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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

1991

**GUIDE TO TRAINING OPPORTUNITIES
FOR INDUSTRIAL DEVELOPMENT**

(Nineteenth issue)

**APERÇU DES MOYENS DE FORMATION
POUR LE DÉVELOPPEMENT INDUSTRIEL**

(Dix-neuvième édition)

**REPERTORIO DE
OPORTUNIDADES DE CAPACITACIÓN
PARA EL DESARROLLO INDUSTRIAL**

(Decimonovena 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.

* * *

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 zone.

* * *

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 nineteenth issue of a publication which first appeared in 1972. It conforms to the Constitution of the United Nations Industrial Development Organization (UNIDO), adopted in April 1979, which includes, among other functions of the Organization:

"Organize and support industrial training programmes aimed at assisting the developing countries in the training of technical and other appropriate categories of personnel needed at various phases of their accelerated industrial development."

The *Guide* is based on the replies to a questionnaire, sent to Governments, organizations, institutions and other bodies concerned with industrial training, in which information about their training activities was solicited. To reduce the size of this volume, entries listed in earlier issues have not been repeated unless a specific request was received from the organizer.

The *Guide* is divided into three chapters:

- I. Training opportunities organized and offered by UNIDO (yellow pages);
- II. Training opportunities offered by institutions in developed and developing countries, classified by industrial branches and industrial functions;
- III. Courses of short duration and other courses that may be of interest as such or as part of longer, more comprehensive training programmes, offered by institutions other than UNIDO.

In chapter I, training opportunities are listed in chronological order, and in chapters II and III by country, in English alphabetical order.

To keep the size of the *Guide* within certain limits, the series of different courses of short duration, offered by the same organizer, have been grouped under a common heading. It is hoped that this will not inconvenience the reader to identify relevant courses.

According to its mandate, UNIDO is to increase or update the professional skills of technical, managerial and administrative personnel, including entrepreneurs, engaged in industry and its development. Therefore, with a few exceptions, academic courses that are part of the regular curricula of universities, vocational training institutes or similar institutions are not included in the *Guide*, since such activities fall within the competence of the International Labour Organisation (ILO) or the United Nations Educational, Scientific and Cultural Organization (UNESCO). Similarly, part-time courses are not included.

UNIDO is not in a position to give further details on the courses contained in chapters II and III; such additional information should be obtained by contacting the organizer, using the mailing address given in each entry. Further information on UNIDO training activities (chapter I) is contained in the "UNIDO Industrial Training Offer Programme 1991", which can be requested from the Industrial Human Resource Development Branch of UNIDO.

The training opportunities listed in the *Guide* are not limited to holders of UNIDO fellowships. Any qualified individual from a developing country may apply for a course or be nominated to attend. Such applications or nominations should be sent directly to the organizer of the course. *Applicants for UNIDO fellowships, however, must be nominated by their respective Government, and nominations should be routed through the local Resident Representative of the United Nations Development Programme (UNDP) to UNIDO.*

It is hoped that this issue of the *Guide* will continue to assist individuals in developing countries who seek industrial training to identify suitable courses. The twentieth issue of the *Guide*, which will cover courses offered in 1992, is scheduled to appear in late 1991.

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Préface

Le présent *Répertoire* des possibilités de formation industrielle offertes aux cadres de pays en développement est la dix-neuvième édition d'un document publié pour la première fois en 1972. Il est conforme à l'Acte constitutif de l'Organisation des Nations Unies pour le développement industriel (ONUDI), adopté en avril 1979, qui cite parmi les fonctions de l'Organisation celles qui consistent à :

“Organiser et favoriser des programmes de formation industrielle visant à aider les pays en développement à former le personnel technique et les autres personnels appropriés nécessaires à divers stades pour leur développement industriel accéléré.”

Le présent *Répertoire* 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.

Ce *Répertoire* comprend trois chapitres :

- I. Possibilités de formation offertes par l'ONUDI elle-même (pages jaunes);
- II. Possibilités de formation offertes par des institutions des pays développés et en développement, classées par secteur industriel et fonction industrielle;
- III. Stages de courte durée et stages n'entrant pas dans les catégories précitées qui présentent un intérêt en eux-mêmes ou qui peuvent utilement s'insérer dans des programmes de formation plus longs et plus vastes offerts par des institutions autres que l'ONUDI.

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.

Afin de conserver au répertoire des dimensions raisonnables, les différents stages de courte durée offerts par une même organisation ont été regroupés sous une rubrique commune. On espère que cette présentation n'empêchera pas le lecteur de repérer les stages qui l'intéressent.

L'ONUDI a pour mandat d'améliorer ou de mettre à jour les compétences professionnelles des techniciens, des gestionnaires et des administrateurs de haut niveau, et notamment des chefs d'entreprise, qui travaillent dans l'industrie et participent à son développement. A quelques exceptions près, les matières figurant ordinairement aux programmes des universités, des instituts de formation professionnelle et des établissements similaires n'ont pas été retenues, car elles relèvent de la compétence de l'Organisation internationale du Travail (OIT) ou de l'Organisation de Nations Unies pour l'éducation, la science et la culture (UNESCO). Il en a été de même pour les stages à temps partiel.

L'ONUDI n'est pas en mesure de fournir des détails supplémentaires sur les stages cités aux chapitres II et III; on s'adressera à cette fin à l'organisateur lui-même, dont l'adresse postale figure sous chaque rubrique. On trouvera des renseignements complémentaires sur les activités de formation de l'ONUDI (chap. Ier) dans la brochure intitulée "Programme de formation industrielle proposé par l'ONUDI pour 1991", que l'on peut obtenir auprès du Service de la mise en valeur des ressources humaines pour l'industrie de l'ONUDI.

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 ce cas, les demandes ou les candidatures doivent être présentées directement à l'organisateur du stage considéré. *Les candidats à des bourses de l'ONUDI, quant à eux, doivent être désignés par leur gouvernement, et leurs dossiers doivent être soumis à l'Organisation par l'intermédiaire du représentant résident local du Programme des Nations Unies pour le développement (PNUD).*

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 vingtième édition du répertoire, qui indiquera les possibilités de formation offertes pour l'année 1992, devrait être publiée à la fin de 1991.

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Prefacio

La presente compilación de oportunidades de capacitación industrial para personal de países en desarrollo constituye la decimonovena edición de una publicación que apareció por vez primera en 1972. Se ajusta a la Constitución de la Organización de las Naciones Unidas para el Desarrollo Industrial (ONUDI) aprobada en abril de 1979, que prescribe, entre otras funciones de la Organización, la siguiente:

“Organizará y apoyará programas de capacitación industrial tendientes a prestar asistencia a los países en desarrollo en la capacitación del personal técnico y de otras categorías pertinentes que resulte necesario en diversas fases para su desarrollo industrial acelerado.”

