Short description:* A pre-employment programme aiming at providing craft skills with a view to self-employment. *Commencing date:* September. *Duration:* 2 academic years. *Qualifications:* GCE. English. *Deadline for application:* April. *Fees:* D 1,800 per year.

*Organizer:* Gambia Technical Training Institute  
P.O. Box 989  
Banjul, Gambia

*Venue:* Kanifing Industrial Estate

**Other industrial branches and intersectoral programmes/  
Autres secteurs industriels et programmes intersectoriels/  
Otras ramas industriales y programas intersectoriales**

**Development of industrial activities**

*Short description:* Advanced electronics; advanced welding; electrical maintenance; heat engines; industrial chemistry; machine-tool maintenance; metrology and engineering inspection; process-control instrumentation; tool and die making; tool design; advanced furniture and cabinet-making. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* Rs 500 per month.

*Organizer:* Advanced Training Institute  
Sion Trombay Road  
Sion  
Bombay-400 022, India

**Industrial instrumentation**

*Short description:* The course is designed to train technicians to deal with the pneumatic electronic, electrical and hydraulic aspects of a variety of industrial instruments as well as to undertake troubleshooting of these instruments. Courses on: pressure and temperature measuring instruments; flow and level measuring instruments; telemetry and display systems; analytical and testing instruments. *Commencing date:* April, October, 1990, 1991. *Duration:* 9 months. *Qualifications:* Secondary school certificate or "O" level. English. *Deadline for applications:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off Shaheed-e-Millat Road  
Karachi, Pakistan

**Traction problems in agriculture**

*Short description:* Introduction to terrain-vehicle systems; basic parameters of tyre traction; characteristic parameter of tyres related to traction; basic parameters of soil; traction prediction; soil trafficability charts; relation of tyres to traction; relation of tyre to soil compaction. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* —.

*Organizer:* Faculty of Technical Sciences  
Institute of Mechanization  
V. Vlahovića 3  
21000 Novi Sad, Yugoslavia

## 2. INDUSTRIAL FUNCTIONS/FONCTIONS INDUSTRIELLES/ FUNCIONES INDUSTRIALES

### Automation and data processing/Automatisation et traitement des données/ Automatización y procesamiento de datos

#### Sistema de automatización y uso de computadora

*Breve descripción:* El estudio del sistema de control industrial; diagrama de bloque básico; análisis transitorio: automatización del proceso de extracción; purificación, evaporación del sub-proceso de cristalización. *Fecha de iniciación:* Enero. *Duración:* 3 semanas. *Calificaciones:* Graduado u. transitorio. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

#### Computer languages

*Short description:* Basic, Cobol, RPG-II, Fortran; "hands-on" experience. *Commencing date:* April, October 1990, April, October 1991. *Duration:* 6 months. *Qualifications:* Higher secondary school certificate (HSC) or 'A' level. English. *Deadline for application:* 1 month before commencing date. *Fees:* —.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

#### Computer science

*Short description:* Computer languages; operating micros proficiently; running programmes on computers; understanding techniques needed to be effective in system analysis. *Commencing date:* January 1990, 1991. *Duration:* 1 year. *Qualifications:* Higher secondary school certificate or "A" level. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

#### Diploma courses in computing

*Short description:* Application of computers to a variety of management related activities; specialization in either computing and statistics or data processing.



*Commencing date:* October 1990, 1991. *Duration:* 9 months. *Qualifications:* English. *Deadline for application:* 1 July. *Fees:* \$'JS 3,800 (including lodging).

*Organizer:* Ipam  
Computer studies  
PMB 570  
Freetown, Sierra Leone

#### **Computer applications in industrial engineering**

*Short description:* Micro-computer systems and their use to manage information of an enterprise. *Commencing date:* 21 February. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 14 February. *Fees:* SLRs 750.

*Organizer:* National Institute of Business Management  
120/5 Wijerama Mawatha  
Colombo 7, Sri Lanka

#### **CAD/CAM fundamentals**

*Short description:* Fundamentals of computing; hardware/software configurations associated with CAD and CAD/CAM systems; graphic manipulations; storage of graphic data; CAD/CAM hardware/software; CAD/CAM data bases; the use of mainframe and micro-computer based software in the design of graphics and mapping applications; CAM programming; NC and APT programming; tool path simulation; and pre- and post-processor development; case materials. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* Participants should have experience in design and manufacturing, graphics, and/or mapping applications. English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,700.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

#### **Computer applications development (I)**

*Short description:* General concepts and techniques in computer applications development; programming languages; specifications of hardware and software appropriate for small to medium-sized computing environments; develop prototypes and basic requirements of a computer-based information system; concepts and current practices in data communications and computer networking for possible implementation in small installations equipped with microcomputers; selected prototype applications in project management, management and operational information systems; organization and analysis of survey/census data and desktop publishing. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* Participants who have limited or no experience with computers. English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,700.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

#### **Computer applications development (II)**

*Short description:* Typical mainframe and microcomputer system architectures and operating systems; programming and fourth generation languages; data base design using relational DBMS; use of relational query language in conjunction with

programming or fourth generation language; data communications; computer networking; CAD/CAM; applications of these technologies, eventual adoption in local environments; management information systems in stand alone or networked environments; case applications with use of specific software packages. *Commencing date:* January, September. *Duration:* 12 weeks. *Qualifications:* Participants with background in programming and/or the use of software packages who desire to enhance their skill in computer technology. English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,700.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

#### **Computer-based applications**

*Short description:* Problem-oriented and tailored training for specific applications and software products. PCAD trainers perform a dual role as trainers and consultants. "Hands-on" training is emphasized and supplemented by classroom-type training sessions and/or consultations, as necessary. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

#### **Computer-based project**

*Short description:* Training of personnel who will implement/administer an RCC-developed application system. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

#### **Computers and data communication**

*Short description:* Mainframe and microcomputer architecture and their data communication features; principles of data communication and data communication systems; current hardware and software technologies; current trends in technology development; concepts, design, implementation and management of networked systems; implementation of local area networks (LAN) and SNA; testing LAN and SNA systems; establishing networked implementation and the use of packet-switching services. "Hands-on" sessions include the following data communication exercises: PC→PC, HOST→HOST, HOST→PC, PC→LAN→HOST, PC→Packet-switching. *Commencing date:* 1st week of September. *Duration:* 12 weeks. *Qualifications:* Participants with experience in computer communications and working in data processing environment. English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,700.

*Organizer:* AIT/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

### **System management**

*Short description:* Managing computer installations of mainframe and microcomputer environments; hardware and software configurations used in selected installations in the region; software for multiple user access in a LAN or mainframe; formulating the requirements and specifications for the installation of a networked processing environment; system management and control; resource management; performance monitoring and evaluation; capacity planning; monitoring performance and optimal utilization of computing capacity in local environment. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* Participants having experience in computer and in administration. English. *Deadline for application:* 30 days before commencing date. *Fees:* SUS 2,700.

*Organizer:* AI, RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

### **Advanced basic programming**

*Short description:* MS DOS operating system. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Basic programming**

*Short description:* Basic commands and computer applications. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Cobol**

*Short description:* Cobol commands and computer applications. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Computer programming languages**

*Short description:* Introduction to ADP, Basic, Cobol, Pascal. Project. *Commencing date:* January. *Duration:* 6 months. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 800,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Hot rolling mill process control**

*Short description:* Computer systems and VAX-11/750: system utilities for real-time process control; detached processes; I/O manipulation; RM process control system; primary data input; product tracking. *Commencing date:* September/December. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

### **Logic circuits**

*Short description:* Logic gates and laboratory applications. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics Programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Lotus and DBase3**

*Short description:* Industrial applications of Lotus and DBase3. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics Programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Pascal**

*Short description:* Pascal commands and computer applications. *Commencing date:* Throughout the year except in July and August. *Duration:* 8 weeks. *Qualifications:* High school. *Deadline for application:* 1 week before commencing date. *Fees:* LT 100,000.

*Organizer:* School of Advanced Vocational Studies  
Electronics Programme  
Boğaziçi University  
Bebek PK2  
Istanbul, Turkey

### **Computer application in design and testing of mechanical constructions**

*Short description:* Introduction to IBM/PC operating system; programming languages; kinematic and dynamic analysis of mechanical systems; static and dynamic analysis of complex structures by means of finite elements; digital data processing; practical applications. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Institute of Mechanization  
Faculty of Technical Sciences  
V. Vlahovića 3  
21000 Novi Sad, Yugoslavia

### **Large-scale control systems**

*Short description:* Basic and practical knowledge of the application of modelling and control, optimization techniques, software for computer control and computer networks with particular emphasis on subjects relevant to the participants' institutions. *Commencing date:* October. *Duration:* 9 months. *Qualifications:* Degree in electrical, chemical or mechanical engineering, mathematics, computer sciences or economics. English. *Deadline for application:* June. *Fees:* \$US 3,500.

*Organizer:* Centre for Large-Scale Control and Decision Systems  
Faculty of Technical Sciences  
Veljka Vlahovića 3  
Novi Sad, Yugoslavia

*Contact address:*

Centre for Large-Scale Control and Decision Systems  
Institute for Computers, Control and Measurements  
Fruškogorska 11  
21000 Novi Sad, Yugoslavia

### **Large-scale control systems**

*Short description:* Application in electrical power systems, multivariable technological systems, economic systems, agricultural systems; system theory, modelling and control of large-scale systems, optimization, mini and micro computers, informatics and computer network. *Commencing date:* 1 November. *Duration:* 2 years. *Qualifications:* University degree in electrical or chemical engineering, mathematics, computer sciences or economics. English. *Deadline for application:* 1 September. *Fees:* \$US 2,000.

*Organizer:* Centre for Large-Scale Control and Decision Systems  
Faculty of Technical Sciences  
Veljka Vlahovića 3  
21000 Novi Sad, Yugoslavia

## **Energy/Energie/Energia**

### **Energy auditing and energy management systems in industry and buildings**

*Short description:* Energy auditing techniques and instrumentation; analyses of various energetical processes and the appropriate computer programmes; electricity and heat supply systems; state of the art of EMS; basis of economic calculation in energy management. *Commencing date:* June, September. *Duration:* 5 days-5 weeks.

**Qualifications:** From maintenance to managerial staff. English. **Deadline for application:** 1 month before commencing date. **Fees:** To be arranged.

**Organizer:** International R & T Centre  
Faculty of Electrical Engineering  
Unska 3  
41000 Zagreb, Yugoslavia

## Environment/Environnement/Medio ambiente

### Physicochimie

**Brève description :** Analyse d'éléments chimiques par spectrophotométrie en UV (visible en infrarouge et par absorption atomique). **Début du cours :** 20 juin. **Durée :** 1 mois. **Qualifications :** Français, anglais. **Date limite d'inscription :** —. **Droits d'inscription :** A arranger.

**Organisateur :** Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

### Protection de l'environnement et traitement des eaux résiduaires des tanneries

**Brève description :** Influence des rejets liquides et solides des tanneries sur l'environnement; revalorisation et traitements de ces rejets. **Début du cours :** Janvier 1990. **Durée :** 1 mois. **Qualifications :** Français. **Date limite d'inscription :** Décembre 1989. **Droits d'inscription :** A arranger.

**Organisateur :** Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

### Laboratories for monitoring pollutants in metallurgy (or chemical industry)

**Short description:** Setting up and development of laboratories attached to large-scale industry: factory inspectorates, or labour institutes; use of recommended methods, equipment and processes for the analysis of the most frequent pollutants. **Commencing date:** To be arranged. **Duration:** 3 weeks. **Qualifications:** Chemists, engineers in safety; industrial hygienists. English. **Deadline for application:** End of February. **Fees:** \$US 1,000.

**Organizer:** Institute of Occupational Health and Protection from Radiation  
Deligradska 29  
11000 Belgrade, Yugoslavia

**Contact address:**

Administration for International Scientific, Educational,  
Cultural and Technical Co-operation  
Nemanjina 22  
Belgrade, Yugoslavia

### Water resources engineering

**Short description:** Hydraulics and hydrology sediment transport; principles of mathematical modelling; measurements and data processing; water supply and sewerage; wastewater treatment; irrigation engineering; drainage of agricultural land; small-

scale hydropower; river engineering; flood control; hydraulic models; field trips to construction sites; practical training in engineering design with computer applications. *Commencing date:* 15 June. *Duration:* 3 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* End of March. *Fees:* To be arranged.

*Organizer:* "Jaroslav Černi" Institute for Development of Water Resources  
Jaroslava Černija 80  
11000 Belgrade, Yugoslavia  
*Contact address:*  
Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
Belgrade, Yugoslavia

### **Industrial design/Design industriel/Diseño industrial**

#### **Machine design and manufacturing**

*Short description:* Design practice as applied in industry; environmental considerations in product development and manufacture; practical cases of detailed design practices; analysis of production/manufacturing requirements; project work on selected areas of interest. *Commencing date:* 9 April 1990. *Duration:* 6 months. *Qualifications:* English, French. *Deadline for application:* 31 January 1990. *Fees:* \$US 5,500.

*Organizer:* Arcedem  
PMB, 19 U.I. Post Office  
Ibadan, Nigeria

### **Industrial information and documentation/ Information et documentation industrielles/ Información y documentación industriales**

#### **Information storage and retrieval systems**

*Short description:* Methods of information processing and organization; skills in the use of information processing techniques; information technology; computer application in information processing and dissemination; establishment of information systems and services. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Information officers and documentalists. English. *Deadline for application:* 15 July. *Fees:* \$US 2,540.

*Organizer:* National Institute of Small Industry Extension Training (NISJET)  
Yousufguda  
Hyderabad-500 045, India

#### **Information systems analysis and design**

*Short description:* Overview of information structure; planning and organizing the information system; microcomputer hardware, software and techniques; data management and data bases. *Commencing date:* 27 August 1990. *Duration:* 3 weeks.

*Qualifications:* English. *Deadline for application:* 2 months before commencing date.  
*Fees:* \$US 1,200.

*Organizer:* Continuing Education Center (CEC)  
Asian Institute of Technology (AIT)  
P.O. Box 2754  
Bangkok, Thailand

#### **New information technology and computerized library**

*Short description:* Computer applications; specialized information; services, management and marketing; production and publishing; audio-visual communication; effective communication skills. *Commencing date:* 9 May 1990. *Duration:* 3 months.  
*Qualifications:* English. *Deadline for application:* 15 April 1990. *Fees:* \$US 3,100.

*Organizer:* Library and Regional Documentation Center  
Asian Institute of Technology  
P.O. Box 2754  
Bangkok 10500, Thailand

#### **Documentation technique**

*Brève description :* Technique de l'exploitation et du classement de la documentation sur les industries du cuir; diffusion d'une documentation technique spécialisée. *Début du cours :* A arranger. *Durée :* 3 mois. *Qualifications :* Anglais, français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
Tunis 1002, Tunisie

#### **Statistique d'entreprise**

*Brève description :* Application de l'informatique dans le domaine des statistiques; exploitation optimale des statistiques d'entreprise. *Début du cours :* A arranger. *Durée :* 1 mois. *Qualifications :* Anglais, français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
Tunis 1002, Tunisie

### **Industrial planning and programming/ Planificación et programmation industrielles/ Planeamiento y programación industrial**

#### **Desarrollo, planificación y políticas públicas**

*Breve descripción:* *Objetivo central:* proceder al análisis sistemático de los problemas principales que inciden en la situación actual y en las perspectivas del desarrollo de los países de América Latina y del Caribe; enfatiza el análisis de los impactos de la crisis internacional sobre los procesos de política económica y social a nivel



nacional. *Fecha de iniciación:* Junio. *Duración:* 6 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* Primera semana de abril. *Derechos de inscripción:* —.

*Organizador:* Instituto Latinoamericano y del Caribe de Planificación Económica y Social (ILPES)  
Casilla 1567  
Vitacura  
Santiago de Chile, Chile

#### **Rural development planning and management**

*Short description:* Planning, implementation and evaluation of rural development projects. *Commencing date:* May. *Duration:* 3 weeks. *Qualifications:* Employees of different organizations with interest in rural development. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Strategic planning**

*Short description:* Principles of strategic planning and management; skills for strategic planning and management. *Commencing date:* June/July. *Duration:* 2 weeks. *Qualifications:* Senior personnel in the public and private organizations. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Regional industrial development**

*Short description:* Designing, programming and monitoring the regional economic development of a specified geographical area. *Commencing date:* 10 July 1990. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 15 May 1990. *Fees:* \$US 4,800.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City, 1101 Philippines

#### **Développement industriel en Afrique**

*Brève description :* Politique macro-économique d'industrialisation; développement de la petite industrie; entreprises du secteur public et industrialisation; techniques quantitatives, planification micro-économique; évaluation de projets industriels; travaux sur le terrain. *Début du cours :* Novembre. *Durée :* 3 mois. *Qualifications :* Anglais, français. *Date limite d'inscription :* Septembre/octobre. *Droits d'inscription :* —.