Dicha compilación o *Repertorio* se basa en las respuestas a un cuestionario enviado a gobiernos, organizaciones, instituciones u otras entidades que se ocupan de la capacitación industrial, en el que se solicitaba información sobre sus respectivas actividades de capacitación. 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.

El *Repertorio* se divide en tres capítulos:

- I. Oportunidades de capacitación organizada y ofrecida por la ONUDI (páginas amarillas);
- II. Oportunidades de capacitación ofrecidas por instituciones en países desarrollados y en desarrollo, clasificadas por ramas industriales y funciones industriales;
- III. Cursos de corta duración y otros cursos que puedan ofrecer interés por sí mismos o como componentes de programas de capacitación de contenido más amplio, ofrecidos por instituciones distintas de la ONUDI.

En el capítulo I las oportunidades de capacitación se enumeran por orden cronológico, y en los capítulos II y III se presentan en el orden alfabético inglés de los nombres de los países en que se ofrece la capacitación.

A fin de limitar las dimensiones del *Repertorio* se agrupan bajo un encabezamiento común las series de diferentes cursos de corta duración ofrecidos por el mismo organizador. Se espera que ello no causará entorpecimientos al lector para encontrar los cursos que le interesen.

Conforme a su mandato, la ONUDI ha de acrecentar o actualizar la competencia profesional del personal técnico, directivo y administrativo, incluidos los empresarios, dedicado a actividades relacionadas con la industria y el desarrollo. Por consiguiente, con escasas excepciones, no se han incluido en el *Repertorio* los cursos académicos que forman parte de los planes de estudio ordinarios de universidades, institutos de capacitación profesional o instituciones similares, ya que tales actividades son de la competencia de la Organización Internacional del Trabajo (OIT) o de la Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO). Tampoco se incluyen los cursos a tiempo parcial.

La ONUDI no está en condiciones de dar más detalles sobre los cursos enumerados en los capítulos II y III; la información suplementaria al respecto debe obtenerse solicitándola al organizador, cuya dirección postal figura junto a cada entrada. En el "Programa de Ofertas de Capacitación Industrial de la ONUDI para 1991", que puede solicitarse a la Subdivisión de Perfeccionamiento de Recursos Humanos Industriales de la ONUDI, se ofrece más información sobre las actividades de capacitación de la Organización (capítulo I).

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 puede solicitar su admisión o ser presentada como candidato para participar en uno de estos cursos. Esta solicitud o candidatura puede 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 local del Programa de las Naciones Unidas para el Desarrollo (PNUD).*

Se espera que esta edición del *Repertorio* siga siendo de utilidad para que las personas de los países en desarrollo que desean recibir capacitación industrial encuentren los cursos adecuados. La publicación de la vigésima edición del *Repertorio*, que comprenderá los cursos que vayan a ofrecerse en 1992, está prevista para finales de 1991.

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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 for several 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, lectures, in-plant training and study tours. During an evaluation session at the end of each programme, participants assess the value and applicability of their newly acquired skills and knowledge in the light of conditions in their home country. Seminars and other group-training programmes have the same objectives: they offer theoretical instruction and, to the extent feasible, practical work.

This chapter contains all UNIDO group-training programmes scheduled for 1991, their implementation being subject to the availability of funds. For each training event it is indicated whether the programme is regional or interregional, as well as the language in which it will be conducted; participants must be proficient in that language in order to derive maximum benefit from the programme.

Formal applications 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 requested to notify UNIDO as early as possible of their interest in participating, and any queries regarding these programmes should reach UNIDO as far in advance as possible.

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

Chapitre premier. 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'institutions spécialisées 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 : des stages de formation collective en entreprise, qui durent de deux à cinq mois, et des séminaires ou autres stages de formation collective, qui durent plusieurs 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 conférences, une formation pratique 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 l'intérêt et la valeur pratique des compétences et des connaissances qu'ils viennent d'acquérir à la lumière des conditions existant dans leur pays d'origine. Les séminaires et autres stages de formation collective répondent aux mêmes objectifs et comportent une formation théorique et, dans la mesure du possible, des travaux pratiques.

Le présent chapitre mentionne tous les programmes de formation collective de l'ONUDI prévus pour 1991, sous réserve que l'ONUDI dispose des fonds nécessaires à leur exécution. Les programmes sont organisés sur une base régionale ou interrégionale; ceci est clairement indiqué pour chacun des programmes figurant dans la liste, de même que la langue dans laquelle il se déroulera; il est essentiel que les participants maîtrisent cette langue pour retirer le maximum de bénéfice du programme.

Les candidatures ne doivent être présentées 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. Toute demande d'information concernant les programmes doit parvenir à l'ONUDI le plus tôt possible.

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

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

Service de la mise en valeur des ressources humaines pour l'industrie,
DIO
Organisation des Nations Unies pour le développement industriel
B.P. 300
A-1400 Vienne
Autriche

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 en determinadas esferas, 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 varias 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, conferencias, capacitación en el trabajo y viajes de estudio. En una sesión de evaluación que tiene lugar al final de cada programa, los participantes juzgan, a la luz de las circunstancias existentes en sus respectivos países, la utilidad y posibilidad de aplicación de la competencia y conocimientos recién adquiridos. Los seminarios y demás programas de capacitación colectiva tienen los mismos objetivos: ofrecen enseñanza teórica y, en la medida de lo posible, estudios prácticos.

Este capítulo contiene todos los programas de capacitación colectiva de la ONUDI previstos para 1991, si bien su realización está sujeta a la disponibilidad de fondos. Se indica, para cada actividad de capacitación ofrecida, si el programa tiene carácter regional o interregional, así como la lengua que se usará para dicha actividad; los participantes han de conocer bien esta lengua para sacar el máximo provecho del programa.

Las solicitudes oficiales de participación deben presentarse a la ONUDI a través de los conductos gubernamentales apropiados y por medio de los representantes residentes del PNUD, 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; asimismo, cualquier pregunta concerniente a los programas debe ser recibida en la ONUDI con la mayor antelación posible.