*Organisateur :* Institut Africain de Développement Economique et de Planification (IDEP)  
B.P. 3186  
Dakar, Sénégal

**Investment promotion and industrial financing/  
Promotion des investissements et financement industriel/  
Promoción de las inversiones y financiación industrial**

**Financial management and budgeting**

*Short description:* The objective of the course is to upgrade the financial management and budgeting skills of both public and private sector personnel with the view to improving resource allocation and use. *Commencing date:* April/June. *Duration:* 12 weeks. *Qualifications:* University degree or senior officers with extensive experience. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

**Project planning and management**

*Short description:* The primary aim of the course is to improve participants' performance in planning, implementing and managing of projects. *Commencing date:* January/March. *Duration:* 10 weeks. *Qualifications:* Planning officers in the civil service and private sector organizations, including financial institutions. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

**Financing small industry**

*Short description:* The course is designed for executives and field-level personnel in commercial banks, personnel in financial institutions and other agencies associated with financing, promotion and development of small industries in developing countries. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Personnel working in banks, financial institutions and development organizations. English. *Deadline for application:* 15 July. *Fees:* \$US 2,540.

*Organizer:* National Institute of Small Industry Extension Training (NISJET)  
Yousufguda  
Hyderabad-500 045, India

**Project feasibility studies**

*Short description:* Practice in project feasibility studies through field-work and case-studies. *Commencing date:* April 1990. *Duration:* 4 weeks. *Qualifications:* Project evaluators, promoters from financial institutions, industrial extension officers. English. *Deadline for application:* March 1990. *Fees:* N 2,220.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

**Evaluación empresarial y social de proyectos**

*Breve descripción:* Técnicas más usadas para evaluar proyectos de inversión en el área productiva o servicios. *Fecha de iniciación:* Abril. *Duración:* 3 meses. *Calificaciones:*

Español. *Fecha limite de inscripción:* Para ser acordado. *Derechos de inscripción:* \$US 500.

*Organizador:* Universidad Nacional de Ingeniería  
Avenida Tupac Amaru s/n Km. 4.5  
Rimac  
Lima, Perú

#### **Project study preparation**

*Short description:* The objective of the course is to provide the participants with the techniques in identifying venture opportunities and in preparing a project feasibility study. *Commencing date:* 10 July 1990. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 13 April 1990. *Fees:* \$US 3,400.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City, 1101 Philippines

#### **Financial management for corporate development**

*Short description:* Computers and financial management; financial analysis and reporting; working capital management and cash management; capital budgeting; interactions of investment and financial decisions; financial markets; mergers and acquisitions. *Commencing date:* February/May 1990. *Duration:* 16 days. *Qualifications:* English and Portuguese. *Deadline for application:* January 1990. *Fees:* —.

*Organizer:* CIFAG  
Avenida Júlio Dinis 11  
1000 Lisbon, Portugal

#### **Project feasibility studies**

*Short description:* Advanced methods and concepts in project preparation; evaluation of project financing at both macro- and micro-level; industrial investment promotion and implementation. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,400.

*Organizer:* Continuing Education Center (CFC)  
Asian Institute of Technology (AIT)  
P.O. Box 2754  
Bangkok, Thailand

#### **Project management**

*Short description:* Project selection, planning and appraisal, project monitoring and performance monitoring; project evaluation, control and termination focusing on basic control systems concept; case-studies; field studies. *Commencing date:* 16 April. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 2,400.

*Organizer:* Continuing Education Center (CFC)  
Asian Institute of Technology (AIT)  
P.O. Box 2754  
Bangkok, Thailand

### **Project monitoring and evaluation**

**Short description:** Budgeting methods and cost estimation; network techniques for scheduling; resource allocation; project management information systems; design of control systems; post-project evaluation. **Commencing date:** To be arranged. **Duration:** 4 weeks. **Qualifications:** English. **Deadline for application:** 2 months before commencing date. **Fees:** \$US 1,600 (approximately).

**Organizer:** Continuing Education Center (CFC)  
Asian Institute of Technology (AIT)  
P.O. Box 2754  
Bangkok, Thailand

### **Industrial projects in developing countries**

**Short description:** Preparation, evaluation, financing and implementation of industrial projects in developing countries. **Commencing date:** 18 September. **Duration:** 6 weeks. **Qualifications:** Professional qualifications. English. **Deadline for application:** End of May. **Fees:** To be arranged.

**Organizer:** Institute of Industrial Economics  
Maršala Tita 16  
Belgrade, Yugoslavia

**Contact address:**  
Administration for International Scientific, Educational, Cultural  
and Technical Co-operation  
Nemanjina 22  
Belgrade, Yugoslavia

## **Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación**

### **Mecánica de mantenimiento industrial**

**Breve descripción:** Especialización técnica y pedagógica en mecánica de mantenimiento industrial a instructores y técnicos de alto nivel, supervisores e ingeniero de la especialidad. **Fecha de iniciación:** Febrero 1990. **Duración:** 11 meses. **Calificaciones:** Ser ingeniero en áreas industriales o metalmecánicas o experto en mecánica industrial con 1 y 3 años respectivamente de experiencia en el área de estudios, o ser supervisor o instructor en mecánica de mantenimiento con más de 3 años de experiencia; tener de 22 a 35 años. **Español.** **Fecha límite de inscripción:** Agosto. **Derechos de inscripción:** —.

**Organizador:** Oficina de Cooperación Técnica Internacional SENA  
Apartado Aéreo 53329  
Bogotá, Colombia

### **Empleo de ensayos no destructivos en el mantenimiento de la agroindustria azucarera**

**Breve descripción:** Conocer la aplicación de los ensayos no destructivos en la agroindustria azucarera; causas del desbalance, metodología para balancear; uso de equipos de ultrasonidos en espesores y fallas de equipos. **Fecha de iniciación:** Enero. **Duración:** 3 semanas. **Calificaciones:** Graduado universitario. **Español.** **Fecha límite de inscripción:** 30 noviembre. **Derechos de inscripción:** —.

**Organizador:** ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

### **Maquinaria de preparación y molienda de caña**

*Breve descripción:* Conocer la experiencia cubana en los sistemas de basculación y preparación de caña; estudio de los equipos de extracción existentes así como los aditamentos auxiliares del tándem; puntos fundamentales de revisión y ajuste para mantenimiento durante la zafra; plan de reparaciones. *Fecha de iniciación:* Septiembre. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 junio. *Derecho de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

### **Medical electronics (technician)**

*Short description:* Basic physics, electrotechnics, mathematics, human biology; instrumentation, transducers, analogue electronics, digital electronics; microprocessor applications in medical equipment; carrying out a medical electronics project. *Commencing date:* September. *Duration:* 10 months. *Qualifications:* Graduates of 6-year technical school with preferably 2 years of experience in maintenance and repair of medical equipment. English. *Deadline for application:* June. *Fees:* \$US 4,400.

*Organizer:* Regional Training Centre  
Higher Technical Institute  
P.O. Box 2423  
Nicosia, Cyprus

### **Repair and maintenance of laboratory equipment, instrumentation and microcomputers**

*Short description:* Repair and maintenance of laboratory equipment, modern instrumentation and microcomputers (atomic absorption, spectrophotometers, arc spark and ICP spectrometers, monochromators, spectrum analysers). *Commencing date:* To be arranged. *Duration:* 1-8 weeks. *Qualifications:* Professional qualifications. English (possibly Arabic). *Deadline for application:* —. *Fees:* SwF 2,000-SwF 5,600.

*Organizer:* P & R Techconsult Ltd.  
Association of Advanced Technical Services GmbH  
P.O. Box 3885  
Nicosia, Cyprus

### **Design of spare parts for machinery repair and maintenance**

*Short description:* Lectures, practical exercise, case-studies and actual work on broken-down equipment to be rehabilitated; identification, design, development and supervision of manufacturing of the missing/faulty parts of the equipment to be rehabilitated. *Commencing date:* 24 September 1990, 8 January 1991. *Duration:* 3 months. *Qualifications:* English, French. *Deadline for application:* 31 July, 31 October 1990. *Fees:* \$US 3,000.

*Organizer:* The African Centre for Engineering Design and  
Manufacturing (ARCEDEM)  
PMB 19, U.I. Post Office  
Ibadan, Nigeria

### **Bio-medical equipment maintenance**

*Short description:* Fundamentals of bio-medical equipment; human anatomy and physiology; basic electronics; digital techniques; bio-medical instrumentation; microprocessors and interfacing techniques; advanced bio-medical equipment; fault diagnosis techniques. *Commencing date:* January 1990, 1991. *Duration:* 1 year. *Qualifications:* Higher secondary school certificate or "A" level. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

### **Computer maintenance**

*Short description:* Digital techniques; microprocessor; microprocessor interfacing operating systems, compilers and assembly and language computer peripherals; computer fault diagnosis and servicing techniques. *Commencing date:* January 1990, 1991. *Duration:* 1 year. *Qualifications:* Higher secondary school certificate or "A" level. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

### **Repair and maintenance of coke oven and by-product plant**

*Short description:* Planned preventive maintenance and repair technology; mechanical equipment of coal handling unit, its design, construction; principle of operation and maintenance; coke oven plant production equipment. *Commencing date:* First Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasim  
Karachi-50, Pakistan

### **Repair and maintenance of sintering plant**

*Short description:* Preventive maintenance of coke oven, by-products belt and chain conveyors, sintering machine, overhead, cranes; cost and inventory control. *Commencing date:* First Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasim  
Karachi-50, Pakistan

### **Repair and maintenance of thermal power plant (I)**

*Short description:* Safety engineering; thermal power plant and oxygen plant and repair technology; steam generation plant; maintenance and repair technology of boilers;

construction, operation. *Commencing date:* First Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasim  
Karachi-50, Pakistan

#### **Repair and maintenance of thermal power plant (II)**

*Short description:* Thermal power plant; constructional features of generators, electrolyser; boilers used in thermal power plant and their control water treatment and chemical treatment plants. *Commencing date:* First Sunday of January, March, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 January, 1 July, 1 November. *Fees:* \$US 2,850.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Quasim  
Karachi-50, Pakistan

#### **1.6 VCR, TV and radio maintenance**

*Short description:* Principles and circuits used in TV and radio systems; maintenance of VCR systems; black and white and colour TV systems; radio and tape recorder system. *Commencing date:* January 1990, 1991. *Duration:* 1 year. *Qualifications:* Higher secondary certificate or 'A' level. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 150 per month.

*Organizer:* Petroman  
Enar Petrotech Services Pvt. Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off. Shaheed-e-Millat Road  
Karachi, Pakistan

#### **Maintenance**

*Short description:* Post-graduate courses for engineers on maintenance techniques and trends. *Commencing date:* Beginning of October. *Duration:* 1 year. *Qualifications:* Portuguese. *Deadline for application:* 15 September. *Fees:* Esc 150,000.

*Organizer:* IST  
Rua Tomás Figueiredo 16A  
1500 Lisbon, Portugal

#### **Electrical maintenance of cold rolling mills and finishing lines**

*Short description:* Safety rules for electrical maintenance of cold rolling mills; AC motors; DC motors; DC generators; power converters, controllers; five-stand tandem mill; batch annealing line; temper mills; tinning line; cold rolled shear lines; hot rolled shear lines; hot rolled slitting line. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Plant  
Eregli, Turkey

### **Electrical maintenance of hot rolling mills**

*Short description:* Safety rules for electrical maintenance of hot rolling mills; electrical equipment; basic motor types; motor bearings; lubrications; foundations, grouting and alignment; emergency care of damaged motors; planning, records and spare and renewal parts; current collecting devices; general bearing care; preventive maintenance test equipment. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Plant  
Eregli, Turkey

### **Maintenance of basic oxygen furnaces and continuous slab caster**

*Short description:* Safety rules for maintenance of basic oxygen furnaces and continuous slab caster; continuous slab caster; cooling water circuits; central hydraulic system; lubrication and central grease system; electrical maintenance; maintenance organization; spare part obtaining system; basic oxygen furnaces maintenance; furnace campaign maintenance; the start-up of the casters; steel surface cracks-measures; safety precautions; ingot teeming; ingot teeming theory and practices; ingot defects. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Plant  
Eregli, Turkey

### **Mechanical maintenance of cold rolling mill and finishing lines**

*Short description:* Safety rules for mechanical maintenance of cold rolling mills and finishing lines; maintenance of lubrications systems; maintenance of hydraulic systems; maintenance of acid pickling lines; maintenance of tandem mill; maintenance of alkali and annealing lines; maintenance of cold and hot shear lines; maintenance of electrolytic tinning line; maintenance of temper mills. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Plant  
Eregli, Turkey

### **Mechanical maintenance of hot rolling mills**

*Short description:* Safety rules for mechanical maintenance of hot rolling mills; the spare-part and material needs; maintenance of machinery in general; maintenance of downcomer machinery; maintenance of mill machinery; maintenance of transfer tables and auxiliaries; maintenance and operation of hydraulic and pneumatic equipment; maintenance of slab furnace; fault detection and repair; evaluation of maintenance work. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Plant  
Eregli, Turkey



## **Management and industrial administration/Gestion et administration industrielle/ Gestión y administración industrial**

### **Postgraduate management diploma programme**

*Short description:* The objective of the programme is to provide the participants with a sound framework of concepts and analytical methods and techniques to enable them to comprehend and assimilate on-the-job training and equip them to execute effectively the usual duties of assistant general manager or functional manager. *Commencing date:* September 1990. *Duration:* 10 months. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 31 May 1990. *Fees:* £C 900.

*Organizer:* The Mediterranean Institute of Management (MIM)  
P.O. Box 536  
Nicosia, Cyprus

### **Administrative management**

*Short description:* Knowledge, attitudes and skills required to ensure efficiency at workplace. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* Managers with at least 3 years of experience in the middle management positions. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

### **Chief executive programme**

*Short description:* Analyse the environment in which chief executives operate and develop an understanding of the interaction between that environment and their organizations; provide chief executives with the opportunity to compare their own experience and approaches with those of other people working in other enterprises; enable chief executives to develop the capability to run efficient, effective and profitable enterprises. *Commencing date:* May. *Duration:* 3 weeks. *Qualifications:* Chief executives of both private and public sector organizations. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

### **Diploma in public administration**

*Short description:* The objective of the course is to prepare trainee officers to fulfil their administrative functions and to provide a firm foundation for mature personal development for broader responsibilities in the future. *Commencing date:* January/ March. *Duration:* 6 months. *Qualifications:* Civil service personnel; candidates should have the Institute's Certificate in Public Administration. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

### **Interpersonal skills**

*Short description:* The course is designed to make senior managers aware of their deficiencies in interpersonal relations and to offer participants opportunities to

improve their own interpersonal skills. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* Senior managers, heads of departments, personnel managers. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Personnel and supervisory management**

*Short description:* Modern concepts, policies and practices of human resources management for senior employees in organizations with responsibility for staff affairs. *Commencing date:* January/March. *Duration:* 5 weeks. *Qualifications:* Practical, managerial or administrative experience for managers, personnel officers and senior executives; between 35 and 50 years of age. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Public administration**

*Short description:* The objective of the course is to improve the efficiency of the officers of different organizations by deepening their insights into administrative concepts, problems and processes and by providing them with basic knowledge and skills of management. *Commencing date:* October, December. *Duration:* 11 weeks. *Qualifications:* Civil service personnel, middle-level administrative personnel in public corporations and private sector organizations and senior officers in the armed forces. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Senior management course**

*Short description:* The objective of the course is to enable participants to: (a) develop up-to-date management techniques and skills, their application and limitations; (b) appreciate the interrelationships among different sectors of the economy, i.e. between public administration and business management in pursuit of overall national aspirations. *Commencing date:* January/March. *Duration:* 10 weeks. *Qualifications:* Administrators and managers holding positions of some authority in the public or private sector; between 32 and 45 years of age. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 35 per day.

*Organizer:* Gimpa  
P.O. Box 50  
Achimota, Ghana

#### **Advanced management**

*Short description:* The course is designed to meet the needs of senior management educators and trainers responsible for human-resource-development activities. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Top and

senior management educators and trainers. *Deadline for application:* 2 months before commencing date. *Fees:* N 2,585.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

#### **Management consultancy**

*Short description:* Essential principles of management consultancy; upgrading skills in areas of production, finance, personnel and marketing; scientific diagnosis of managerial problems and solutions. *Commencing date:* August 1990. *Duration:* 6 weeks. *Qualifications:* Senior and middle managers; practising and aspiring consultants with a master's degree. *Deadline for application:* April 1990. *Fees:* N 2,100.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

#### **Plant training of engineers in chemical, electrical, mechanical and instrument disciplines**

*Short description:* This course is for middle- and lower-level executives. Training is conducted at one of the large nitrogenous or phosphatic fertilizer plants of the National Fertilizer Corporation. The basic aim is to improve managerial skills of executives in order to manage capital and human resources more efficiently. Class-room training includes lectures and discussions on particular processes while on-the-job training is carried out at plant where trainees are actively involved and share experience of their counterparts. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 500 per month (including board and lodging).

*Organizer:* National Fertilizer Corporation of Pakistan (Pvt.) Ltd.  
Alfalah Building  
Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

#### **Entrepreneur**

*Short description:* Postgraduate course mainly for engineers giving a global view of the enterprise and its related aspects (management, finances, personnel, law). *Commencing date:* Beginning of October. *Duration:* 1 year. *Qualifications:* Portuguese. *Deadline for application:* 15 September. *Fees:* Esc 150,000.

*Organizer:* IST/FCT/UNL  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

#### **Management for junior executives**

*Short description:* Environment analysis and management impact; marketing management; finance; technology and logistics; human resources management; business game. *Commencing date:* February/April, October/December 1990. *Duration:* 20 days. *Qualifications:* Portuguese. *Deadline for application:* January, September 1990. *Fees:* —.