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

Puede obtenerse información más amplia 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)

JANUARY/JANVIER/ENERO

Quality improvement in industrial products

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/MAR^{CH}/MARZO

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

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:* March-June. *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: Lomonosov University
Moscow, Union of Soviet Socialist Republics

Rehabilitation of railway equipment

Short description: Upgrading of the 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: Basic theory of welding: processes and equipment of fusion welding, manual arc welding, gas-shielded welding, submerged arc welding, electroslag welding, gas, plasma welding and cutting, electron-beam welding, brazing and soldering, surfacing; processes and equipment of pressure welding; resistance welding, induction, cold diffusion, explosion, friction, ultrasonic welding; technology for welding of various structural materials; principles of fabrication of welded structures; organizational and economical aspects of welding production and training of welding specialists. Training in plants manufacturing electric welding equipment, in the metalworking industry as well as in 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)

Wheat 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

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 other relevant branch of engineering; 1-5 years of experience; employed in cement industry. English.

Host institution: Cement Research and Development Centre
Ankara, Turkey

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. English.

Host institution: Institute of Economy of Developing Countries
D-O-1157 Berlin, Germany

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:* April-July. *Invited countries:* Interregional 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

MAY/MAI/MAYO

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: 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, 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

Breve 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.

Organisme hôte : 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: 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

JULY/JUILLET/JULIO

Repair and maintenance of diesel engines

Short description: Basic working principles, construction and general characteristics of high-speed diesel engines, basic work involved in the assembly inspection and adjustment of such engines and techniques for their installation, maintenance, overhaul and repair. *Duration:* July-October. 15 weeks. *Invited countries:* Inter-

regional 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

Technology and equipment in electric welding

Short description: Basic theory of welding; processes and equipment of fusion welding, manual arc welding, gas-shielded welding, submerged arc welding, electroslag welding, gas, plasma welding and cutting, electron-beam welding, brazing and soldering, surfacing; processes and equipment of pressure welding; resistance welding, induction, cold diffusion, explosion, friction, ultrasonic welding; technology for welding of various structural materials; principles of fabrication of welded structures; organizational and economical aspects of welding production and training of welding specialists. Training in plants manufacturing electric welding equipment, in the metalworking industry as well as in laboratories. *Duration*: August-October. 14 weeks. *Invited countries*: Interregional programme. *Qualifications*: Degree in electrical or mechanical engineering or equivalent; at least 5 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)

SEPTEMBER/SEPTEMBRE/SEPTIEMBRE

Documentation et information industrielles

Breve description: Rôle de l'information dans le développement industriel; méthodes de recherche et d'extraction des données et leurs applications pratiques; méthodes de classification; systèmes d'information pour l'industrie. Formation pratique dans les domaines de l'information et de la documentation industrielles et visites d'instituts spécialisés chargés de fournir des renseignements à l'industrie. *Durée*: Septembre-octobre. 7 semaines. *Pays invités*: Programme interrégional. *Qualifications*: Diplôme universitaire ou diplôme équivalent; quelques années d'expérience pratique dans le domaine de l'information et de la documentation scientifiques et technologiques. Français.

Organisme hôte: Institut d'information scientifique et technique de l'URSS (VINITI)
Moscou, Union des Républiques socialistes soviétiques

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

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 of technology transfer and labour employment, issues of financing industrial development, project preparation, project appraisal; field trip and workshop. **Duration:** September-October. 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

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:** Interregional programme. **Qualifications:** Degree in metallurgy, chemistry, mechanical or electrical engineering; 1-5 years of experience in iron and steel industry; between 25 and 35 years of age. English.

Host institution: Eregli Iron and Steel Works
Eregli, 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:* Interregional 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

Man-made fibres

Short description: In-plant group training programme in the application of man-made fibres in textile processing; blending and quality control. *Duration:* September-October. *Invited countries:* Interregional programme. *Qualifications:* English.

Host institutions: 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 technologies 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, Germany

Small-scale foundry operations for least developed countries

Short description: Theoretical and practical training in 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 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; environmental 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: Upgrading of knowledge and skills in industrial processing of medicinal herbs. *Duration:* September. 3 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in pharmacy, chemistry or 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 power plant: design, operation and maintenance

Short description: Participants from least developed countries will gain from the experience of and the results achieved by a developing country; increased working knowledge on different aspects of energy management and efficiency; various tools and techniques to achieve fuel efficiency and increase energy productivity. *Duration:* October-November. 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

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. 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

Basic petrochemicals and production technologies

Short description: Theoretical and practical training and study visits with emphasis on production management and production processes for pyrolysis feedstock for ethylene production, downstream petrochemical products, polyolefins, aromatic hydrocarbons etc.; product quality, plant safety, maintenance, environmental control and energy management. *Duration:* 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in chemical, petrochemical or related engineering; 1-5 years of experience in the petrochemical industry; between 25 and 35 years of age. English.

Host institution: Training Centre of the Ministry of Petrochemical Industry
Bucharest, Romania

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. *Pays invités :* Programme régional pour les pays africains francophones. *Qualifications :* Ingénieurs et techniciens supérieurs.

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 les 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 : Bangui, République centrafricaine

Railway track

Short description: Group training programme in the 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. English.

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

Venue: United Kingdom
Kenya

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

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/industria de los materiales de construcción

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 : Cement processes and equipment, latest technological developments, optimization of production in new and old plants. *Commencing date* : To be arranged. *Duration* : 3 weeks. *Qualifications* : Engineers with managerial or supervisory responsibility in the production area of a cement plant. *Deadline for application* : 3 months before commencing date. *Fees* : DKr 70,000, including board and lodging and one week of plant visits.

Organizer : F.L. Smidth and Co. A/S
Plant Services Division
77, Vigerslev Allé
2500 Valby
Copenhagen, Denmark

Chemical industries/Industrie chimique/Industrias químicas

Maintenance, plant inspection and energy conservation in petroleum refineries

Short description : Corrosion and corrosion prevention; advanced non-destructive testing technology with demonstration; application of inspection technologies to shut-down

15/16/17

and on-stream inspections; overview of energy conservation; case study. *Commencing date:* To be arranged; *Duration:* 3 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* None.

Organizer: ÖMV Aktiengesellschaft
Otto-Wagner-Platz 5
1090 Vienna, Austria

Material testing, corrosion, inspection and overhaul in chemical plants

Short description: Material testing: mechanical, destructive and non-destructive testing methods. Corrosion: heat treatment, welding techniques, resistance of metals and alloys, properties of lubricants. Inspection and revision. *Commencing date:* Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

Organizer: Chemserv/Consulting
St.-Peter-Strasse 25
4020 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:* 7 weeks. *Qualifications:* Graduation and experience in industry. English. *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 July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

Chemical analysis of mineral samples

Short description: 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: Université catholique de Louvain
Laboratoire de traitement des minerais
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

Sciences et techniques verrières

Brève description : Formation scientifique et technique dans le domaine du verre; enseignement dans les sciences existantes et dans les disciplines ou techniques nouvelles. *Début du cours* : A arranger. *Durée* : 1-6 mois. *Qualifications* : Français, anglais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

Organisateur : Ecole supérieure du verre (ESV)
c/o CIFO P
1b, avenue Général Michel
6000 Charleroi, Belgique

Soluble and immobilized biocatalysts

Short Description: Enzyme kinetics, structure-function relationship of enzymes, purification methods of enzymes, methods for immobilization of enzymes and cells, applications of soluble and immobilized biocatalysts. *Commencing date*: November. *Duration*: 4 weeks. *Qualifications*: English. *Deadline for application*: 11 months before commencing date. *Fees*: \$US 500.

Organizer: University of Horticulture and Food Industry
Department of Chemistry and Biochemistry
P.O. Box 53
1502, Budapest, Hungary

Integrated development programming for the refining, petrochemical and chemical industries

Short description: Based on "learning by doing methodology" using a specially developed computer system called MIDAC (multiobjective interactive decision aid).

Commencing date: May, July. *Duration:* 3-4 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 2,500.

Organizer: Joint Systems Research Department of the Academy of Mining and Metallurgy and the Industrial Chemistry Research Institute
AGH (B1), Al. Mickiewicza 30
30-059 Krakow, Poland

Aflatoxin analysis and mycotoxins

Short description: Designed for scientists from developing countries; 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:* December 1990. *Fees:* To be arranged.

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

Pesticide residue analysis

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

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

Tropical soil analysis

Short description: Intended for laboratory workers; knowledge and skills needed to perform the most frequently requested routine soil and plant analyses. *Commencing date:* To be arranged. *Duration:* 6-12 weeks. *Qualifications:* Practical experience in laboratory work in soil science. English. *Deadline for application:* —. *Fees:* To be arranged.

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

Utilization of medicinal and aromatic plants in the pharmaceutical and related industries

Short description: Collection, post-harvest treatment and technology steps of medicinal and aromatic plants processing; distillation, extraction and separation; pharmaceutical equipment design, formulation and plant extracts; economic aspects, R and D, marketing and management. *Commencing date:* July. *Duration:* 21 days. *Qualifications:* University degree in pharmacy, chemistry, botany or chemical engineering. Minimum 3 years of experience in production and processing of medicinal and aromatic plants. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Joint UNIDO/Yugoslavia Centre
P.O. Box 323
21000 Novi Sad, Yugoslavia

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

Advanced electronics

Short description: Electronic principles revision, digital techniques revision, radio-system principles revision. *Commencing date:* March. *Duration:* 6 weeks. *Qualifications:* 3 years experience as workshop electronic technician. Trainee must have passed an aeronautical engineering or vocational training programme in radio/navigation systems/equipment. English. *Deadline for application:* —. *Fees:* DM 12,300.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Digital avionics—EFIS

Short description: Digital data transmission, EFIS system performance, system maintenance. *Commencing date:* November. *Duration:* 4 weeks. *Qualifications:* 3 years experience as avionic technician; successful completion of an aeronautical engineering training programme and successful completion of the course "advanced electronics". English. *Deadline for application:* —. *Fees:* DM 15,100.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Navigation equipment workshop inspector

Short description: ADF system/equipment, KDF 805, VHF-NAV system/equipment, KNR 630, KMR 675. *Commencing date:* August. *Duration:* 6 weeks. *Qualifications:* 3 years experience as radio/navigation technician in an avionic workshop; successful completion of an aeronautical engineering or vocational training programme in radio/navigation and successful completion of the course "advanced electronics". English. *Deadline for application:* —. *Fees:* DM 21,400.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Industrial electronic components and equipment for power utilities

Short description: High-level knowledge and practical skills in industrial electronics.
Commencing date: To be arranged. *Duration:* 10 weeks. *Qualifications:* Engineers and electrical technicians. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Industrial microprocessor hardware and software for power utilities

Short description: High-level knowledge and practical skills in industrial microprocessors.
Commencing date: To be arranged. *Duration:* 6 weeks. *Qualifications:* Engineers and electrical technicians. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Electronics and allied fields

Short description: Tailor-made individual programme for post-graduates on industrial subjects, with laboratory research, practical projects in various departments etc.
Commencing date: January. *Duration:* 50 weeks. *Qualifications:* Degree in electrical engineering or equivalent. English. *Deadline for application:* September 1990. *Fees:* f. 15,000.

Organizer: Philips International Institute of Technological Studies (PII) and
Eindhoven University of Technology (EUT)
Jonckbloetlaan 13
P.O. Box 218
5600 MD Eindhoven, Netherlands

Operation and maintenance of electric power-stations

Short description: Operation, control, testing, maintenance and repair of electric power-stations (coal-fired); safety of work and plant management. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Technicians and engineers specialized in mechanical, electrical or control instrumentation engineering. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Data communications

Short description: Principles and development of data communications; protocols, fibre optics, satellite systems and micro-waves. *Commencing date:* April. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* March. *Fees:* £1,800.

Organizer: Systec Training, TBIC
Nene College
St. Georges Avenue
Northampton NN2 7AL, United Kingdom

Digital electronics and ECAD simulation

Short description: Basic logic gates; design of combinational and sequential logic systems. The designed systems will be simulated by using an ECAD package. *Commencing date:* January. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £3,800.

Organizer: Systec Training, TBIC
Nene College
St. Georges Avenue
Northampton NN2 7AL, United Kingdom

Food-processing industries/Industrie alimentaire/ Industrias alimentarias

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

Brève 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: Société sucrière d'études et de conseils S.A.
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:* March, 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 trends. *Commencing date:* Throughout the year. *Duration:* 4-10 weeks. *Qualifications:* Professional qualifications. English, 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:* March. *Fees:* To be arranged.

Organizer: Berlin Humboldt University
Unter den Linden
D-O-1086 Berlin, Germany

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:* Food engineers and food chemists. *English.* *Deadline for application:* March. *Fees:* To be arranged.

Organizer: Berlin Humboldt University
Unter den Linden
D-O-1086 Berlin, Germany

Fruit sorting and packing

Short description: Treating and processing fruits for export; quality requirements of packing, and proceeding from harvesting to storage. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* —. *Fees:* To be arranged.

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

Quality of foods

Short description: Analytical survey of the different elements (essential and toxic) in different food samples. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* *English.* *Deadline for application:* December 1990. *Fees:* \$US 450.