*Organizer:* CIFAG  
Avenida Júlio Dinis 11  
1000 Lisbon, Portugal

## Management for senior executives

*Short description:* Strategic management; marketing and strategy; strategic management of human resources; strategic management of technology; strategy, finance and value creation. *Commencing date:* October/November 1990. *Duration:* 20 days. *Qualifications:* Portuguese. *Deadline for application:* September 1990. *Fees:* —.

*Organizer:* CIFAG  
Avenida Júlio Dinis 11  
1000 Lisbon, Portugal

## Managing human resources

*Short description:* Job description and analysis; recruitment, selection and placement; new forms of organization; training; diagnosis of needs, planning and evaluation; technology evolution and qualifications of local human resources; negotiation and conflicts management; strategic management of human resources. *Commencing date:* February/May 1990. *Duration:* 15 days. *Qualifications:* Portuguese. *Deadline for application:* January 1990. *Fees:* —.

*Organizer:* CIFAG  
Avenida Júlio Dinis 11  
1000 Lisbon, Portugal

## Modern methods and techniques of management of industrial and agro-industrial enterprises

*Short description:* Diagnosis/analysis: a tool for improving enterprise organization and management; work and production organization and management; informatics for managers; marketing methods and techniques; psycho-sociology and ergonomics for managers; organization and management of human resources; economic/financial analysis for managers. *Commencing date:* March, May 1990. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English or French. *Deadline for application:* 1 month before commencing date. *Fees:* SUS 540 per week (including accommodation and meals).

*Organizer:* International Centre for Management Development (CEPECA)  
Otopeni Soseana Odâi no. 20  
Bucharest, Romania

## General management

*Short description:* Modern management techniques; identification and solution of managerial problems. *Commencing date:* 27 March. *Duration:* 4 months. *Qualification:* English. *Deadline for application:* 16 March. *Fees:* SLRs 4,500.

*Organizer:* National Institute of Business Management  
120/5 Wijerama Mawatha  
Colombo 7, Sri Lanka

## Industrial management

*Short description:* The objective of the course is to provide participants with useful techniques of industrial engineering and with knowledge of scientific management concepts. *Commencing date:* 7 June. *Duration:* 4 months. *Qualifications:* English. *Deadline for application:* 31 May. *Fees:* SLRs 4,500.

*Organizer:* National Institute of Business Management  
120/5 Wijerama Mawatha  
Colombo 7, Sri Lanka

### **Postgraduate diploma course in industrial engineering**

*Short description:* To provide participants with up-to-date knowledge of productivity techniques, systems, industrial engineering and management disciplines so as to fully equip them to take up assignments as industrial engineers, systems managers, productivity advisers, managers of management services or training officers. *Commencing date:* 13 May. *Duration:* 1 year. *Qualifications:* English. *Deadline for application:* 5 May. *Fees:* SLRs 8,500.

*Organizer:* National Institute of Business Management  
120/5 Wijerama Mawatha  
Colombo 7, Sri Lanka

### **PCAD-client joint programme**

*Short description:* The programme is conducted co-operatively with clients. Administration and facilities are provided by PCAD; the trainers are PCAD personnel and associated experts are provided by the client. PCAD normally conducts this type of programme with international public- or private-sector organizations. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 2,700.

*Organizer:* ATI/RCC  
P.O. Box 2754  
Bangkok 10501, Thailand

### **Production management**

*Short description:* Production planning and control, recording techniques, plant location and layout, material handling, inventory control, quality control, maintenance. *Commencing date:* 26 November 1990. *Duration:* 4 weeks. *Qualifications:* Candidates should be nominated by their Governments and be either a current or a potential industrial extension officer possessing a degree in business administration or its equivalent and be familiar with basic quantitative methods and analysis. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; free for government nominees.

*Organizer:* Thai Aid Sub-Division  
Department of Technical and Economic Cooperation (DTEC)  
962 Krung Kasem Road  
Bangkok 10100, Thailand

*Executing agency:*  
The SITE Project  
Research Institute for Management Science (RVB)  
P.O. Box 143  
2600 Delft, Netherlands  
*and*  
Department of Industrial Promotion  
Ministry of Industry  
Rama 6 Road  
Bangkok 10400, Thailand

### **Technology orientation for development managers**

*Short description:* Technology forecasting and impact assessment; appropriate technology: water supply and sanitation, rural road construction and maintenance, rural energy technologies, low-cost housing and construction, farming technology and its

transfer; communication and management skills; study visits and field trips.  
*Commencing date:* October 1990. *Duration:* 3 weeks. *Qualifications:* English.  
*Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,000.

*Organizer:* CEC/AIT  
P.O. Box 2754  
Bangkok, Thailand

### **El desarrollo de la capacidad para dirigir**

*Breve descripción:* Presentar un programa sobre técnicas fundamentales de la capacidad para dirigir, especialmente preparado para el directivo, que trabaja en el comercio, la industria, la banca y empresas estatales o en cualquier otra actividad formalmente organizada, adiestrando a los gerentes con técnicas que aumentarán su capacidad individual y mostrando cómo emplearlas en el desarrollo diario de sus tareas. *Fecha de iniciación:* Para ser acordado. *Duración:* 27 horas. *Calificaciones:* Gerentes y jefes de departamento. Español. *Fecha límite de inscripción:* Diciembre 1989. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Centro Nacional de Tecnología y Productividad Industrial  
Sarandi 690 D 2.º entpiso  
Montevideo, Uruguay

### **Master of Business Administration course in public enterprise management in developing countries**

*Short description:* Analysis of socio-economic environment and relations between Governments and public enterprises of developing countries; organizational structures; planning and control; financial management; marketing management; technology management; public investment analysis; project management; human resources management. *Commencing date:* September 1990. *Duration:* 1 year. *Qualifications:* Degree in business administration, economics, law or engineering; 3-5 years of experience. English. *Deadline for application:* May 1990. *Fees:* \$US 10,000.

*Organizer:* International Centre for Public Enterprises in Developing Countries  
(ICPE)  
P.O. Box 92  
Titova 104  
61109 Ljubljana, Yugoslavia

### **Marketing and export promotion/Marketing et promotion des exportations/ Comercialización y promoción de las exportaciones**

#### **Export marketing**

*Short description:* International marketing management; international economic systems; export and import procedures and documentation; India's foreign trade; export marketing research; marketing logistics; costing and pricing for export. *Commencing date:* August/November 1990, 1991. *Duration:* 4 months. *Qualifications:* Executives and officers dealing with export promotion in various organizations. English. *Deadline for application:* Mid-January. *Fees:* Rs 2,200.

*Organizer:* Indian Institute of Foreign Trade  
B-21, Mehrauli Institutional Area  
New Delhi-16, India

### **Marketing management**

*Short description:* Decision-making in marketing; financial tools for the marketing manager; marketing management system; formulation of strategy in marketing; marketing-mix; marketing planning and control; organizing; marketing audit. *Commencing date:* February/May 1990. *Duration:* 16 days. *Qualifications:* French and Portuguese. *Deadline for application:* January 1990. *Fees:* —.

*Organizer:* CIFAG  
Avenida Júlio Dinis 11  
1000 Lisbon, Portugal

### **Marketing and financial management for industrial extension officer**

*Short description:* The consumer and the market; marketing research and information; product, pricing, promotion, distribution, extension and service decisions; industrial marketing; exploring marketing opportunities; work visit for financial management; financial analysis; managerial and cost accounting; planning and control and working capital management; capital budgeting and investment selection; appraisal and financial consultancy. *Commencing date:* 18 June 1990. *Duration:* 8 weeks. *Qualifications:* Degree in business administration or equivalent; familiar with basic quantitative methods and analysis. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; free for government nominees.

*Organizer:* Thai Aid Sub-Division  
Department of Technical and Economic Co-operation (DTEC)  
962 Krung Kasem Road  
Bangkok 10100, Thailand  
*Executing agency:*  
The SITE Project  
Research Institute for Management Science (RVB)  
P.O. Box 143  
2600 Delft, Netherlands  
*and*  
Department of Industrial Promotion  
Ministry of Industry  
Rama 6 Road  
Bangkok 10400, Thailand

### **Marketing international**

*Brève description :* Lois du marché international; techniques afférentes aux opérations d'importation et d'exportation; techniques de pénétration dans les marchés; techniques de conclusion des marchés. *Début du cours :* Mai, juin ou août. *Durée :* 1 mois. *Qualifications :* Anglais, français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
Tunis 1002, Tunisie

### **Quality control and standardization/Contrôle de la qualité et normalisation/ Control de calidad y normalización**

#### **Control de calidad de materias primas y productos terminados de caucho**

*Breve descripción:* Prácticas de laboratorio sobre ensayos físicos y químicos de productos de caucho; utilización de técnicas holográficas para control de

procesabilidad con reómetro capilar. *Fecha de iniciación:* Para ser acordado. *Duración:* 1 mes. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 400.

*Organizador:* Centro de Investigación Tecnológica de la Industria del Caucho (CITIC)  
Avenida Gral. Paz, entre Albarelos y Constituyentes  
San Martín  
Buenos Aires, Argentina

### Control de la calidad de la producción industrial

*Breve descripción:* Dominar conceptos básicos del control de la calidad de la producción; gráfico de control e inspección de aceptación valorando su aplicabilidad en la industria azucarera; métodos de ensayos fundamentales utilizados en la exportación y certificación de la calidad del azúcar. *Fecha de iniciación:* Octubre. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 20 julio. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

### Legal metrology

*Short description:* Basic principles of metrology; organization, structure and performance of Legal Metrology Service; measurement standards; measuring instruments; measurements of mechanical, thermodynamical, electrical and physico-chemical quantities. *Commencing date:* October 1990. *Duration:* 1 month. *Qualifications:* Technical officials of Legal Metrology Services in developing countries. English or Spanish. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* State Committee for Standardization (NC)  
Egido 610 entre Gloria y Apodaca  
La Habana, Cuba

### Standardization

*Short description:* The implementation of the national system of standardization, metrology and quality control; visits to factories and laboratories. *Commencing date:* 4 June 1990. *Duration:* 15 days. *Qualifications:* Technical officials of National Standards Institutions in developing countries. English or Spanish. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* State Committee for Standardization (NC)  
Egido 610 entre Gloria y Apodaca  
La Habana, Cuba

### Técnicas de análisis de azúcar crudo, blanco y refinado

*Breve descripción:* Se estudiarán técnicas novedosas aplicadas en el control del proceso fabril así como la investigación. Se contemplarán los aspectos relacionados con el análisis instrumental, polarimetría, volumétrico y gravimétrico. *Fecha de iniciación:*



Enero. *Duración:* 3 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

**Organizador:** State Committee for Standardization (NC)  
Egido 610 entre Gloria y Apodaca  
La Habana, Cuba

### Quality control

*Short description:* Company standardization and precision measurements; basic concepts of quality control; quality assurance and total quality control; quality control tools; process capability and control and the economics of quality. *Commencing date:* 23 October. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 1 September. *Fees:* \$US 2,000.

**Organizer:** Kenya Bureau of Standards  
P.O. Box 54974  
Nairobi, Kenya

**Venue:** Mombasa, Kenya

### Standardization

*Short description:* The development of company standards; identification of standards-related problems at company level and their solutions through project work. *Commencing date:* 24 April. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 1 April. *Fees:* \$US 2,000.

**Organizer:** Kenya Bureau of Standards  
P.O. Box 54974  
Nairobi, Kenya

**Venue:** Mombasa, Kenya

### Quality

*Short description:* Postgraduate course for engineers aiming at a comprehensive formation in global quality. *Commencing date:* Beginning of October. *Duration:* 1 year. *Qualifications:* Portuguese. *Deadline for application:* 15 September. *Fees:* Esc 150,000.

**Organizer:** Instituto de Soldadura e Qualidade  
Universidade Nova de Lisboa  
Faculdade Ciências e Tecnologia Rua Tomas de Figueiredo 16A  
1500 Lisbon, Portugal

### Quality control for food industries

*Short description:* New course being developed. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* —.

**Organizer:** Continuing Education Center (CEC)/AIT  
P.O. Box 2754  
Bangkok, Thailand

### Metallurgical quality control

*Short description:* Concepts of specification standards and quality; metallurgical factors; steel production methods and furnaces; raw material specifiers; steel types.

*Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

#### **Measurement techniques in research and quality control**

*Short description:* Basic measurement theory; planning of experiments; application of various measurement systems; computer application in processing of measured data; statistical analysis; analysis of static and dynamic processes; strain gauges; module analysis; fatigue life evaluation; practical training with emphasis on industrial applications. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* —.

*Organizer:* Institute of Mechanization  
Faculty of Technical Sciences  
V. Vlahovića 3  
21000 Novi Sad, Yugoslavia

#### **Small-scale industries and entrepreneurship/Petites industries et entrepreneurs/ Pequeñas industrias y los empresarios**

##### **Small-industry management consultancy**

*Short description:* Problem solving in the functional areas of management; consultancy skills in the areas of small-industry management. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Management consultants from governmental or semi-governmental organizations. English. *Deadline for application:* 15 July. *Fees:* \$US 3,600, apart from allowances payable direct to scholars.

*Organizer:* National Institute of Small Industry Extension Training (NISJET)  
Yousufguda  
Hyderabad-500 045, India

##### **Small-industry promotion in developing countries**

*Short description:* India's achievements and experiences in planned development of village and small industries; implications of policies and major programmes that could make an impact on the development of small industries. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Personnel associated with policy formulation, promotion and development of village and small industries. English. *Deadline for application:* 15 July. *Fees:* \$US 3,600, apart from allowances payable direct to scholars.

*Organizer:* National Institute of Small Industry Extension Training (NISJET)  
Yousufguda  
Hyderabad-500 045, India

##### **Industrial automation and instrumentation for small and medium-size enterprises**

*Short description:* The course aims at enabling the participants to design, implement and maintain automation and instrumentation control systems, particularly pneumatics, electro-pneumatics, digital electronics, programmable logic controllers and process

controls. *Commencing date:* 12 September 1990. *Duration:* —. *Qualifications:* Engineers or industrial technicians or instructors of technical schools. English. *Deadline for application:* 15 June 1990. *Fees:* US\$ 3 400.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

#### **Project evaluation, appraisal and monitoring of small and medium-size enterprise projects**

*Short description:* The course is designed to provide technical staff/project officers with the necessary skills, techniques and measures for effective and efficient project appraisal and evaluation. *Commencing date:* 3 October 1990. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree or equivalent; development officer/consultant. English. *Deadline for application:* 15 June 1990. *Fees:* US\$ 2,800.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

#### **Small-industry information management**

*Short description:* The course is designed to enable participants to provide industrial information to entrepreneurs through proper management of information. *Commencing date:* 12 September 1990. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent; information officers/processors. English. *Deadline for application:* 15 June 1990. *Fees:* US\$ 3,400.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

#### **Informatics for management of small and medium-size enterprises**

*Short description:* Rational utilization of informatics in managing small and medium-size enterprises; methods of analysis and design of management information systems; selection of areas of informatics application in managing a modern enterprise; applications and case-studies based on examples from developing countries. *Commencing date:* June, October 1990. *Duration:* 4-10 weeks. *Qualifications:* Professional qualifications. English or French. *Deadline for application:* 1 month before commencing date. *Fees:* US\$ 540 per week (accommodation and meals included).

*Organizer:* International Centre for Management Development (CFPECA)  
Otopeni, Soseana Odâi 20  
Bucharest, Romania

#### **Small-business management**

*Short description:* Planning a new business venture; continuing and strengthening existing small-scale facilities; getting started in small business; feasibility analysis; market analysis; financial statement analysis; financial planning. *Commencing date:*

5 November 1990. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* At least 2 months before commencing date. *Fees:* SUS 1,600.

*Organizer:* Continuing Education Center (CEC)/AIT  
P.O. Box 2754  
Bangkok, Thailand

### **Trainer development/Formation de formateurs/ Perfeccionamiento de profesionales de capacitación**

#### **Asesor-formador de formadores de empresas**

*Breve descripción:* Capacitar al participante para impartir formación y orientar empresas, gremios o instituciones de formación profesional en aspectos tales como identificar necesidades y asesoramiento en formación profesional, y en la planeación, organización, ejecución y evaluación de programas de formación profesional. *Fecha de iniciación:* Febrero 1990. *Duración:* 4 meses. *Calificaciones:* Funcionario de instituciones de formación profesional o empresarial con formación técnica, pedagógica; experiencia en formación profesional. Español. *Fecha límite de inscripción:* Agosto. *Derechos de inscripción:* —.

*Organizador:* Cooperación Técnica Internacional SENA  
Apartado Aéreo 53329  
Bogotá, Colombia

#### **Especialización técnico-pedagógica de instructores en fabricación de muebles y manufacturas de madera**

*Breve descripción:* Formar al docente para aprender a enseñar utilizando el método de formación-producción y para planificar, orientar y evaluar las innovaciones tecnológicas en ebanistería, tapicería y pintura de productos de madera. *Fecha de iniciación:* Marzo 1990. *Duración:* 4 meses. *Calificaciones:* Ser instructor del área en la cual pretende adelantar su perfeccionamiento y tener preparación académica y experiencia en dicha área. Español. *Fecha límite de inscripción:* Octubre 1989. *Derechos de inscripción:* —.