Organizer: University of Horticulture and Food Industry
Department of Chemistry and Biochemistry
P.O. Box 53
1502 Budapest, Hungary

Agro-industry management

Short description: Management of agro-industrial enterprises with a view to increasing their efficiency and productivity, particularly of small- and medium-sized firms. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* *English.* *Deadline for application:* 3 months before commencing date. *Fees:* \$US 200.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Post-harvest technology for vegetables and fruits

Short description: Modern and appropriate technologies for the prevention of loss of vegetables and fruits. *Commencing date:* To be arranged. *Duration:* 3 weeks.

Qualifications: English. *Deadline for application:* 3 months before commencing date.
Fees: \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Certificación de calidad de productos alimentarios no tradicionales para la exportación

Breve descripción: Fortalecer las bases para lograr el incremento de las exportaciones de productos alimentarios no tradicionales a terceros mercados, como un factor conyuvante al desarrollo socioeconómico del país. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro Español de Metrología
Ministerio de Obras Públicas y Urbanismo
Dirección General del Instituto Geográfico Nacional
Madrid, España

Ciencia y tecnología de alimentos

Breve descripción: 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. *Asignaturas básicas:* 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 postcosecha 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. Español. *Fecha límite de inscripción:* 6 meses antes del curso. *Derechos de inscripción:* Ptas 154.000.

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

Control de calidad en alimentos

Breve descripción: Especialización en el control de calidad: frutas y hortalizas procesadas. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro Español de Metrología
Ministerio de Obras Públicas y Urbanismo
Dirección General del Instituto Geográfico Nacional
Madrid, España

Especialización en grasas

Breve descripción: Características generales de las grasas; análisis de las materias grasas; extracción del aceite de oliva; extracción y transformación de aceites de semillas y de orujo de aceitunas. Dichas asignaturas se desarrollan a nivel teórico y práctico. *Fecha*

de iniciación: Octubre. *Duración:* 6 meses. *Calificaciones:* Titulación universitaria superior o de grado medio. Español. *Fecha límite de inscripción:* Septiembre. *Derechos de inscripción:* Ptas 120.000.

Organizador: Instituto de la Grasa y sus Derivados (CSIC)
Avda. Padre García Tejero 4
41005 Sevilla, España

Milling technology

Short description: Wheat, rye and maize milling technology (theoretical and practical courses); basic scientific subjects relating to milling technology; physics and mathematics with emphasis on pneumatics, electrotechnics and programmable control systems; brewing technology and oat milling techniques; plant management. *Commencing date:* September. *Duration:* 10 months. *Qualifications:* Professional qualifications. German, English. *Deadline for application:* 1 year before commencing date. *Fees:* SwF 9,500.

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:* January. *Fees:* To be arranged.

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

Post-harvest fruit, vegetable and root crop technology

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

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

Post-harvest technology

Short description: Upgrading and updating of expertise in post-harvest activities. *Commencing date:* January, October. *Duration:* 3 months. *Qualifications:* Degree or equivalent in a relevant subject, or extensive experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Silsoe College
Silsoe
Bedford MK45 4DT, United Kingdom

Storage of durable agricultural products in the tropics

Short description: Principles, practices and management of the storage of cereals, pulses and other durable agricultural products at farmer and national levels. Post-harvest characteristics of durable crops, potential causes of deterioration and methods of prevention and control. *Commencing date:* August. *Duration:* 4 months. *Qualifications:* Degree or equivalent in chemistry; several years of experience in analytical work, particularly in pesticide residue analysis. English. *Deadline for application:* June. *Fees:* To be arranged.

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

Organization and management of spare parts in agricultural and food-processing industries

Short description: Operation, management and manufacture of spare parts for agricultural machinery for co-operative organizations, private farmers and food-processing plants, with emphasis on timely replacement of spare parts. *Commencing date:* June. *Duration:* 40 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* March. *Fees:* —.

Organizer: Joint UNIDO/Yugoslavia Centre
P.O. Box 323
21000 Novi Sad, Yugoslavia

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

Brève 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 :* Juin. *Droits d'inscription :* FB 80 000.

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

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:* April, September. *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: Designed 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. Sorting and judging hides and skins, and semi-manufactured and finished leather; maintenance of machines and safety measures. *Commencing date:* April, September. *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

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:* April, September. *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

Basic leather production techniques

Short description: Theory and practice of leather manufacture; shoe uppers, clothing vegetable or chrome tanned; hair-on, calf, goat, sheep, reptile. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

Organizer: National Leathersellers Centre
Nene College
Moulton Park
Northampton NN2 7AL, United Kingdom

Physical testing and chemical analysis of leathers, chemical and process liquors

Short description: Application of IULTC methods in a quality-control laboratory; sampling, sample preparation, physical and fastness tests on leathers; analysis of chrome and vegetable tanning materials and leathers; analysis of tannery waste liquors. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

Organizer: National Leathersellers Centre
Nene College
Moulton Park
Northampton NN2 7AL, United Kingdom

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

Vibration control by balancing

Short description: Statics and dynamics of unbalanced rigid rotors; dynamic measuring procedure; procedures for balancing; balancing quality; experimental determination of the required balance quality. *Commencing date:* Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

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: Spoorwegmaterieel en Metaalconstructies, BN
Vaartdijkstraat 5
8200 Bruges, Belgique

Airframe/engine helicopter technician

Short description: General engineering—workshop practices, mechanical engineering—maintenance practices, helicopter engineering, helicopter maintenance practices. *Commencing date:* April. *Duration:* 40 weeks. *Qualifications:* Vocational training as mechanic, experience in general mechanical work (semi-skilled). English. *Deadline for application:* —. *Fees:* DM 67,000.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Avionics helicopter technician

Short description: Basic technical training, basic helicopter training, helicopter engineering (electrics and avionics), helicopter maintenance practices. *Commencing date:* April. *Duration:* 40 weeks. *Qualifications:* Experience in general electrical work (semi-skilled). English. *Deadline for application:* —. *Fees:* DM 67,000.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Agricultural machinery (repair and fitting)

Short description: Maintenance system for agricultural machinery; use of work tools, fitting tools and devices. *Commencing date:* To be arranged. *Duration:* To be

arranged. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

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:* To be arranged. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

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

NC and CNC machine tools

Short description: Basic and specialized training in production, maintenance, programming technologies etc. *Commencing date:* January. *Duration:* 11-18 weeks. *Qualifications:* English, French, Spanish. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

Organizer: Szakmai Továbbképző és Atképző V.
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Operation, maintenance and repair of agricultural machinery and tools

Short description: Systematic approach to and practical training in the operation and maintenance of agricultural machinery. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* —. *Deadline for application:* —. *Fees:* To be arranged.

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

Welding experts

Short description: Welding techniques for materials of different types and thickness (according to DIN 8560). *Commencing date:* January. *Duration:* 6 weeks. *Qualifications:* Welders or metal-workers with 2 years of experience. English, French, Spanish. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

Organizer: Szakmai Továbbképző és Atképző V.
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Application of plastics in machine industries

Short description: Classification of plastics and their characteristics; suitability for making machine parts, components and assemblies such as gears, pulleys, bushes, washers, protective covers etc.; selection of materials, manufacturing technology, tools and procedures, quality inspection. **Commencing date:** To be arranged. **Duration:** 5 weeks. **Qualifications:** Technicians and engineers involved in the design and development of machines and machine parts. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Chipless treatment technology

Short description: Foundry technology, forming of metals including plastics processing: materials, related technology, quality inspection, safety of work, workshop practice. **Commencing date:** To be arranged. **Duration:** 10 weeks. **Qualifications:** Mechanical engineers and technicians. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Computer-aided design of agricultural machinery

Short description: Basic and special-purpose software for the design of machine constructions. **Commencing date:** February, August. **Duration:** 2-3 months. **Qualifications:** Higher technical education (mechanical), with knowledge of computers, preferably specialized in agricultural machinery. English. **Deadline for application:** 1 month before commencing date. **Fees:** To be arranged.

Organizers: Industrial Institute of Agricultural Machinery
Starolecka 31
60-963 Poznań, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

Electric welding

Short description: Metals and their characteristics; reading technical drawings, electric welding principles; welding materials, equipment and technology; quality inspection; occupational safety, on-the-job training; welding shop equipment. **Commencing date:** To be arranged. **Duration:** 7 weeks. **Qualifications:** Skilled workers and foremen. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Gas welding

Short description: Metals and their characteristics; reading technical drawings; gas welding principles and methods; welding materials; gas welding and cutting equipment, technology, weld finishing, weld defects and quality inspection; occupational safety, on-the-job training; welding shop equipment. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Skilled workers and foremen. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Paint and plastic coatings for corrosion protection of metal products

Short description: Choice of corrosion protection according to service conditions; testing the properties of coating materials and coatings; surface preparation for coating with regard to the base material and future service conditions; deposition of paint and plastic coatings; control of properties of applied coatings. *Commencing date:* To be arranged. *Duration:* 3-4 weeks. *Qualifications:* Engineers, technical high-school graduates. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizers: Institute of Precision Mechanics
Duchnicka 3
00-967 Warsaw, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

Plastic tool design and manufacturing

Short description: Plastics and their characteristics; processing technology; injection and compression moulding machines; design, development, construction and manufacturing technology of moulds for processing of plastic materials. *Commencing date:* To be arranged. *Duration:* 5 weeks. *Qualifications:* Technicians and engineers. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Programming of NC/CNC lathes (advanced)

Short description: Computer programming for numerically controlled lathes, POUT-APT system, effective use of post-processor programmes, and adaptive control and optimization of cutting parameters for turning. *Commencing date:* To be arranged. *Duration:* 4 months. *Qualifications:* Degree in mechanical engineering. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Programming of NC/CNC milling machines (advanced)

Short description: Computer programming for NC, CNC and DNC milling machines with 3-axis control, POUT-APT system, effective use of post-processor programmes, and adaptive control and optimization of cutting parameters for milling. *Commencing date:* To be arranged. *Duration:* 4 months. *Qualifications:* Degree in mechanical engineering. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Protective painting of metals

Short description: Surface finishing and protection of metals (structures and components) by coating with appropriate paints; workshop practice in the use of various painting materials and methods of surface coating, quality inspection and safety of work. *Commencing date:* To be arranged. *Duration:* 7 weeks. *Qualifications:* Foremen and technicians. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Thermal spraying

Short description: Basic technologies of thermal spraying; building-up machine elements; anti-corrosion coatings. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Engineers, technical high-school graduates, skilled and unskilled workers. English, German. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizers: Institute of Precision Mechanics
Duchnicka 3
00-967 Warsaw, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

Agricultural machinery management

Short description: Managerial and technical skills for staff responsible for agricultural machinery and support services needed to keep the machines operating efficiently, with particular reference to developing countries. *Commencing date:* July. *Duration:* 3 months. *Qualifications:* Degree or equivalent. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Silsoe College
Silsoe
Bedford MK45 4DT, United Kingdom

CNC machining

Short description: Theory and practice in CNC milling (3-axis) and turning (2-axis).

Commencing date: To be arranged. *Duration:* 4-26 weeks. *Qualifications:* English.

Deadline for application: To be arranged. *Fees:* To be arranged.

Organizer: East Kilbride and District Eng. GTA Ltd.
3 Law Place, Nerston Industrial Estate
East Kilbride G74 4PP, Scotland, United Kingdom

Machining processes

Short description: Practical training in the skilful operation of machine tools, including centre lathes, horizontal and vertical milling machines, surface grinders and shaping machines. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth and Paisley, 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

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; classification 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

Tenth RIA motive power course

Short description: The course covers all aspects of railway rolling stock engineering, and places emphasis on diesel traction, electric traction, rolling stock construction,

maintenance and overhaul. *Commencing date:* June. *Duration:* 6 weeks. *Qualifications:* Graduate engineers with minimum 3-5 years railway experience. English. *Deadline for application:* March. *Fees:* To be arranged.

Organizer: Railway Industry Association
6 Buckingham Gate
London SW1E 6JP, United Kingdom

Welding technology

Short description: Practical training in various forms of welding processes according to a variety of international standards. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth and Paisley, United Kingdom

Metallurgical industries/Industrie métallurgique/ Industrias metalúrgicas

Productivity improvement in the foundry industry

Short description: Productivity increase by improving management and technical aspects; with emphasis on ferrous castings. *Commencing date:* January. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Design and manufacture of spare parts

Short description: Significance, classification and manufacturing technology for cast spare parts. *Commencing date:* April. *Duration:* 10 weeks. *Qualifications:* Engineers. English. *Deadline for application:* March. *Fees:* —.

Organizer: Foundry Research Institute
Zakopiańska 73
30-418 Kraków, Poland

Increasing the durability of high-speed steel tools

Short description: Methods of life extension of high-speed steel tools; thermo-chemical treatment (cementation); oxynitriding with eventual selective gas (ammonia) nitriding; oxynitriding, nitriding and oxidation in the fluidized bed; installations for carrying out these processes; properties of the treated tools, methods of testing; examples of industrial applications. *Commencing date:* To be arranged. *Duration:* 1 week.