*Organizador:* Cooperación Técnica Internacional SENA  
Apartado Aéreo 53329  
Bogotá, Colombia

#### **Audio-visual aids in training (Module I)**

*Short description:* Role of training aids in training; teaching techniques; selection of audio-visual aids; audio-visual communication; photographic techniques and processes; preparation of slides, film strips and transparencies; maintenance of conventional audio-visual equipment; selection and use of audio-visual hardware. *Commencing date:* 20 November 1989, 13 August 1990, 7 January 1991. *Duration:* 3 weeks. *Qualifications:* Junior training executives from industries and industrial training institutes or centres. English. *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500.

*Organizer:* Central Staff Training and Research Institute  
Calcutta, Dasnagar, Howrah-711 105, India  
*Contact address:*  
D.G.E. & T.  
Ministry of Labour  
Shram Shakti Bhavan, 2&4, Rafi Marg  
New Delhi-1, India

## **Audio-visual aids in training (Module II)**

*Short description:* Role of training aids in training; teaching techniques; selection of audio-visual aids; audio-visual communication; photographic techniques and processes; preparation of slides, film strips and transparencies; maintenance of conventional audio-visual equipment; selection and use of audio-visual hardware. *Commencing date:* 11 December 1989, 3 September 1990, 28 January 1991. *Duration:* 3 weeks. *Qualifications:* Training executives with proficiency in preparation and use of conventional audio-visual aids, preferably those who have completed module I. English. *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500.

*Organizer:* Central Staff Training and Research Institute  
Calcutta, Dasnagar, Howrah-711105, India

*Contact address:*

D.G.E. & T.  
Ministry of Labour  
Shram Shakti Bhavan, 2&4, Rafi Marg,  
New Delhi-1, India

## **Communication for development**

*Short description:* Basic skills in video production, audio-visual techniques, animation techniques of inexpensive reproduction, such as silk screen; communication methodology and practice: developing a design brief, creating aids relevant to specific subjects and regions ranging from low-cost reproduction techniques to the use of mass media. *Commencing date:* November 1990. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* January 1990. *Fees:* \$US 900.

*Organizer:* National Institute of Design  
Paldi  
Ahmedabad 380 007, India

## **Craft-instructor training**

*Short description:* Courses in the trades of fitter, turner, machinist, tool and die maker, welder (gas and electric), carpenter, electrician, mechanic (motor vehicle, general electronics, radio and TV). *Commencing date:* 1 August. *Duration:* 1 year. *Qualifications:* Secondary education; diploma in engineering or certificate in the trade; 1 year of experience. English. *Deadline for application:* 2nd week of June. *Fees:* Rs 500.

*Organizer:* Advanced Training Institute  
Sion Trombay Road  
Sion  
Bombay-400 022, India

## **Craft-instructor training**

*Short description:* Remedial training in trade practical and related instruction; main training in methodology. *Commencing date:* 1 August 1990. *Duration:* 1 year. *Qualifications:* Diploma in engineering or vocational trade certificate in the relevant trade; some experience. English. *Deadline for application:* 15 June 1990. *Fees:* Rs 30 per month.

*Organizer:* Central Training Institute  
Guindy, Madras-600032, India

### **Entrepreneurship for small-business trainers/promoters**

*Short description:* Entrepreneurship and entrepreneurial quality development; enterprise launching/resourcing; enterprise management; promoters role and functions.  
*Commencing date:* 7 January 1991. *Duration:* 8 weeks. *Qualifications:* English.  
*Deadline for application:* 7 December 1990. *Fees:* \$US 2,470.

*Organizer:* Niesbud  
NSIC-PDTC Campus  
Okhla Industrial Estate  
New Delhi-110 020, India

### **Performance and administrative management of industrial training institutes or centres**

*Short description:* Changing concept of management; human communication; motivational technique; grievance and grievance handling; problem solving and decision making; leadership and team building, performance appraisal and techniques for improving performance; changing concept of training; administration of industrial training institutes; financial management. *Commencing date:* 6 November 1989, 9 April, 8 October 1990. *Duration:* 3 weeks. *Qualifications:* Principals or vice-principals of training institutes. English. *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500.

*Organizer:* Central Staff Training and Research Institute  
Calcutta, Dasnagar, Howrah-711105, India  
*Contact address:*  
D.G.E. & T.  
Ministry of Labour  
Shram Shakti Bhavan, 284, Rafi Marg  
New Delhi-1, India

### **Product design**

*Short description:* The programme is tailored to the needs of design teachers and trainers for a developing economy. It covers: internationally accepted design principles; methodology of problem solving process; the process of identifying and analysing a problem of exploring alternatives and arriving at a synthesis relevant to a particular situation; ways and means of communicating the solutions to clients or students. *Commencing date:* July 1990. *Duration:* 1 year. *Qualifications:* At least 3 years of experience in teaching in design or design related disciplines. English. *Deadline for application:* March 1990. *Fees:* \$US 5,000 per year.

*Organizer:* National Institute of Design  
Paldi  
Ahmedabad 380 007, India

### **Promotion of self-employment**

*Short description:* Programmes and promotional techniques used for accelerating self-employment; skills in identifying beneficiaries, and avocations for self-employment; the Indian experience and that of other developing countries in this field. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Officials of development organizations concerned with formulation of policies and implementation of programmes for employment generation. English. *Deadline for application:* 15 July. *Fees:* \$US 2,540, apart from allowances payable direct to scholars.

*Organizer:* National Institute of Small Industry Extension Training (NISJET)  
Yousufguda  
Hyderabad-500 045, India

### Teaching and instructional skills

*Short description:* Concept of teaching and instruction; principles and methods of teaching and training; motivation in teaching and training; behavioural objectives; audio-visual aids; analysis of a lesson; testing and evaluation. *Commencing date:* 8 January, 7 May, 3 December 1990. *Duration:* 3 weeks. *Qualifications:* Officers engaged in teaching and instruction at training institutes or centres. English. *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500.

*Organizer:* Central Staff Training and Research Institute  
Calcutta, Dasnagar, Howrah-711 105, India

*Contact address:*

D.G.E. & T.  
Ministry of Labour  
Shram Shakti Bhavan, 284, Rafi Marg  
New Delhi-1, India

### Training methods and skills

*Short description:* The training process; choice and use of training methods and materials; planning curriculum; personal and role effectiveness of trainers. *Commencing date:* October. *Duration:* 9 weeks. *Qualifications:* Trainers in management and development organizations, industrial establishments, consultancy firms and educational institutes. English. *Deadline for application:* 15 July. *Fees:* SUS 2,810, apart from allowances payable direct to scholars.

*Organizer:* National Institute of Small Industry Extension Training (NISIET)  
Yousufguda  
Hyderabad-500 045, India

### Training of trainers

*Short description:* Knowledge and skills for trainers; training in practice. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* College degree; 3 years of experience; employed in a training department. Arabic. *Deadline for application:* 3 months before commencing date. *Fees:* SUS 500 per week.

*Organizer:* National Centre for Planning and Management Development  
P.O. Box 2 040 (Alwyiah)  
Baghdad, Iraq

### Trainers' development

*Short description:* The objective of the course is to enable participants to determine trainers' major roles, identify training needs at individual/organizational level, develop training objectives, use a variety of training methods, design curricula, identify problems of adult learning, conduct such a course, evaluate training effectiveness. *Commencing date:* April 1990. *Duration:* 5 weeks. *Qualifications:* Executives responsible for management and supervisory training in public and private organizations, management educators and trainers in institutions of higher learning. *Deadline for application:* 28 February 1990. *Fees:* N 1,960.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **Training of trainers**

*Short description:* A 2-part seminar held in Nigeria and France, which covers identification of training needs and curriculum development; training techniques; knowledge and practice of group animation. Industrial visits; individual projects; promotion of cross-cultural management. *Commencing date:* May/June 1990. *Duration:* 5 weeks. *Qualifications:* Management educators and trainers in company training centres, business schools, banks, universities, institutes and colleges of higher education. *Deadline for application:* 31 March 1990. *Fees:* N 3,000.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **Training of supervisors**

*Short description:* This course is based upon a series of learning elements keyed to identified tasks, which can be arranged in a suitable sequence to form learning units to meet the training needs of an individual or a group of supervisors. *Commencing date:* 1st week of September 1990. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 4th week of July 1990. *Fees:* \$US 3,000.

*Organizer:* Pakistan Steel  
In-plant Training Department  
Bin Qasim  
Karachi, Pakistan

### **Entrepreneurial competence development for trainers**

*Short description:* The objective of the course is to upgrade the trainers' skills to design and implement training programmes aimed at developing entrepreneurial competencies. *Commencing date:* 17 April 1990. *Duration:* 4 weeks. *Qualifications:* Bachelor's degree or equivalent; employed as development officers or trainers. English. *Deadline for application:* 15 February 1990. *Fees:* \$US 3,100.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City 1101, Philippines

### **Entrepreneurship development for trainers**

*Short description:* The objective of the course is to enable the participants to design, implement, monitor and control entrepreneurship development programmes. *Commencing date:* 4 September 1990. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree or equivalent; trainers or development officers. English. *Deadline for application:* 15 June 1990. *Fees:* \$US 4,100.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City 1101, Philippines



## **Occupational safety/Prévention des accidents du travail/Seguridad profesional**

### **Safety**

*Short description:* Postgraduate course for engineers aiming at a comprehensive formation in safety (materials, personnel and environment). *Commencing date:* Beginning of October. *Duration:* 1 year. *Qualifications:* French, Portuguese, Spanish. *Deadline for application:* 15 September. *Fees:* Esc 150,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Direcção Geral de Higiene e Segurança do Trabalho  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

### **Industrial safety**

*Short description:* Plant safety; human relations; industrial psychology; materials handling; safety organization; safety education on training; fire prevention and protection. *Commencing date:* 2nd week of September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* End of May. *Fees:* —.

*Organizer:* Erdemir  
Eregli Iron and Steel Company  
Eregli, Turkey

### Chapter III. Other training opportunities and short courses

#### Chapitre III. Autres possibilités de formation et sessions d'étude de brève durée

#### Capítulo III. Otras oportunidades de capacitación y cursos cortos

##### A. DEVELOPED COUNTRIES AND AREAS/ PAYS ET ZONES DÉVELOPPÉS/ PAÍSES Y ZONAS DESARROLLADOS

###### Iron and steel industry

*Short description:* Material management; raw materials; sourcing and purchasing of raw material; energy. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* S 26,500 (including lunch and in-plant transport).

*Organizer:* Voest-Alpine Industrial Services Corp Ltd.  
P.O. Box 2  
Krempfstrasse 5  
4020 Linz, Austria

###### Commerce et marketing

*Brève description:* Communications publiques; distribution des produits; technologie des produits; recherche marketing de la nouveauté; la recherche du produit; les études de marché. *Début du cours:* Toute l'année sauf en juillet et août. *Durée:* —. *Qualifications:* Qualifications professionnelles. Français. *Date limite d'inscription:* —. *Droits d'inscription:* A arranger.

*Organisateur:* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

###### Conception et fabrication assistée par ordinateur de pièces mécaniques, etc.

*Brève description:* Conception et fabrication assistée par ordinateur de pièces mécaniques, d'ouvrage; d'art, etc. *Début du cours:* Toute l'année sauf en juillet et août. *Durée:* —. *Qualifications:* Qualifications professionnelles. Français. *Date limite d'inscription:* —. *Droits d'inscription:* A arranger.

*Organisateur:* Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

###### Formation des contremaîtres et des ingénieurs à l'élaboration des modes opératoires

*Brève description:* Connaissances théoriques et techniques nécessaires à l'élaboration des modes opératoires, ces derniers étant non seulement la clé de l'utilisation correcte

de l'équipement et de sa longévité mais également l'outil de base de la formation des contremaîtres et ingénieurs. *Début du cours* : Toute l'année sauf de juillet au 15 septembre. *Durée* : —. *Qualifications* : Ingénieur ou contremaître possédant une expérience de plusieurs années dans sa spécialisation, son secteur d'activité ou sa profession. Français, anglais. *Date limite d'inscription* : 3 mois avant la date de début du cours. *Droits d'inscription* : A arranger.

*Organisateur* : International Executives Benelux SA (INTEX)  
5, rue de la Science  
1040 Bruxelles, Belgique

### Formation d'ingénieurs

*Brève description* : Cet enseignement est conçu dans une vue très large dépassant le sens restreint de "formation" classique. Il vise plus spécialement le transfert de méthodes, le transfert de technologies et aussi de know-how. *Début du cours* : Toute l'année sauf de juillet au 15 septembre. *Durée* : —. *Qualifications* : Ingénieurs possédant une certaine expérience dans leur spécialisation. Français. *Date limite d'inscription* : 3 mois avant la date de début du cours. *Droits d'inscription* : A arranger.

*Organisateur* : International Executives Benelux SA (INTEX)  
5, rue de la Science  
1040 Bruxelles, Belgique

### Gestion de production

*Brève description* : Statistiques de ventes et de production; prévision de production; planning et contrôle de la production; contrôle des stocks; stockage et manutention; productivité; contrôle budgétaire; prix de revient industriel; études de marchés. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Helping SA  
38, avenue Montjoie  
1180 Bruxelles, Belgique

### Mécanique générale

*Brève description* : Large éventail de sujets dans le domaine de la mécanique générale. *Début du cours* : A arranger. *Durée* : 3 mois en moyenne. *Qualifications* : Qualifications professionnelles. Anglais, français ou néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Spoorvegmateriel en Metalconstructies  
Kaartdijkstraat 5  
8200 Bruges  
Belgique

### Sanitaire

*Brève description* : Assemblage et façonnage des tuyauteries; alimentation en eau potable; évacuation des eaux usées; ventilations; installations des appareils sanitaires; chauffage de l'eau sanitaire; couverture en zinc; groupes hydrophores. *Début du cours* : Toute l'année sauf en juillet et août. *Durée* : —. *Qualifications* :

Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre de coopération et de recherche pédagogique et technique (CREPT)  
Université du travail Paul Pastur  
1, boulevard Roullier  
6000 Charleroi, Belgique

#### **Advanced production technologies in mechanical engineering**

*Short description*: Flexible automation in manufacturing; managerial approaches to advanced technologies; physical planning and design of flexible manufacturing systems; modern manufacturing technologies and organization; education and training for professional personnel; new approaches to flexible maintenance in engineering. *Commencing date*: September 1990, 1991. *Duration*: 2 weeks. *Qualifications*: Managers, engineers; master's degree, preferably in mechanical, electrical engineering, production economics; at least 5 years of experience. English. *Deadline for application*: 15 July 1990. *Fees*: —.

*Organizer*: UNIDO-Czechoslovakia Joint Programme for Co-operation  
Metallic Industries  
Inorga Institute  
Letenská 17  
118 06 Prague 1, Czechoslovakia

#### **Environmental engineering and ecological planning**

*Short description*: Environmental engineering; utilization of various types of non-metallic sorbents for environmental protection (waste-water treatment, recultivation, soil rehabilitation); role of non-metallic raw materials in environmental protection. *Commencing date*: June 1991. *Duration*: 1 week. *Qualifications*: University degree or equivalent. English. *Deadline for application*: 29 February 1991. *Fees*: —.

*Organizer*: UNIDO-Czechoslovakia Joint Programme for Co-operation  
Non-metallic Industries  
Pražská 12  
305 11 Pilsen, Czechoslovakia

#### **Industrial applications of personal computers**

*Short description*: Personal computer hardware and software; industrial applications in management; production control; maintenance and repair; computer aided design and manufacturing; demonstration; practical training; industrial visits. *Commencing date*: April 1990. *Duration*: 2 weeks. *Qualifications*: Managers, engineers; degree, preferably in economics, management, electronics; at least 3 years of experience. English. *Deadline for application*: 15 February 1990. *Fees*: —.

*Organizer*: UNIDO-Czechoslovakia Joint Programme for Co-operation  
Metallic Industries  
Inorga Institute  
Letenská 17  
118 06 Prague 1, Czechoslovakia

#### **Non-metallic industrial minerals**

*Short description*: Non-metallic minerals and rocks and national economies; characterization and research in non-metallic mineral sector; exploration of indigenous

minerals and rocks; upgrading technologies; refining to process advanced materials; exploitation of industrial minerals. *Commencing date:* October 1990. *Duration:* 2 weeks. *Qualifications:* University degree or equivalent. English. *Deadline for application:* 30 June 1990. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme for Co-operation  
Non-metallic Industries  
Pražská 12  
305 11 Pilsen, Czechoslovakia

#### **Promotion and development of new materials industries**

*Short description:* Identification of areas for the utilization of non-metallic raw materials for the production of advanced materials for local and foreign markets; processing and refining of minerals and rocks to satisfy the requirements of new technologies. *Commencing date:* May 1990. *Duration:* 1 week. *Qualifications:* University degree or equivalent. English. *Deadline for application:* 31 January 1990. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme for Co-operation  
Non-metallic Industries  
Pražská 12  
305 11 Pilsen, Czechoslovakia

#### **Recent technologies for beneficiation of ferrous and non-ferrous ores**

*Short description:* Ore beneficiation; the improvement of existing production facilities; economics of production; the management of technological development in metallurgy and engineering; demonstrations, industrial visits. *Commencing date:* February 1990. *Duration:* 2 weeks. *Qualifications:* Managers, engineers; master's degree, preferably in metallurgy, engineering, production economics; at least 5 years of experience. English. *Deadline for application:* 15 December 1989. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme for Co-operation  
Metallic Industries  
Inorga Institute  
Letenská 17  
118 06 Prague 1, Czechoslovakia

#### **UNEP/UNESCO postgraduate course in ecological planning**

*Short description:* Environmental engineering; utilization of non-metallic sorbents for waste-water treatment; recultivation and soil rehabilitation by using natural sorbents. *Commencing date:* June 1990. *Duration:* 1 week. *Qualifications:* University degree or equivalent. English. *Deadline for application:* 28 February 1990. *Fees:* —.