Qualifications: Engineers, technical high-school graduates. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Institute of Precision Mechanics
3 Duchnicka
00-967 Warsaw, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
1/3 Wspolna
00-529 Warsaw, Poland

Electroplating technology

Short description: Basic principles; characteristics of protective metals; technology of modern metal finishing by electroplating; electroless plating; plating of plastics; chromium plating; aluminium anodizing; surface colouring; pollution control; safety of work; set up, operation and management of industrial electroplating workshops. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Engineers and technicians in related trades. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Metal heat-treatment technology

Short description: Materials, volume heat treatment, treatment of tool steel, heat treatment in gas environment and in vacuum conditions, heat-chemical treatment, surface heat treatment with related industrial practice. *Commencing date:* To be arranged. 1 month. *Qualifications:* Degree in engineering and experience in heat treatment. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Metal heat treatment by spraying

Short description: Technology of metal coating by hot spraying; materials; regeneration technology; anti-corrosive coating; quality inspection; safety of work; equipment required; workshop layout. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Technicians and engineers involved in metal heat treatment. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Foundry technology

Short description: Basic principles of metal founding with an appreciation of the effect of casting design and material selection to the finished products. Foundry principles in relation to specific processes in the manufacture and use of castings. *Commencing*

date: February, August. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley and Grangemouth, United Kingdom

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)

Breve 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'emballage; le transport des marchandises dangereuses; la corrosion; les machines d'emballage; visites d'usines et canaux de distribution. *Début du cours :* A arranger. *Durée :* 3 mois. *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-CPM Packaging Research Institute
P.O. Box 71
2600 AB Delft, Netherlands

Textile industries/Industrie textile/Industrias textiles

Application of man-made fibres in textile processing (blending and quality control)

Short description: Production of man-made fibres, manufacturing of blended yarns, spinning, weaving and knitting technologies, printing, dyeing and finishing of yarns and fabrics, mercerization and after-treatment processes, procedures for testing of fibres, yarns and fabrics, practical laboratory work, statistical evaluations of measurements. *Commencing date:* To be arranged. *Duration:* 5 weeks. *Qualifications:* Education in textile technology. English. *Deadline for application:* To be arranged. *Fees:* None.

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

Industrie textile

Brève 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

Brève 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 control and material testing in the textile and clothing industry

Short description: Quality control and different testing methods according to ISO, ASTM, BS, DIN and other national standards; evaluation techniques and trouble-shooting; covers all products of the textile and clothing industry (fibres, slivers, fabrics, non-wovens, ready-made products etc.). *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* University degree in engineering, technicians. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Institute for Quality Control in the Textile Industry
P.O. Box 27
1428 Budapest, Hungary

Garment CAD/CAM pattern design

Short description: CAD systems; benefit/cost calculations and purchase; departmental organization; pattern engineering and preparation for CAD systems; computer pattern modifications; interactive grading and its organization; marker making techniques; use of materials; cut planning. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* For pattern engineers and technical staff concerned with product development. *English. Deadline for application:* —. *Fees:* f. 7,500.

Organizer: TNO Fibre Research Institute
Clothing Department
P.O. Box 236
7550 AE Hengelo (O), Netherlands

Garment technology

Short description: Quality control; improvement and costs; assembling techniques; machinery; organization, planning and production control; pattern engineering techniques; measurements and sizes techniques; grading; CAD systems; marker making; use of raw materials; cut planning; production automation; reduction of handling procedures. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Work and departmental managers in the clothing industry. *English. Deadline for application:* —. *Fees:* f. 10,000.

Organizer: TNO Fibre Research Institute
Clothing Department
P.O. Box 236
7550 AE Hengelo (O), Netherlands

Knitting and styling

Short description: Theoretical and practical training in product development in the knitting and 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; 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

Textiles

Short description: Testing of fibres, yarns, fabrics, knitted fabrics, non-wovens, carpets and garments; testing methods, interpretation of test results and formulation of specifications for specific end-uses. *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

Textile mill management

Short description: 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:* Graduates from a textile engineering college or equivalent; 2 years of 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

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. *Duration:* 6 months. *Qualifications:* Degree or equivalent. English. *Deadline for application:* September. *Fees:* To be arranged.

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

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

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

Timber technology and management

Short description: The course aims to train graduates or experienced technical personnel to diploma level in wood technology and management. Sawmilling, saw technology, drying, preservation, wood-based panels, furniture production, wood machining and timber engineering. *Commencing date:* September. *Duration:* 10 months. *Qualifications:* Graduates or non-graduates with several years of experience in forestry or a wood-related industry in a position of responsibility. English. *Deadline for application:* August. *Fees:* £4,645.

Organizer: Timber Technology Department
Buckinghamshire College
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

Timber utilization

Short description: Timber as a building material, seasoning (drying), preservation, grading and utilization. *Commencing date:* To be arranged. *Duration:* 11 weeks.

Qualifications: Forestry or timber-utilization background. English. *Deadline for application:* June. *Fees:* £2,900.

Organizer: Timber Research and Development Association (TRADA)
Overseas Operations
Stocking Lane, Hughenden Valley
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

Pulp and paper technology

Short description: Technology of semi, chemical and mechanical pulps; sulphite and sulphate pulps; pulp bleaching; fibre microscopy, analysis of fibres, chemistry; utilization derivatives. Technology of paper board, fillers, pigments; technology of surface finishing, coating; analysis and print test of paper. *Commencing date:* Throughout the year. *Duration:* To be arranged. *Qualifications:* English, German. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Institut za celulozo in papir Ljubljana
Bogišičeva 8
61001 Ljubljana, Yugoslavia

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

Matériaux composites

Brève 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 :* 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 : 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

Formation à l'Informatique technique et à la CAO en bâtiment, aménagement, génie urbain

Brève description : Préparation des concepteurs à : élaboration de leur propre cahier des charges de système CAO; étude et choix des systèmes proposés par les fournisseurs; utilisation, évolution ou élaboration de systèmes de CAO spécialisés. *Début du cours* : Octobre. *Durée* : 9 mois. *Qualifications* : Ingénieurs, architectes, urbanistes, formateurs dans un des domaines visés. *Date limite d'inscription* : 2 mois avant le début du cours. *Droits d'inscription* : F 41 000.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Stages individualisés pour cadres

Brève description : Formation complémentaire adaptée à l'exercice de nouvelles fonctions. *Début du cours* : A arranger. *Durée* : A arranger. *Qualifications* : Ingénieurs recherchant une qualification technique différente; cadres recherchant un nouvel emploi dans un secteur en développement. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Vérification

Short description: Theoretical training of verification officers in the testing of measuring instruments subject to mandatory verification. *Commencing date*: September. *Duration*: 3 months. *Qualifications*: Germ. *Deadline for application*: March. *Fees*: To be arranged.