*Organizer:* UNIDO-Czechoslovakia Joint Programme for Co-operation  
Non-metallic Industries  
Pražská 12  
305 11 Pilsen, Czechoslovakia

#### **Maintenance in cement industry**

*Short description:* Maintenance strategies; systems and organization; preventive/predictive measures; fault/wear detection and maintenance execution. *Commencing date:* Late August. *Duration:* 2 weeks. *Qualifications:* Technical, managerial and

supervisory personnel in cement industry; at least 1 year of experience in the industry. *Deadline for application*: 15 July. *Fees*: DKr 40,000.

*Organizer*: P. L. Smidth & Co.,  
A/S 77 Vigerslev Alle  
2500 Valby, Copenhagen, Denmark

#### **Analyse de la valeur**

*Brève description* : Cours de courte durée sur : estimation des coûts industriels; les outils de l'analyse de la valeur; conception des produits; méthodes de l'analyse de la valeur; analyse de la valeur administrative; créativité dans l'analyse de la valeur. *Début du cours* : Mai, octobre 1990, 1991. *Durée* : 2-4 jours. *Qualifications* : Ingénieurs et cadres ayant déjà pratiqué l'analyse de la valeur et désirant acquérir ou parfaire les techniques d'animation d'un groupe analyse de la valeur. Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : —.

*Organisateur* : AFAV-AFNOR  
Tour Europe, Cedex 07  
92080 Paris La Défense, France

#### **Analyse de la valeur**

*Brève description* : Cours de courte durée sur : créativité : richesse de l'analyse de la valeur; efficacité des travaux administratifs. *Début du cours* : Février, juin, octobre, novembre 1990, 1991. *Durée* : 3 jours. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : —.

*Organisateur* : AFNOR-AFAV  
70, rue Maurice Flandin  
69003 Lyon, France

#### **Automation et régulation**

*Brève description* : Stages de courte durée sur : analyse et mesures industrielles; instrumentation; régulation; robotique; automatismes; microprocesseurs; automates programmables; langages; technique de la régulation. *Début du cours* : A arranger. *Durée* : 3 jours-2 semaines. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 4 900-FF 11 000.

*Organisateur* : Institut de régulation et automation  
Chemin des Moines  
13644 Arles, France

#### **Contrôle industriel et qualité, normalisation**

*Brève description* : Cours sur : l'analyse de la valeur; la normalisation d'entreprise; comment améliorer l'efficacité de la maintenance; la gestion des rechanges; le contrat de maintenance; concepts de qualité; la qualité à la production; la qualité aux études et au marketing; la micro-informatique au service du contrôle qualité; la qualité du logiciel; comprendre la normalisation OSI; méthodes pour établir la documentation technique d'exploitation et de maintenance, comment maîtriser la disponibilité des équipements dès la conception; la conception pour un coût objectif — CCO; apprendre à maîtriser les coûts de la qualité; manuel qualité et procédures. *Début du cours* : Toute l'année. *Durée* : 3-5 jours. *Qualifications* :

Qualifications professionnelles. Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : A arranger.

*Organisateur* : Association française de normalisation (AFNOR)  
Tour Europe, Cedex 7  
92080 Paris La Défense, France  
*en collaboration avec*  
ACANOR, QUALDEV et UNM

#### Gestion des entreprises

*Brève description* : Stages de courte durée sur : la codification dans l'entreprise; comment améliorer l'efficacité de la maintenance; comment maîtriser la disponibilité des équipements de la conception; comment optimiser sa maintenance avec l'outil informatique; comprendre la normalisation OSI; la conduite des projets informatiques; le contrat de maintenance; la gestion des rechanges; documentation technique d'exploitation et de maintenance; maîtriser la gestion de production; méthodes de gestion et de production. *Début du cours* : Février, juillet, novembre 1990, 1991. *Durée* : 2 jours. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droit d'inscription* : —.

*Organisateur* : Association française de normalisation (AFNOR)  
Tour Europe, Cedex 7  
92080 Paris La Défense, France

#### Maîtrise de la qualité des produits industriels

*Brève description* : Stages de courte durée sur différents aspects de la maîtrise et contrôle de la qualité des différents produits industriels. *Début du cours* : A arranger. *Durée* : 3 jours. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date du début du cours. *Droits d'inscription* : —.

*Organisateur* : Association française de normalisation (AFNOR)  
Tour Europe, Cedex 7  
92080 Paris La Défense, France  
*en collaboration avec*  
AFCIQ

#### Microbiologie des aliments

*Brève description* : Stages de courte durée sur : maîtrise et contrôle de la microbiologie des aliments; viande et produits carnés; boissons; produits de la mer. *Début du cours* : Mai-octobre 1990. *Durée* : 1-2 semaines. *Qualifications* : Français. *Date limite d'inscription* : 6 semaines avant la date de début du cours. *Droits d'inscription* : FF 4 200-FF 6 700.

*Organisateur* : Institut Pasteur  
1, rue du Professeur Crimette  
B.P. 245  
59019 Lille, Cedex, France

#### Technologie du bois et de ses utilisations industrielles

*Brève description* : Le bois : structure, propriétés; essences commerciales; techniques de transformation; les panneaux et les produits dérivés du bois. *Début du cours* : Mars, septembre. *Durée* : 1 semaine. *Qualifications* : Français. *Date limite d'inscription* : Fin juin, fin décembre. *Droits d'inscription* : FF 4 000.

*Organisateur* : Institut national du bois (INB)  
6, avenue de St-Mandé  
75012 Paris, France

### **Application of the pre-stressing force to post-tensioned concrete members**

*Short description:* Planning, designing and constructing pre-stressed concrete frameworks; experimental studies of concrete elements in an industrial experimental plant.  
*Commencing date:* To be arranged. *Duration:* 14 days. *Qualifications:* Civil engineers. English. *Deadline for application:* 31 March. *Fees:* To be arranged.

*Organizer:* Cottbus: University of Technology  
Karl-Marx-Strasse 17  
7500 Cottbus, German Democratic Republic

### **Damage research in commodity science**

*Short description:* Possible damage during transport, storage and distribution; damage as indicator of environmental influences. *Commencing date:* September 1990. *Duration:* 6 days. *Qualifications:* German. *Deadline for application:* 1 July 1990. *Fees:* To be arranged.

*Organizer:* Handelshochschule Leipzig  
PSF 640  
7010 Leipzig, German Democratic Republic

### **Measuring techniques of process analysis**

*Short description:* The measurement of concentration; programming of micro-computer combinations with process analysers. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Measuring and automation experts, chemists, physicists, chemical engineers. German. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* Köthen University of Engineering  
Bernburger Strasse 52-57  
4370 Köthen, German Democratic Republic

### **Optimization of petroleum processing**

*Short description:* Crude distillation; reforming process; intensified petroleum processing using cracking processes; protective systems in petroleum processing plants; transport of crude. *Commencing date:* September. *Duration:* 10 days. *Qualifications:* English. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* Carl Schorlemmer Technical University  
O-Nuschke-Strasse  
4200 Leuna-Merseburg, German Democratic Republic

### **Transport logistics**

*Short description:* Logistics in national and managerial economy; logistics as a matter of decision in transport logistics; elements of transport logistics. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Professional qualifications. English. *Deadline for application:* 31 March 1990. *Fees:* To be arranged.

*Organizer:* TCIB/TCAC University of Transport and Communications  
"Friedrich List"  
Friedrich-List-Platz 1  
8010 Dresden, German Democratic Republic



### **Hand soldering of reliable connections**

*Short description:* Production of highly reliable soldered connections by means of an intensive, practically oriented course in hand soldering. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Manufacturing engineers, personnel in production, quality assurance, design. *Deadline for application:* —. *Fees:* DM 885.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Hannover  
Am Lindener Hafen 1  
3000 Hannover 91, Federal Republic of Germany

### **Laser treatments of materials**

*Short description:* Practical course in accordance with the Richtlinie DVS 1147 with different laser types (CO<sub>2</sub>-, solid-, eximer-laser); optimal adjustment of the laser unit for treatment of materials with laser beam cutting, welding, soldering and surface treatment. *Commencing date:* April, October 1990, 1991. *Duration:* 2-7 weeks. *Qualifications:* Experts, technicians, laser operators, engineers. English, German. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Hannover  
Am Lindener Hafen 1  
3000 Hannover 91, Federal Republic of Germany

### **Thermal spraying for supervisory personnel**

*Short description:* Wire flame spraying; arc spraying; powder spraying. *Commencing date:* 14 February, 14 November 1990, 13 February, 13 November 1991. *Duration:* 1-3 days. *Qualifications:* German. *Deadline for application:* 2 weeks before commencing date. *Fees:* 1990, DM 720 plus test; 1991, DM 740 plus test.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt (SLV)  
Fellbach GmbH  
Fellbacher Strasse 86  
7012 Fellbach, Federal Republic of Germany

### **Welding**

*Short description:* Gas welding; manual metal arc welding; TIG welding; MAG/MIG welding. *Commencing date:* To be arranged. *Duration:* 80-320 hours. *Qualifications:* English, German. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Duisburg  
Postfach 10 12 62  
Bismarckstrasse 85  
4100 Duisburg 1, Federal Republic of Germany

### **Welding (aluminium)**

*Short description:* Welding of aluminium. *Commencing date:* April 1990, 1991. *Duration:* 1 week. *Qualifications:* Welders, welding engineers. English, German. *Deadline for application:* January 1990, 1991. *Fees:* In German in the Federal Republic of Germany, DM 1,200; in English, to be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Duisburg  
Postfach 10 12 62  
Bismarckstrasse 85  
4100 Duisburg 1, Federal Republic of Germany

### **Welding (pipeline)**

*Short description:* Pipeline, vessel welding. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Welders, foremen. English, German. *Deadline for application:* 3 months before commencing date. *Fees:* In German in the Federal Republic of Germany, DM 700; in English, to be arranged.

*Organizer:* Schweisstechnische Lehr- und Versuchsanstalt Duisburg  
Postfach 10 12 62  
Bismarckstrasse 85  
4100 Duisburg I, Federal Republic of Germany

### **Industrial technology**

*Short description:* Short courses on: automation technology; CAD/CAM technology; textile and garment technology; plastic technology; building and construction; microcomputers; systems analysis and programming; microprocessors; computer operations; advanced computer technology; data communications, data security, industry-related application software; product design and development; watch design and manufacture; management techniques. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* Technical personnel. Chinese, English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Hong Kong Productivity Council  
World Commerce Centre  
12/F, Harbour City  
11 Canton Road  
Kowloon, Hong Kong

### **Training of trainers**

*Short description:* Discussions, group exercises and planning. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Management trainers and line managers with training responsibilities. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* The Hong Kong Management Association  
14/F Fairmont House  
8 Cotton Tree Drive  
Central Hong Kong

### **National instruments and measuring technique centres**

*Short description:* Effective and economic utilization of instruments in a country can be implemented through national instruments and measuring technique centres, such as the Instrument and Measuring Technique Service of the Hungarian Academy of Science. *Commencing date:* November 1990. *Duration:* 2 weeks. *Qualifications:* Degree in engineering or Bachelor of Science; at least 2 years of experience. English. *Deadline for application:* End of April 1990. *Fees:* SwF 3,900 per week (including accommodation and meals).

*Organizer:* Instrument and Measuring Technique Service of the Hungarian Academy of Science (MTA-MMSZ)  
*in collaboration with*  
Organization for International Technical and Scientific Co-operation (TESCO)  
Rosenberg hsp. utca 21  
1054 Budapest, Hungary

## **Welding**

*Short description:* Welding robot, laser, management of welding. *Commencing date:* To be arranged. *Duration:* 1-2 days. *Qualifications:* Japanese. *Deadline for application:* —. *Fees:* ¥10,000.

*Organizer:* The Japan Welding Technology Centre

*Contact address:*

Japan International Co-operation Agency (JICA)  
Training Affairs Department  
Shinjuku-Mitsui Building, 48th floor  
1, 2-chrome, Nishi Shinjuku, Shinjuku-ku  
Tokyo 160, Japan

## **Welding techniques**

*Short description:* Techniques of manual and semi-automatic welding; welding procedures. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English, Japanese. *Deadline for application:* —. *Fees:* ¥6,000-¥10,000.

*Organizer:* The Japan Welding Technology Centre

*Contact address:*

Japan International Co-operation Agency (JICA)  
Training Affairs Department  
Shinjuku-Mitsui Building, 48th floor  
1, 2-chrome, Nishi Shinjuku, Shinjuku-ku  
Tokyo 160, Japan

## **Effective manager**

*Short description:* A practical course for functional managers. *Commencing date:* 3 March 1990, 2 March 1991. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 15 January. *Fees:* \$US 1,600.

*Organizer:* Spectrum Training International SA  
Panama and Geneva

*Contact address:*

Spectrum Training International  
P.O. Box 252  
98005 Monaco, Monaco

*Venue:* Morocco

## **Financial management and control**

*Short description:* Principles and techniques of successful financial management. *Commencing date:* 3 November 1990, 2 November 1991. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 15 September. *Fees:* \$US 1,600.

*Organizer:* Spectrum Training International SA  
Panama and Geneva

*Contact address:*

Spectrum Training International  
P.O. Box 252  
98005 Monaco, Monaco

*Venue:* Monaco

### **Management of petroleum enterprises**

*Short description:* The objective of the course is to enable participants to identify problems and to suggest solutions, to update their current management, thinking and practice and to develop their leadership skills. *Commencing date:* 8 September 1990, 7 September 1991. *Duration:* 2 weeks. *Qualifications:* English (Arabic available for exercises). *Deadline for application:* 15 June. *Fees:* \$US 1,600.

*Organizer:* Spectrum Training International SA  
Panama and Geneva

*Contact address:*  
Spectrum Training International  
P.O. Box 252  
98005 Monaco, Monaco

*Venue:* United Kingdom

### **Reading skills**

*Short description:* Courses in English and Arabic for managers designed to improve reading speed and comprehension. *Commencing date:* English course, 2 June 1990, 1 June 1991; Arabic course, 9 June 1990, 8 June 1991. *Duration:* 5 days. *Qualifications:* Arabic or English. *Deadline for application:* 15 March. *Fees:* \$US 800.

*Organizer:* Spectrum Training International SA  
Panama and Geneva

*Contact address:*  
Spectrum Training International  
P.O. Box 252  
98005 Monaco, Monaco

*Venue:* Egypt

### **CAD-CAM in clothing**

*Short description:* Theoretical and practical training in CAD-CAM techniques in the clothing industry. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Clothing  
Postbus 671  
7500 AR Enschede, Netherlands

### **Desalination operations**

*Short description:* Operation of desalination units; multi-stage flash evaporators; start up, shut down procedures; chemical dosing; "hands on" operations. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* On application. To be arranged.

*Organizer:* Esmil Engineering and Contracting  
P.O. Box 7811  
Bv de Boelelaan 7  
1008 AA Amsterdam, Netherlands

### **Energy saving in injection moulding of plastics**

*Short description:* Energy saving in plastics processing; machine/mould combination; energy measurements; costs; management. *Commencing date:* To be arranged.

*Duration:* —. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Plastics and Rubber Research Institute  
P.O. Box 71  
2600 AB Delft, Netherlands

### **Metalworking**

*Short description:* Short courses on: cutting technology; flexible manufacturing systems for cutting operations; flexible manufacturing operations for sheet metalworking; flexible manufacturing systems for welding operations; inspection and maintenance of cutting machines; sheet metalworking technology; welding technology. *Commencing date:* To be arranged. *Duration:* 10-15 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 7,000-f. 11,000.

*Organizer:* Metal Research Institute TNO  
P.O. Box 541  
7300 AM Apeldoorn, Netherlands

### **Risk analysis**

*Short description:* Hazard identification; accident data base management; cost effectiveness of risk management; quantitative risk analysis. *Commencing date:* May 1990, September 1991. *Duration:* 4 days. *Qualifications:* Technical high school. English. *Deadline for application:* March 1990, August 1991. *Fees:* To be arranged.

*Organizer:* TNO Division of Technology for Society  
Department for Industrial Safety  
P.O. Box 342  
7300 AH Apeldoorn, Netherlands

### **Training of trainers**

*Short description:* Motivation and learning; identification of learning methods; "on and off" job training; course design and implementation; planning and preparation of training sessions; seminar with video presentation. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 1,800.

*Organizer:* Esmil Engineering and Contracting  
P.O. Box 7811  
Bv de Boelelaan 7  
1008 AA Amsterdam, Netherlands

### **Petroleum administration**

*Short description:* Petroleum resource management; security of petroleum supplies. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Managers, policy makers, engineers. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Norwegian Petroleum Directorate  
P.O. Box 600  
4001 Stavanger, Norway

### Process metallurgy of aluminium

*Short description:* The course provides an updated, comprehensive review of the state of the art in aluminium production. *Commencing date:* 28 May 1990, 27 May 1991. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 1 April 1990, 1991. *Fees:* Nkr 12,000 (including luncheons).

*Organizer:* Institute of Inorganic Chemistry  
The Norwegian Institute of Technology  
7034 Trondheim, Norway

### Automation systems

*Short description:* Complex automation systems with application of minicomputers in industry, transport and scientific works; theory and practical examples of applications based on devices of INTEL DIGIT — distributed microprocessor system for complex automation. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Automatic, design and production engineers. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Institute of Automation and Measurements  
Warsaw, Poland  
*Contact address:*  
State Office for Scientific and Technological Development  
Wspolna 1/3 00-529 Warsaw, Poland

### Electrochemical corrosion testing

*Short description:* Stationary and non-stationary methods for corrosion examination; investigation of localized corrosion; investigation of passive films and of passivity breakdown; investigation of hydrogen embrittlement; testing corrosion resistance of paints; use of computers in corrosion testing and monitoring. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Degree in chemistry, material science, metallurgy or physics. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Physical Chemistry, PAN  
Warsaw, Poland  
*Contact address:*  
State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

### Modern tool steel types and their heat treatment

*General description:* Development of tool steel types; technologies for heat treatment of tool steels. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* Degree in metallurgy or equivalent; practical experience. English. *Last date for receipt of applications:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Precision Mechanics  
Warsaw, Poland  
*Contact address:*  
Office for the Promotion of Progress in Science, Technology and  
Development  
Wspolna Str. 1/3  
00-529 Warsaw, Poland

### **Programming and application of industrial robots**

*Short description:* Programming of electrical industrial robots with high level of artificial intelligence; robot applications, practical training; study tours. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* University degree; 2 years of experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Institute of Automation and Measurements  
Warsaw, Poland

*Contact address:*

State Office for Scientific and Technological Development  
Wspolna 1/3  
00-529 Warsaw, Poland

### **Management techniques**

*Short description:* Short courses on: management methods; systems of information; MERISE method; working groups. *Commencing date:* February-May 1990. *Duration:* 3-5 days. *Qualifications:* Spanish. *Deadline for application:* 2 weeks before commencing date. *Fees:* -.

*Organizer:* Sema Mer, a Iberica  
Rosario Pino 14-16  
28020 Madrid, Spain

### **International trade in services**

*Short description:* This fourth programme will analyse international trade in services from the point of view of the Uruguay Round Negotiations. It will focus on sectoral analysis and impact on development. *Commencing date:* May 1990. *Duration:* 5 days. *Qualifications:* Diplomats, negotiators, business representatives and specialists in responsible positions within services industries or activities. English. *Deadline for application:* 31 January 1990. *Fees:* SwF 2,500.

*Organizer:* Centre for Applied Studies in International Negotiations (CASIN)  
11a, avenue de la Paix  
1202 Geneva, Switzerland

### **Management of interdependence**

*Short description:* High technology and development; foreign direct investment; environment; problem solving; negotiating solutions. *Commencing date:* 31 October 1990. *Duration:* 10 days. *Qualifications:* Senior civil servants, business executives, trade union representatives. English. *Deadline for application:* 31 July 1990. *Fees:* SwF 2,900.

*Organizer:* Centre for Applied Studies in International Negotiations (CASIN)  
11a, avenue de la Paix  
1202 Geneva, Switzerland

### **Administration and communication**

*Short description:* Languages; accounts; business administration; basic computer skills. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Brown and Brown Training Programmes  
20 Warnborough Road  
Oxford OX2 6AF, United Kingdom

### **Advanced noise and vibration**

*Short description:* The course is designed for researchers and development engineers in industry and research establishments who are associated with noise and vibration problems. *Commencing date:* 17 September 1990. *Duration:* 5 days. *Qualifications:* University degree or equivalent. English. *Deadline for application:* 15 August 1990. *Fees:* £700.

*Organizer:* ISVR  
University of Southampton  
Southampton, Hampshire SO9 5NH, United Kingdom

### **Advanced polymers**

*Short description:* Developments in high performance plastics materials. *Commencing date:* March 1990. *Duration:* 5 days. *Qualifications:* University degree or equivalent. English. *Deadline for application:* 31 January 1990. *Fees:* £400-£500.

*Organizers:* Surrey University, Surrey  
Brunel University, Uxbridge  
*Contact address:*  
Continuing Education Centre  
Uxbridge, Middlesex, United Kingdom

### **Assessment and significance of defects in structures**

*Short description:* The course considers the main documents available for defect assessment, ASME XI, PD6493 and CEBG-R6. Examples are used to show how assessments can be carried out using these documents. *Commencing date:* September 1990. *Duration:* 3 days. *Qualifications:* HNC or equivalent. English. *Deadline for application:* August. *Fees:* To be arranged.

*Organizer:* School of Industrial Science  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Basic electronics**

*Short description:* The course is designed for engineers, works electricians and maintenance personnel who require a practical introduction to industrial electronics and fault-finding techniques. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Pira Pit Division  
Randalls Road  
Leatherhead KT22 7RU, United Kingdom

### **Building research for developing countries**

*Short description:* The course gives an appreciation of the contribution of building research to the development and improvement of housing and building in developing countries. *Commencing date:* Early April. *Duration:* 1 week. *Qualifications:* Final-year students of architecture and building studying at British universities. English. *Deadline for application:* January. *Fees:* £150.

*Organizer:* Building Research Establishment  
Overseas Division  
Garston, Watford WD2 7JR, United Kingdom



### **Business management**

*Short description:* Short courses on: business strategy; construction industry; internal consultancy; leadership; management; marketing; project management. *Commencing date:* To be arranged. *Duration:* 6 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Price Waterhouse  
The Urwick Management Centre  
Baylis House  
Stoke Poges Lane  
Slough, Berkshire SL1 3PF, United Kingdom

### **Computer applications in modern warehouse design and operations**

*Short description:* The use of computers in warehouse design and operations; simulation and CAD techniques for warehouse layout and equipment; computerized information systems for warehouse operations. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £350 (including accommodation).

*Organizer:* Cranfield Institute of Technology  
Distribution Studies Unit  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Computer awareness in distribution**

*Short description:* Use of computers in the design of distribution systems; the application of computerized information systems; developments in system design and simulation. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* —. *Fees:* £590 (including accommodation).

*Organizer:* Cranfield Institute of Technology  
Distribution Studies Unit  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Computerized systems**

*Short description:* Short courses on: communications and distributed systems; expert systems; software engineering. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Some computing experience. English. *Deadline for application:* To be arranged. *Fees:* £600.

*Organizer:* Brunel University  
Department of Computer Science  
Uxbridge, Middlesex UB8 3PM, United Kingdom

### **Computers for engineers**

*Short description:* Short courses on: computer-aided engineering; "C" programming for engineers; software engineering. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £450-£800.

*Organizer:* Nene College  
St. George's Avenue  
Northampton NN2 6JD, United Kingdom

### Computers in maintenance

*Short description:* The use of computer programmes in maintenance; pitfalls and implementation hazards. *Commencing date:* Throughout the year. *Duration:* 2 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £260.

*Organizer:* Wolfson Maintenance  
University of Manchester  
Simon Building  
Oxford Road  
Manchester M13 9PL, United Kingdom:

### Condition-based maintenance

*Short description:* The course is designed for managers and engineers responsible for capital plant and its maintenance. It covers the techniques of condition monitoring with practicals to ensure participants understand when, where and how to apply condition-based maintenance. *Commencing date:* March, June, September. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £340.

*Organizer:* Wolfson Maintenance  
University of Manchester  
Simon Building  
Oxford Road  
Manchester. M13 9PC, United Kingdom

### Corrosion monitoring

*Short description:* Corrosion management with emphasis on internal corrosion in process plant; industries covered: oil/gas, chemical production, cooling water systems, civil engineering, concrete, marine vessels, corrosion audits/surveys of plant. Possible additional modules: introduction to corrosion, control of corrosion in industrial plant, corrosion consideration at design stage. *Commencing date:* To be arranged. *Duration:* 2-4 days. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Corrosion Monitoring Consultancy (CMC)  
5 Old School Gardens  
School Lane, Eaton Socon.  
St. Neots, Cambridgeshire PE19 3JB, United Kingdom

### Cost-effective maintenance

*Short description:* The aim of the course is to present an appreciation of the maintenance strategies available to the maintenance manager including scheduled and condition-based maintenance. *Commencing date:* February, May, October. *Duration:* 1 day. *Qualifications:* English. *Deadline for application:* —. *Fees:* £160.

*Organizer:* Wolfson Maintenance  
University of Manchester  
Simon Building  
Oxford Road  
Manchester M13 9PC, United Kingdom

### Diesel particulates

*Short description:* Particulate formation; measurement techniques; advanced analytical techniques; particulate pollution and health hazards; lubricating oil effects; particulate reduction, catalysts and additives; injector design and fuel influences.

*Commencing date:* April. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* March. *Fees:* £400.

*Organizer:* University of Leeds  
Fuel and Energy Department  
Leeds, United Kingdom

### **Electrical engineering**

*Short description:* Short courses on: electrical engineering for non-electrical personnel; practical electrical engineering; refrigeration and air-conditioning. *Commencing date:* To be arranged. *Duration:* 3-4 days. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Pera  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

### **Electromagnetic compatibility for engineers and managers**

*Short description:* Introduction to electromagnetic compatibility; EC directive; measurement techniques and design principles. *Commencing date:* 19 March, 17 September 1990, 18 March, 16 September 1991. *Duration:* 3 days. *Qualifications:* Engineers and managers. English. *Deadline for application:* 9 March, 7 September 1990, 8 March, 6 September 1991. *Fees:* £600 (including accommodation).

*Organizer:* York Electronics Centre  
University of York  
York YO1 5DD, United Kingdom

### **Electronics**

*Short description:* Short courses on: electronics; practical industrial electronics; thyristors in power control; practical digital electronics. *Commencing date:* To be arranged. *Duration:* 2-4½ days. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Pera  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

### **Engineering**

*Short description:* Short courses on: signal processing techniques for engineers; nuclear technology and reactor operations; optical methods for industrial measurement; programming the finite element method; fluid mechanics and heat transfer. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* Engineers. English. *Deadline for application:* 1 month before commencing date. *Fees:* £300-£600.

*Organizer:* University of Manchester  
Department of Engineering  
Continuing Education Unit  
Oxford Road  
Manchester M13 9PL, United Kingdom

### Engineering technology developments

*Short description:* Short courses on: propulsion technology; mechanical integrity; industrial research and development; fluid engineering and instrumentation; energy technology. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* School of Mechanical Engineering  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

### Engineering with plastics

*Short description:* Materials selection; mould design; injection moulding; case-studies. *Commencing date:* June 1990. *Duration:* 3 days. *Qualifications:* University degree. English. *Deadline for application:* 31 May. *Fees:* £350.

*Organizer:* Brunel University  
Materials Department  
*Contact address:*  
Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex, United Kingdom

### Engine noise and vibration control

*Short description:* Fundamental principles of engine noise; vibration generation; control in all types of prime mover; design and practice of construction. *Commencing date:* September 1990. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* August 1990. *Fees:* £500.

*Organizer:* ISVR  
University of Southampton  
Southampton, Hampshire SO9 5NH, United Kingdom

### Fire and explosion

*Short description:* Fire initiation; fire-spread gases and solids; dust explosions; over-pressure and venting; smoke spread; hazard analysis; design, explosion and fire protection; confined explosions; case-studies. *Commencing date:* September. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* August. *Fees:* £400.

*Organizer:* University of Leeds  
Department of Fuel and Energy  
Leeds, United Kingdom

### Fracture mechanics

*Short description:* Basic theory of fracture mechanics; application of this theory in heavy engineering. *Commencing date:* February 1990. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* January. *Fees:* To be arranged.

*Organizer:* School of Industrial Science  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Furniture industry development**

*Short description:* Short courses on: design of seating; dimensional control and measurement; effective panel; furniture packing; improving management performance; production, management, design and marketing for furniture companies; upholstery fabrics. *Commencing date:* To be arranged. *Duration:* 1 day. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £100 per day.

*Organizer:* Furniture Industry Research Association  
Maxwell Road  
Stevenage, Hertfordshire SG1 2EW, United Kingdom

### **Hydraulic and pneumatic power systems**

*Short description:* Short courses on: operation and maintenance of pneumatic systems; operation and maintenance of hydraulic systems. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Pera  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

### **Incineration and energy from waste**

*Short description:* Basic combustion; combustion of solids; combustion of liquids; pastes and gases; heat transfer; combustion aerodynamics; refractory material; chimney design; pollution from incineration; pollution control; energy recovery; hazardous waste incineration; rotary kiln and fluidized bed incineration; case-studies. *Commencing date:* September. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* August. *Fees:* £200.

*Organizer:* University of Leeds  
Department of Fuel and Energy  
Leeds, United Kingdom

### **Information technology**

*Short description:* Short courses on: data communication theory; operation and diagnostics of different types of equipment. *Commencing date:* To be arranged. *Duration:* 1-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £190-£950.

*Organizer:* Racial Training Services Ltd.  
Heckfield Place  
Heckfield, near Basingstoke, Hampshire RG27 6LD,  
United Kingdom

### **Instructional techniques**

*Short description:* Short courses on: managerial presentation; interpersonal communications and skills; supervising people; open learning; development instructional techniques; training programme design; segments, selection and control. *Commencing date:* Throughout the year. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £420-£690.

*Organizer:* EITB  
Webton Court  
Allerton Park  
Leeds LS7 4ND, United Kingdom

## Management

*Short description:* Short courses on: basic supervision skills; basic management skills; health and safety for managers; leadership, team building; productivity and quality improvement. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 2-3 months before commencing date. *Fees:* £650 plus VAT.

*Organizer:* Amarc (Tes) Ltd.  
Hebburn Management Centre  
Ellison Street  
Hebburn, Tyne & Wear NE31 1YN, United Kingdom

## Management

*Short description:* Short courses on: communication, international selling; key management techniques; managing change; multicultural effectiveness; personal effectiveness; supervisory skills. *Commencing date:* Throughout the year. *Duration:* 2-14 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Cargill, Attwood and Thomas Ltd  
8 Teddington Park  
Teddington TW11 8DA, United Kingdom

## Management techniques

*Short description:* Short courses on: management at different levels; motivation work groups; project management; financial management; report writing; selling; production control; purchasing; stock control; information technology; computer integrated manufacture; materials engineering; value engineering; quality management; management of maintenance. *Commencing date:* To be arranged. *Duration:* 1-4½ days. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Pera  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

## Managing negotiation

*Short description:* Industrial relations framework; the skills of the negotiator; theory and practice of negotiation; trends in collective bargaining; the practical business of negotiating; constructive industrial relations practices; service and enterprise visits. *Commencing date:* April, August. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Society International  
48 Bryanston Square  
London W1H 7LN, United Kingdom

## Manufacturing management

*Short description:* Short courses on: design for manufacture; materials management; logistics in manufacturing; incentives; contrast management. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* Technical and design managers. English. *Deadline for application:* —. *Fees:* £280-£300.

*Organizer:* P-F Inbucon Ltd.  
692 Warwick Road  
Solihull BQ1 3DX, United Kingdom

### **Manufacturing strategy**

*Short description:* Short courses on: computer integration planning and justification; company-wide quality improvement; computer-integrated manufacturing strategy; computer-integrated manufacturing technology. *Commencing date:* To be arranged. *Duration:* 1-3 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £250-£750 plus VAT.

*Organizer:* Ciminstitute  
Cranfield, Bedfordshire MK43 0AL, United Kingdom

### **Manufacturing systems and manufacturing management**

*Short description:* New manufacturing systems; technologies and management practices. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Amtri  
Human Resources Division  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, United Kingdom

### **Manufacturing technologies and manufacturing management**

*Short description:* Design; quality management; production management; robotics; assembly automation; CAD, FM, CIM; industrial visits and projects. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Some industrial experience. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Amtri  
Human Resources Division  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, United Kingdom

### **Microprocessor control**

*Short description:* The objective of the course is to give an appreciation of the operation of a microprocessor, associated input/output memories and interfacing circuits, employed in typical microprocessor control applications. This will encourage a systematic approach to fault finding on similar equipment and give sufficient practice to carry out routine testing. *Commencing date:* To be arranged. *Duration:* Two 5-day modules. *Qualifications:* English. *Deadline for application:* —. *Fees:* £1,390 (including accommodation).

*Organizer:* Overseas Development  
National Health Service Training Authority  
Eastwood Park  
Falfield, Wooton-under-Edge, Gloucestershire GL12 8DA,  
United Kingdom

### **Microwave measurement and practice**

*Short description:* Introduction to modern microwave measurement and practice. *Commencing date:* 22 January, 4 June, 10 September 1990. *Duration:* 5 days. *Qualifications:* Engineers, scientists or technologists. English. *Deadline for application:* 1 week before commencing date. *Fees:* £850 (including accommodation and board).

*Organizer:* Cranfield Institute of Technology  
Department of Electronic System Design  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Noise control for engineers in processing industries**

*Short description:* Measurement and instrumentation; enclosures and screens; silencers; structure-borne noise isolation; acoustic treatment of factories; equipment noise and specifications; total plant noise; propagation and prediction and hearing conservation. *Commencing date:* 2 April 1990. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* March 1990. *Fees:* Approximately £600.

*Organizer:* ISVR  
University of Southampton  
Southampton, Hampshire SO9 5NH, United Kingdom

### **Non-destructive testing**

*Short description:* Short courses on: radiography; radiographic interpretation; non-destructive testing for engineers; radiation safety; ultrasonics. *Commencing date:* Throughout the year. *Duration:* 4-14 days. *Qualifications:* English. *Deadline for application:* 1-3 weeks before commencing date. *Fees:* £230-£546.

*Organizer:* Quality Inspection Services Ltd.  
Training Division  
Preston Farm Industrial Estate  
Concorde Way  
Stockton-on-Tees, Cleveland TS18 3SB, United Kingdom

### **Occupational health**

*Short description:* First aid at work; audiometry; dermatitis, causes and prevention treatment; respiratory screening; principles and practice. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* Technical/supervisory qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Amarc (Tes) Ltd.  
Ellison Street  
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

### **Offshore oil and gas production systems**

*Short description:* Short courses on: vibration monitoring; testing of underwater equipment; downhole materials engineering; offshore materials; oil and gas production; well control; offshore oil; deep water well control; drilling, fluid and solids control; directional drilling; H<sub>2</sub>S control; drilling principles and practices; workover and completion; drilling and completions; offshore installation management. *Commencing date:* Throughout the year. *Duration:* 2-10 days. *Qualifications:* Diploma or degree; personnel involved in engineering maintenance of rotating machinery. *Deadline for application:* March. *Fees:* £600.

*Organizer:* School of Mechanical and Offshore Engineering  
Robert Gordon's Institute of Technology  
Schoolhill  
Aberdeen AB9 1FR, United Kingdom

### **Packaging**

*Short description:* Short courses on: corrugated materials and cans; effective packaging buying; packaging plastics; new packaging ideas; retail packaging. *Commencing*



*date:* June 1990. *Duration:* 2 days. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £285.

*Organizer:* Pira  
Randalls Road  
Leatherhead, Surrey, KT22 7RU, United Kingdom

### **Petrochemical training programmes**

*Short description:* Short courses on: oilfield operations; oil and gas development; petroleum engineering; oil recovery and developments in enhanced oil recovery techniques; oilfield drilling completions, testing and workover operations; process facilities for handling oil and natural gas; production economics; creative international trading in crude oil and petroleum products; joint interest for offshore operations; subsea oilfield engineering; the economics of marginal oilfield development; offshore project management; structure and development of the international petroleum and petrochemical industries; managing and financing of major capital projects in oil and gas; natural gas; energy forecasting techniques and practices; use of microcomputers in supply and planning of refinery operations; refinery upgrading; refinery non-fuel streams; forecasting world oil demand, supply, trade and prices; control of oil inventories; retail petroleum marketing; liquefied petroleum gases; crude oil; bunkering; oil futures in physical trading; lubricants and functional fluids; petrochemical technology and economics; polymers in the oilfield; drilling fluids; water injection systems; oilfield chemicals; transport fuel additives; process, metalworking and functional fluids; refinery process chemicals; synthetic lubricants. *Commencing date:* To be arranged. *Duration:* 17 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* —.

*Organizer:* The College of Petroleum Studies  
New Inn Hall Street  
Oxford OX1 2QD, United Kingdom

### **Plastics welding**

*Short description:* Welding process. *Commencing date:* February 1990. *Duration:* 4 days. *Qualifications:* University degree. English. *Deadline for application:* January 1990. *Fees:* £400.

*Organizer:* Brunel University  
Materials Technology  
*Contact address:*  
Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex, United Kingdom

### **Printing**

*Short description:* Short courses on: general management problems; planning and implementing changes in the work place; objective setting and problem solving; production control; first management; basics of printing and finishing; print estimating; quality control for lithography; web-offset newspaper printing; desk-top publishing; roll-labels; colour reproduction. *Commencing date:* To be arranged. *Duration:* 1 day-1 week. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Pira  
Randalls Road  
Leatherhead, Surrey KT22 7RU, United Kingdom

## Process control

*Short description:* Control terminology, feedback and automation control concepts as used in process industries. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £400.

*Organizer:* Foxboro Great Britain Limited  
Redhill, Surrey RH1 2HL, United Kingdom

## Quality assurance and related subjects

*Short description:* Regular and comprehensive programme of short courses on all subjects relating to quality assurance. *Commencing date:* To be arranged. *Duration:* 2-4 days. *Qualifications:* Personnel at all levels engaged in the quality assurance of products and service. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Institute of Quality Assurance  
10 Grosvenor Gardens  
London SW1 0DQ, United Kingdom

## Quality management

*Short description:* Short courses on: the management of quality; total quality; lead assessor. *Commencing date:* To be arranged. *Duration:* 1-4½ days. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* £195-£225 per module.

*Organizer:* School of Industrial Science  
Quality Assurance Group  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

## Structural adhesives

*Short description:* Part I: Types, properties and application of structural adhesives bonding for metals, composites and plastics. Part II: Design of adhesives, joints, testing and durability. *Commencing date:* Part I: January 1990; part II: February 1990. *Duration:* Part I: 4 days; part II: 4 days. *Qualifications:* University degree. English. *Deadline for application:* 1 January 1990. *Fees:* Part I: £400; part II: £400.

*Organizer:* Brunel University  
Materials Department  
*Contact address:*  
Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex, United Kingdom

## Textiles for chemists

*Short description:* The course is designed for chemists entering the industry as dyers or finishers to introduce them to general aspects of the textile industry, with special emphasis on dyeing and finishing. *Commencing date:* To be arranged. *Duration:*

7 days. *Qualifications:* Preferably chemical training. English. *Deadline for application:* 1 month before commencing date. *Fees:* £350 (plus living costs).

*Organizer:* Department of Textile Industries  
University of Leeds  
Leeds LS2 9JT, United Kingdom

### **Textile technology**

*Short description:* Textile fibre properties; yarn manufacture; knitting, weaving and finishing. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Preferably some scientific training. English. *Deadline for application:* 1 month before commencing date. *Fees:* £600.

*Organizer:* University of Leeds  
Department of Textile Industries  
Leeds LS2 9JT, United Kingdom

### **Vibration monitoring**

*Short description:* The course is designed for engineers or technicians involved in the design, operation, installation or maintenance of machinery. *Commencing date:* April, October. *Duration:* 1-4 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* Approximately £100-£420.

*Organizer:* Wolfson Maintenance  
University of Manchester  
Simon Building  
Oxford Road  
Manchester M13 9PL, United Kingdom

### **Water supply and sanitation**

*Short description:* Training programmes are arranged (based on attending formal residential training courses) usually on a 1-week modular basis followed by practical attachments to a Water Authority in order to consolidate the skills acquired. *Commencing date:* To be arranged. *Duration:* Training programmes 3-6 months; study tours 2-3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Usually £300-£400 per week.

*Organizer:* Water International Ltd.  
P.O. Box 49  
Old Trafford  
Manchester M16 0QY, United Kingdom

### **Build your own computer**

*Short description:* This intensive course provides step-by-step instructions in the assembly of an IBM compatible computer. Participants take home the self-assembled computers at the end of the course. Also provided are systems software, manuals and a diagnostic disk. *Commencing date:* 15 January, 30 July 1990. *Duration:* 4 days. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Environmental impact analysis**

*Short description:* Environmental impact analysis; making environmental impact analysis cost effective; simplifying assessment and evaluation methodologies; implementing environmental impact analysis. *Commencing date:* 30 April 1990. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 1,500.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Financial auditor**

*Short description:* Accounting theory; ADP auditing; flowcharting; developing and presenting audit findings; interviewing techniques for auditors; audit report writing; financial and audit application using LOTUS 1-2-3; statistical sampling; audit simulation. *Commencing date:* To be arranged. *Duration:* —. *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,000.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

### **Pacific Asian business**

*Short description:* International business education marketing; accounting; finance; management; comparative management; management practices in selected Asian countries; multinational management and strategic planning. *Commencing date:* 9 January 1990, 8 January 1991. *Duration:* 4 days. *Qualifications:* English. *Deadline for application:* 15 November 1990, 1991. *Fees:* \$US 195.

*Organizer:* Pacific Asian Management Institute  
Center for Executive Development  
College of Business Administration  
University of Hawaii at Manoa  
2404 Maile Way, B101  
Honolulu, Hawaii 96822, United States of America

### **Strategic management for senior officials**

*Short description:* The role of the senior government executive; managing large and complex organizations; setting a motivational climate; current research on leadership excellence; national development in a global economy; decision-making and planning; trends for the future; staffing and employee development; workshops, private consultations. *Commencing date:* 10 September 1990. *Duration:* 2 weeks. *Qualifications:* Senior policy-making officials from developing countries. English. *Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,000.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

## **Telecommunications**

*Short description:* Technical options: capabilities of digital and transmission technologies and evaluation of available office equipment; management of telecommunications; assessing financial, organizational and service needs; applications of telecommunications: information on telecommunications applications in agriculture, manufacturing, transport, education, health and science; telecommunications policy issues: effects of deregulation and models of telecommunications international use.  
*Commencing date:* 30 July 1990. *Duration:* 1-4 weeks. *Qualifications:* English.  
*Deadline for application:* 30 days before commencing date. *Fees:* \$US 2,500 for 4 weeks, \$US 625 for 1 week.

*Organizer:* International Institute for Development  
Graduate School, USDA  
600 Maryland Avenue, S.W., Room 134  
Washington, DC 20024, United States of America

## B. DEVELOPING COUNTRIES/PAYS EN DÉVELOPPEMENT/ PAÍSES EN DESARROLLO

### Fertilizer production technology

*Short description:* Processing of fertilizers (ammonia, urea, superphosphate etc.); compound fertilizers (granulation, dry mixing, fluid fertilizers); organic and organic-mineral fertilizers; micronutrients. *Commencing date:* 8 October 1990. *Duration:* 5 days. *Qualifications:* Chemists, engineers, economists. English or Portuguese. *Deadline for application:* —. *Fees:* \$US 500.

*Organizer:* Centro de Estudos de Fertilizantes (CEFER)  
Instituto de Pesquisas Tecnológicas do Estado de São Paulo SA  
(IPT)  
C. Postal 7141  
Cidade Universitária  
05508 São Paulo, São Paulo, Brazil

### Control de procesos industriales a través de microcomputadores

*Breve descripción:* Diseño y optimización de plantas de flotación de minerales mediante computador; técnicas de análisis y optimización de procesos metalúrgicos; teoría y práctica moderna de flotación de sulfuros. *Fecha de iniciación:* 15 mayo, 15 septiembre 1990. *Duración:* 1 semana. *Calificaciones:* Español o inglés. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* \$US 400.

*Organizador:* Centro Investigación Minera y Metalúrgica  
Avenida Parque Rabat 6500  
Santiago, Chile

### La informática en la organización

*Breve descripción:* Modelación, diseño y optimización de procesos de conminución; optimización de circuitos de molienda semiautógena mediante técnicas de simulación matemática. *Fecha de iniciación:* 15 mayo, 15 septiembre 1990. *Duración:* 1 semana. *Calificaciones:* Español o inglés. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* \$US 400.

*Organizador:* Centro Investigación Minera y Metalúrgica  
Avenida Parque Rabat 6500  
Santiago, Chile

### Principios de ergonomía

*Breve descripción:* Conceptos básicos y prácticos de la relación hombre-trabajo; confort-eficiencia en el trabajo; puestos de trabajo. *Fecha de iniciación:* 16 abril 1990. *Duración:* 2 días. *Calificaciones:* Español. *Fecha límite de inscripción:* 16 marzo 1990. *Derechos de inscripción:* \$Ch 200.

*Organizador:* Fundación Duoc  
Darío Urzúa 2100  
Santiago de Chile, Chile

### Capacitación en proyectos agroindustriales

*Breve descripción:* El proyecto en el marco del desarrollo agroindustrial; técnicas y criterios para la identificación, formulación y evaluación de proyectos agroindustriales; análisis de casos de proyectos agroindustriales en Colombia. *Fecha de iniciación:* 28 febrero. *Duración:* 4 días. *Calificaciones:* Empresarios o funcionarios técnicos vinculados a la empresa, funcionarios del Gobierno y entidades especializadas. Español. *Fecha límite de inscripción:* 20 febrero. *Derechos de inscripción:* \$Col 35.000.

*Organizador:* Asociación Nacional de Industriales (ANDI)  
Cra 13 No. 26-45, Piso 6  
Bogotá, Colombia

### Negociaciones de tecnología textil

*Breve descripción:* Conceptos sobre transferencia de tecnología; cláusulas principales en un contrato de licencia; asistencia técnica y compra de maquinaria; estrategia de negociación; foro sobre la importancia de la tecnología textil; casos especializados y ejercicios de simulación. *Fecha de iniciación:* 1 marzo. *Duración:* 3 días. *Calificaciones:* Gerentes, jefes técnicos, directores de planeación, jefes de departamento comercial, directores de producción, propietarios de empresas. *Fecha límite de inscripción:* 24 febrero. *Derechos de inscripción:* \$Col 25.000.

*Organizador:* Asociación Nacional de Industriales (ANDI)  
Edificio Coltejer, Piso 8  
Medellín, Colombia

### Nuevos adelantos en envases y empaques

*Breve descripción:* Nuevas tecnologías en subsectores de envases y empaques: hojalata, cartón corrugado, productos adhesivos, vidrio; técnicas de coextrusión y barreras. *Fecha de iniciación:* 5 abril. *Duración:* 3 días. *Calificaciones:* Gerentes, jefes técnicos, directores de planeación, directores de producción, propietarios de empresas. Español. *Fecha límite de inscripción:* 30 marzo. *Derechos de inscripción:* \$Col 25.000.

*Organizador:* Asociación Nacional de Industriales (ANDI)  
Edificio Coltejer, Piso 8  
Medellín, Colombia

### Evaluación sensorial de los alimentos

*Breve descripción:* Desarrollar en los participantes las habilidades en la elaboración, perfeccionamiento y utilización de los procedimientos de evaluación sensorial aplicados a las actividades relativas al control organoléptico de los alimentos. *Fecha de iniciación:* Para ser acordado. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 100.

*Organizador:* Instituto de Investigaciones para la Industria Alimenticia de la República de Cuba  
Calle 41  
4455 Playa  
Ciudad D  
La Habana, Cuba

### Formulación y tecnología para la elaboración de productos cárnicos

*Breve descripción:* Este curso le permitirá completar sus conocimientos con nuevos métodos de trabajo y podrá adquirir una masa de técnicas inmediatamente

utilizables. *Fecha de iniciación:* Para ser acordado. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 100.

*Organizador:* Instituto de Investigaciones para la Industria Alimenticia de la República de Cuba  
Calle 41  
4455 Playa  
Ciudad D  
La Habana, Cuba

#### **Química y tecnología de las aguas residuales de la industria alimenticia**

*Breve descripción:* Brindar a los participantes los conocimientos necesarios sobre las aguas residuales de la industria alimentaria, su impacto sobre el ambiente, características, métodos de análisis y tecnologías de depuración. *Fecha de iniciación:* Para ser acordado. *Duración:* 2 semanas. *Calificaciones:* Español o inglés. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 100.

*Organizador:* Instituto de Investigaciones para la Industria Alimenticia de la República de Cuba  
Calle 41  
4455 Playa  
Ciudad D  
La Habana, Cuba

#### **Residuos en la industria azucarera**

*Breve descripción:* Caracterización y métodos de tratamiento de las aguas residuales y los lodos; técnicas analíticas; obtención de biogás; diseño de biodigestores; soluciones tecnológicas para la descontaminación de efluentes azucareros. *Fecha de iniciación:* Enero. *Duración:* 2 semanas. *Calificaciones:* Graduado universitario. Español. *Fecha límite de inscripción:* 30 noviembre. *Derechos de inscripción:* —.

*Organizador:* ICINAZ  
Apartado 10154  
Quivicán (Código 33 500)  
La Habana, Cuba

#### **Computer technology**

*Short description:* Computer software development and network planning. *Commencing date:* To be arranged. *Duration:* 1-8 weeks. *Qualifications:* Professional qualifications. English (possibly Arabic). *Deadline for application:* —. *Fees:* SwF 3,300-SwF 7,800.

*Organizer:* P+R Techconsult Ltd.  
Association of Advanced Technical Services GmbH  
P.O. Box 3885  
Nicosia, Cyprus

#### **Industrial engineering**

*Short description:* Electronics for process control and analytical instrumentation; laboratory equipment evaluation and preventive maintenance. *Commencing date:* To be arranged. *Duration:* 1-8 weeks. *Qualifications:* Professional qualifications. English (possibly Arabic). *Deadline for application:* —. *Fees:* SwF 1,400-SwF 4,800.

*Organizer:* P+R Techconsult Ltd.  
Association of Advanced Technical Services GmbH  
P.O. Box 3885  
Nicosia, Cyprus



### **Methods and techniques of elemental analysis**

*Short description:* Analysis of different materials, such as agricultural samples, crude oil, geological samples; UV-VIS spectrophotometry, atomic absorption spectroscopy, ICAP-ICP spectrometry. *Commencing date:* To be arranged. *Duration:* 1 week-9 months. *Qualifications:* Professional qualifications. English (possibly Arabic). *Deadline for application:* —. *Fees:* —.

*Organizer:* P+R Techconsult Ltd.  
Association of Advanced Technical Services GmbH  
P.O. Box 3885  
Nicosia, Cyprus

### **Management**

*Short description:* Short courses on: production engineering; economic research; industrial safety; maintenance management; scientific management for marketing. *Commencing date:* To be arranged. *Duration:* 1-6 weeks. *Qualifications:* Professional qualifications. *Deadline for application:* —. *Fees:* \$US 50-\$US 450.

*Organizer:* Ministry of Industry  
Productivity and Vocational Training Department  
Cairo, Egypt

### **Maintenance in fertilizer industry**

*Short description:* Maintenance management; maintenance and inspection of critical equipment and machinery; refractory and insulation; developments in lubrication; design/maintenance interface; reliability engineering; failure analysis; spares and inventory control; computerization of plant maintenance systems; case-studies. *Commencing date:* Mid-June 1990, 1991. *Duration:* 7 days. *Qualifications:* Maintenance engineers with a degree or diploma in engineering; at least 5 years of relevant experience. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* \$US 500 (including board and lodging).

*Organizer:* The Fertiliser Association of India  
10 Shaheed Jit Singh Marg  
New Delhi 110 067, India

### **Management of training in industry**

*Short description:* Short courses on: designing a training project; communication and interpersonal skill; leadership and motivation; training management; manpower planning; evaluation of industrial training programmes. *Commencing date:* 7 May, 12 November 1990. *Duration:* 2 weeks. *Qualifications:* Instructors. English. *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500.

*Organizer:* Central Staff Training and Research Institute  
Calcutta, Dasnagar, Howrah-711 105, India  
*Contact address:*  
D.G.E. & T.  
Ministry of Labour  
Shram Shakti Bhavan, 2&4, Rafi Marg  
New Delhi-1, India

### Computer-based training

*Short description:* Skills required for employing the computer in training. *Commencing date:* August/September. *Duration:* 2 weeks. *Qualifications:* University degree. *Deadline for application:* —. *Fees:* —.

*Organizer:* Oil Training Institute  
Kirkuk, Iraq

### Management and training

*Short description:* Courses of short duration covering: performance; company planning; general management; feasibility studies. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Bachelor's degree; 3 years of experience. *Arabic.* *Deadline for application:* 3 months before commencing date. *Fees:* \$US 500 per week.

*Organizer:* National Centre for Planning and Management Development  
P.O. Box 2040 (Alwiyah)  
Baghdad, Iraq

### Metrology

*Short description:* The national calibration service systems; the role of measurements in manufacturing and production of quality goods; safety in industry; accreditation of laboratories and calibration centres; instrumentation; repair and construction of measuring instruments and gauges. *Commencing date:* August. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 1 July. *Fees:* \$US 1,000.

*Organizer:* Kenya Bureau of Standards  
P.O. Box 54974  
Nairobi, Kenya

*Venue:* Imperial Hotel  
Kisumu, Kenya

### Emballage et conditionnement

*Brève description :* Actualisation sur les nouvelles techniques de l'emballage et du conditionnement en priorité des produits alimentaires, des produits pharmaceutiques et des produits à l'exportation. *Début du cours :* Deuxième quinzaine de chaque mois (mars à décembre 1990). *Durée :* 3-4 jours. *Qualifications :* Directeur technique des usines ou cadres supérieurs. Français. *Date limite d'inscription :* 2 mois avant la date de début du cours. *Droits d'inscription :* \$US 400.

*Organisateur :* Institut marocain de l'emballage et du conditionnement  
B.P. 8006  
Casa-Oasis, Maroc

### Gestion industrielle

*Brève description :* Stages de courte durée sur : finances; marketing; relations humaines; électricité et froid; informatique; production et maintenance industrielle. *Début du cours :* A arranger. *Durée :* 7-3 jours. *Qualifications :* Français. *Date limite d'inscription :* —. *Droits d'inscription :* —.

*Organisateur :* OFPPT  
50, rue Caporal  
Driss Chbakou  
Ain Bordja, Casablanca, Maroc

### **Advanced production management**

*Short description:* Participants will learn to: identify organizational problems affecting performance at all levels; plan short- and long-term activities to avoid bottle-necks, set up and apply production targets; make optimum use of machine, materials and labour; maintain expected stock levels. *Commencing date:* November 1990. *Duration:* 2 weeks. *Qualifications:* Senior production and plant managers in the manufacturing, processing, extraction or agro-allied industries. English. *Deadline for application:* 31 August 1990. *Fees:* N 1,320.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **Audio-visual aids workshop**

*Short description:* Participants will learn to: identify suitable teaching aids; plan and produce different graphics for charts, slides, and hp transparencies; prepare simple visuals using cardboard instruments and colours for teaching. *Commencing date:* July 1990. *Duration:* 5 days. *Qualifications:* Management trainers and educators and other users of A-Ving. *Deadline for application:* 31 March 1990. *Fees:* N 720.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **Cash management for small business**

*Short description:* The objective of the course is to upgrade the level of management competence of small-scale industrialists to enable them to handle their business successfully. *Commencing date:* April, September 1990. *Duration:* 5 days. *Qualifications:* Small- and medium-scale industrialists. *Deadline for application:* 28 February 1990. *Fees:* N 550.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **EDP and setting up a new business**

*Short description:* The objective of the course is to motivate and encourage potential entrepreneurs to set up businesses of their own. *Commencing date:* May, July, October, 1990. *Duration:* —. *Qualifications:* Prospective entrepreneurs. *Deadline for application:* 15 April 1990. *Fees:* N 550.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### **Production management**

*Short description:* Short courses on: advanced production management; audio-visual instruments; cash management for small business; strategic management. *Commencing date:* February, November 1990. *Duration:* 5 days-2 weeks. *Qualifications:* Industrialists, entrepreneurs. *Deadline for application:* 20 December 1989. *Fees:* N 550-N 1,320.

*Organizer:* Centre for Management Development  
P.M.B. 21578  
Ikeja, Nigeria

### Strategic management

*Short description:* The objective of the course is to bring elements of decision-making close to the reality of business life. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Senior executives and decision-makers. *Deadline for application:* 31 January 1990. *Fees:* N 1,000.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### Training needs analysis and assessment

*Short description:* The objective of the course is to enable participants to recognize the importance of the training function, to apply different methods analysing training needs and to differentiate between individual and organizational needs. *Commencing date:* February 1990. *Duration:* 5 days. *Qualifications:* Managers responsible for the assessment of organizational and employee needs. *Deadline for application:* 20 December 1989. *Fees:* N 660.

*Organizer:* Centre for Management Development (CMD)  
PMB 21578  
Ikeja, Nigeria

### Industrial management

*Short description:* Short courses on: industrial relations for engineers; writing business letters; electronics; air-conditioning systems; manufacturing management; contracts; word processing; maintenance; CAD; computer applications; training of trainees; computers for managers; project management; industrial project appraisal; construction management; electronic instrumentation maintenance; LOTUS 1, 2, 3; digital systems and control; corrosion monitoring; MIS for modern management; preventive maintenance; energy conservation; electrical installation; computer-based financial accounting; personnel management; environmental pollution; water treatment. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Executives. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 400.

*Organizer:* Petroman  
Enar Petrotech Services Ltd.  
Musarrat Building, 1st floor  
Sultan Ahmed Shah Road, Off: Shaheed-e-Millat Road  
Karachi, Pakistan

### Industrial safety

*Short description:* Short courses on: industrial safety; inventory control; non-destructive testing; corrosion engineering. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Engineers. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 200 per week.

*Organizer:* Preventive Maintenance Centre (PMC)  
P.O. Box 830  
c/o Ravi Rayon Ltd.  
Kalashah Kaku  
Lahore, Pakistan

### **Lubrication and safety problems in processing industries**

*Short description:* Short courses on: industrial tribology; pollution control in process industries; hydraulic lubrication systems; safety engineering in process industry.  
*Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English.  
*Deadline for application:* 1 month before commencing date. *Fees:* \$US 300.

*Organizer:* Metallurgical Training Centre  
Pakistan Steel  
Bin Qasim  
Karachi 50, Pakistan

### **Steel plant management**

*Short description:* Short courses on: principles of management; industrial relations; upgrading of functional competence of shop supervisors; repair and maintenance of electrical equipment of a steel plant; mechanical maintenance of the equipment in a steel plant. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 1,000.

*Organizer:* Pakistan Steel  
Human Resources Development Department  
Bin Qasim  
Karachi, Pakistan

*Venue:* Management Development Centre  
Pakistan Steel  
Bin Qasim  
Karachi, Pakistan

### **Metalmecánica**

*Breve descripción:* Ampliación de conocimientos teóricos en tecnología en técnicas de taller, gestión de producción, gestión de personal; perfeccionamiento de las habilidades, procesos en los aspectos de máquinas-herramientas, ensayo de materiales, neumática, hidráulica, tratamiento térmico, mantenimiento, soldadura. *Fecha de iniciación:* Febrero 1990. *Duración:* 4 semestres. *Calificaciones:* Maestro industrial. *Fecha límite de inscripción:* 30 noviembre 1989. *Derechos de inscripción:* Ninguno; aporte semestral, \$US 300.

*Organizador:* Senati  
Apartado 1769  
Autopista Lima  
San Martín de Porres, Perú

### **Basic value analysis**

*Short description:* Management technique to improve profitability and/or reduce manufacturing cost through design modification on products continuously manufactured without affecting the functions. *Commencing date:* January. *Duration:* 40 hours. *Qualifications:* English. *Deadline for application:* —. *Fees:* P1,750.

*Organizer:* Metals Industry Research and Development Center (MIRDC)  
Industrial Training Division  
P.O. Box 1440 MCPO  
1299 Makati, Metro Manila, Philippines

### **Industrial sector planning**

*Short description:* The programme is designed for professionals in both private and public sectors who are involved in determining the future direction of sectors and industries. *Commencing date:* To be arranged. *Duration:* 2-3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Center for Research and Communication  
P.O. Box 478, Greenhills Post Office  
Metro Manila, Philippines

### **Performance improvement of industrial enterprises**

*Short description:* Short courses on: experts of methods and times; management formation; learning marketing; industrial time keeping experts; maintenance management; marketing management; personnel policies; project management; public relations. *Commencing date:* To be arranged. *Duration:* 4 days. *Qualifications:* Professional qualifications. Portuguese. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 40,000.

*Organizer:* AIP/COPRAI  
Praça das Industrias 1399  
Lisbon, Portugal

### **Denrées alimentaires**

*Breve description:* Stages de courte durée sur : poissons et produits halieutiques; contrôle de qualité des denrées alimentaires; conservation et transformation fruits et légumes. *Début du cours:* A arranger. *Durée:* 2-4 semaines. *Qualifications:* Français. *Date limite d'inscription:* 30 décembre. *Droits d'inscription:* \$US 1 400.

*Organisateur:* Ita  
B.P. 2765  
Route des Pères Maristes  
Hann Dakar, Sénégal

### **Management**

*Short description:* Short courses on: general management problems; energy conservation; small-scale business development; corporate planning; formulation; appraisal and evaluation of industrial projects; statistical information; industrial safety; data processing; maintenance management. *Commencing date:* Throughout the year. *Duration:* 1-5 days. *Qualifications:* English. *Deadline for application:* April. *Fees:* SL Rs 500-SL Rs 2,000.

*Organizer:* National Institute of Business Management  
120/5 Wijerama Mawatha  
Colombo 7, Sri Lanka

### **AIT-UC Berkeley advance management programme for Asia-Pacific managers**

*Short description:* Intensive course for managers in Asia and the Pacific. *Commencing date:* 24 July. *Duration:* 2 weeks. *Qualifications:* Marketing, planning, production engineers. *Deadline for application:* —. *Fees:* \$US 2,500.

*Organizer:* CEC/AIT  
P.O. Box 2754  
Bangkok, Thailand

### Computer applications

*Short description:* Seminars/workshops dealing with: distributed data-base systems; local area networks; office automation; software engineering; strategic information systems planning. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* Managers. English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Regional Computer Centre  
Business Operations  
Asian Institute of Technology  
P.O. Box 2754  
Bangkok 10501, Thailand

### Standardization

*Short description:* Short courses on: standardization in food industry; quantities of chemical and pesticide residues in food specified in national and international standards. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* English, Thai. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Thai Industrial Standards Institute (TISI)  
Rama VI Street  
Bangkok 10400, Thailand

### Constructions soudées

*Brève description :* Calcul, conception et fabrication des assemblages soudés; choix et qualification des procédés de soudage; parachèvement des constructions soudées; tenue en service des assemblages soudés. *Début du cours :* 21 mai 1990. *Durée :* 5 jours. *Qualifications :* Ingénieur, technicien, chercheur universitaire, industriel. Français. *Date limite d'inscription :* 1 mois avant la date de début du cours. *Droits d'inscription :* \$US 400.

*Organisateur :* Le Cetime  
B.P. 121  
Tunis, Cedex 1080, Tunisie

### Gestion de la qualité

*Brève description :* Concepts organisation de la qualité; gestion et assurance de la qualité; audit qualité; utilisation des moyens de contrôle. *Début du cours :* 11 juin 1990. *Durée :* 5 jours. *Qualifications :* Ingénieurs et techniciens des services de production et du contrôle qualité. Français. *Date limite d'inscription :* 1 mois avant la date de début du cours. *Droits d'inscription :* \$US 400.

*Organisateur :* Le Cetime  
B.P. 121  
Tunis, Cedex 1080, Tunisie

### Gestion de production assistée par ordinateur "GPAO"

*Brève description :* Les concepts de la gestion de production; les données techniques; les fonctions de la production; la micro-informatique de production. *Début du cours :* 6 mars 1990. *Durée :* 3 jours. *Qualifications :* Ingénieur, technicien de production industriel. Français. *Date limite d'inscription :* 1 mois avant la date de début du cours. *Droits d'inscription :* \$US 150.

*Organisateur :* Le Cetime  
B.P. 121  
Tunis, Cedex 1080, Tunisie

## Tanneries

*Brève description* : Analyse des huiles de nourriture employées en tannerie. *Début du cours* : 20 décembre. *Durée* : 2 semaines. *Qualifications* : Anglais, français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Centre national du cuir et de la chaussure  
6, rue Djebel Mansour  
1002 Tunis, Tunisie

## Techniques de contrôle non destructif "CND"

*Brève description* : L'apport des techniques de CND dans la maintenance; utilisation des techniques ultrasons; radio; gammagraphie; magnétoscopie; ressuage; émissions acoustiques. *Début du cours* : Décembre 1990. *Durée* : 1 semaine. *Qualifications* : Ingénieurs, techniciens. Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : \$US 400.

*Organisateur* : Le Cetime  
B.P. 121  
Tunis, Cedex 1080, Tunisie

## Chemical engineering systems

*Short description*: Short courses on: optimization of chemical engineering systems; equation-oriented chemical plant design and simulation. *Commencing date*: June, September 1990. *Duration*: 1 week. *Qualifications*: English, Turkish. *Deadline for application*: February 1990. *Fees*: \$US 300.

*Organizer*: Ege University  
Müh Fak. Bornova  
Izmir, Turkey

## Effect of industrial effluents on soil and water resources

*Short description*: Classifications of industrial effluents, environmental problems in Turkey and in Europe; acidifying air pollutants: emission, transport, deposition; the acidification of the environment: forest land, rivers and water sources; reduced emissions technology and costs. *Commencing date*: June. *Duration*: 7 days. *Qualifications*: University degree. English. *Deadline for application*: April. *Fees*: —.

*Organizer*: Forest Research Institute  
P.K.24, Bahçelievler  
Ankara, Turkey

## Evaluation of financial situation

*Short description*: The seminar will examine the most-frequently-met financial problems of enterprises. *Commencing date*: April. *Duration*: 5 days. *Qualifications*: Middle- and top-level managers. Turkish. *Deadline for application*: 1 April. *Fees*: To be arranged.

*Organizer*: National Productivity Centre of Turkey  
Güvenevler, Gelibolu Sok. 5  
06690 Kavaklıdere, Ankara, Turkey



### **Forest products**

*Short description:* The course will cover the anatomical structure of native species, their mechanical properties, impregnation methods, sawing. *Commencing date:* November. *Duration:* 15 days. *Qualifications:* Forest engineers. English. *Deadline for application:* May. *Fees:* —.

*Organizer:* Forest Research Institute  
P.K.24, Bahçelievler  
Ankara, Turkey

### **Personnel management**

*Short description:* The aim of the seminar is to enable middle and top management from private and public sectors to develop ways for efficient use of human resources. *Commencing date:* First week in July. *Duration:* 5 days. *Qualifications:* Turkish. *Deadline for application:* 15 May. *Fees:* To be arranged.

*Organizer:* National Productivity Centre of Turkey  
Güvenevler, Gelibolu Sok. 5  
06690 Kavaklıdere, Ankara, Turkey

### **Quality control circles**

*Short description:* Quality control circles as a productivity improvement technique. *Commencing date:* Second half of May. *Duration:* 3-4 days. *Qualifications:* Turkish. *Deadline for application:* 15 April. *Fees:* —.

*Organizer:* National Productivity Centre of Turkey  
Güvenevler, Gelibolu Sok. 5  
06690 Kavaklıdere, Ankara, Turkey

### **Reduction of energy consumption in processing industry**

*Short description:* Energy analysis; heat recovery network; pinch technology; equipment improvement and process retrofitting. *Commencing date:* January 1990. *Duration:* 4 days. *Qualifications:* Basic thermodynamics; basic unit operations. English. *Deadline for application:* October. *Fees:* \$US 650.

*Organizer:* Institute of Thermal Energy and Process Engineering  
University of Novi Sad  
P.O. Box 55  
21000 Novi Sad, Yugoslavia