Organizer: German Academy of Metrology
Verification School at the Bavarian State Office of Weights and Measures
Franz-Schrank-Strasse 9
D-W-8000 Munich 19, Germany

Hydrology

Short description: Advanced theoretical and practical hydrological methods used in developing water resources management. *Commencing date*: February. *Duration*: 6 months. *Qualifications*: Bachelor's degree or equivalent level of academic studies

and 2 years experience in hydrology. English. *Deadline for application:* September 1990. *Fees:* \$US 8,500.

Organizer: Water Resources Research Centre (VITUKI)
P.O. Box 27
1453 Budapest, Hungary

Irrigation mechanics

Short description: Operation and maintenance of irrigation machines and devices. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

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

Labour-management co-operation

Short description: The dynamics of labour-management co-operation in the context of the Japanese experience; identification of measures for implementation in the trainees' respective organizations. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Video programme production techniques

Short description: Connect, adjust and operate video equipment for programme production. *Commencing date:* March. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* ¥687,500 (including lunches on training days).

Organizer: International Cooperation Division
Sony Corporation
7-35 Kitashinagawa-6, Shinagawa
Tokyo 141, Japan

Cutter suction dredging

Short description: Soil mechanics, hydraulic engineering, dredge pump, sandfill, cutter suction dredge, maintenance, anchoring, survey, instrumentation and automation; estimating, planning, tendering, contract; safety, environmental impact. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Senior technical and operational staff of dredging institutes and consultants. *Deadline for application:* 3 weeks before commencing date. *Fees:* f. 43,100.

Organizer: DEMAS
P.O. Box 403
2260 AK Leidschendam, Netherlands

Venue: DEMAS
Vlietweg 17
2266 KA Leidschendam, Netherlands

Housing, planning and building

Short description: Urban management and planning; analysis and communication; public-sector interventions in housing; resource management and the role of organizations; land issues; integration of development; appraisal; excursions and selected complementary course units. *Commencing date:* January. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree or equivalent in a relevant field of study. *Deadline for application:* October 1990. *Fees:* f. 10,000.

Organizer: Institute for Housing Studies (IHS)
P.O. Box 20718
3001 JA Rotterdam, Netherlands

Hydraulic engineering

Short description: Six branches: hydraulic engineering in upland areas; hydraulic engineering in lowland areas; land and water development; experimental and computational hydraulics; port engineering; coastal and offshore engineering. *Commencing date:* October. *Duration:* 11 months (additional 6 months for Master's programme). *Qualifications:* Bachelor's degree in civil engineering or related science. English. *Deadline for application:* August. *Fees:* f. 7,000, including field trips.

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

Modernization and management of irrigation systems

Short description: Improvement, management, operation and maintenance of irrigation systems. *Commencing date:* September. *Duration:* 6 weeks. *Qualifications:* Professionals from South and South-East Asia, with 5-10 years of relevant practical experience in land and water development. English. *Deadline for application:* July. *Fees:* f. 7,500.

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

Trailing suction hopper dredging

Short description: Soil mechanics, hydraulic engineering, dredge pump, dumping grounds, trailing suction dredge, maintenance, survey, instrumentation and automation; estimating, planning, tendering, contract; safety, environmental impact. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Senior technical and operational staff of dredging institutes and consultants. *Deadline for application:* 3 weeks before commencing date. *Fees:* f. 43,100.

Organizer: DEMAS
P.O. Box 403
2260 AK Leidschendam, Netherlands

Venue: DEMAS
Vlietweg 17
2266 KA Leidschendam, Netherlands

Metrología industrial

Breve descripción: Calibración, comprobación y verificación de los instrumentos de medida y control, empleados en los procesos industriales. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro Español de Metrología
Ministerio de Obras Públicas y Urbanismo
Dirección General del Instituto Geográfico Nacional
Madrid, España

Metrología legal

Breve descripción: Métodos de medición y los instrumentos de medida, en lo relativo a las exigencias técnicas y jurídicas reglamentadas, para garantía pública en relación con la seguridad y precisión de las mediciones. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español y portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro Español de Metrología
Ministerio de Obras Públicas y Urbanismo
Dirección General del Instituto Geográfico Nacional
Madrid, España

Cross-technical subjects

Short description: Basic training in measuring, maintenance and technical drawings; advanced training in metrology and technical drawings or in maintenance. *Commencing date:* April. *Duration:* 8 weeks. *Qualifications:* Theoretical background in mechanical engineering; relevant experience as instructor, supervisor or technician. *English.* *Deadline for application:* January. *Fees:* \$US 11,000.

Organizer: SWEDEC International AB
Rehnegatan 20
Box 19090
104 32 Stockholm, Sweden

Basic engineering skills

Short description: Preparatory course for Engineering Industry Training Board (EITB) certification. *Commencing date:* September. *Duration:* 38 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £397 per week.

Organizer: Eaton Hall International
Retford
Nottinghamshire DN22 OPR, United Kingdom

Drilling engineering

Short description: Engineering skills used in the drilling industry. *Commencing date:* To be arranged. *Duration:* 9 weeks. *Qualifications:* Engineers or graduates in a relevant scientific discipline. *English.* *Deadline for application:* 6 months before commencing date. *Fees:* £3,660.

Organizer: Drilling and Production Training Centre
Blackness Avenue
Altens
Aberdeen AB1 4QR, Scotland, United Kingdom

Housing for developing countries

Short description: Formulation and implementation of low-income housing programmes and projects: sites and services, squatter upgrading schemes, assessment of project affordability, project cost recovery methods, evaluation of housing projects and programmes, information technology. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent, or relevant experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* £3,200.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

Infrastructure for low-income urban housing

Short description: Post-graduate diploma course for engineers, architects and planners holding appointments with organizations providing housing in developing countries. Includes: management; site preparation; water; sanitation; solid waste; building; access. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience or relevant degree or equivalent. English. *Deadline for application:* July. *Fees:* £5,500 (including residence and meals).

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

Irrigation and water resources

Short description: Post-graduate diploma course for professionals concerned with irrigation in developing countries. Includes: planning; design; structure; drainage; management; reservoir design; earth dams; river engineering; ground water; resource evaluation. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience or relevant degree or equivalent. English. *Deadline for application:* 2 months before commencing date. *Fees:* £5,500 (including residence and meals).

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

Roads maintenance management and practice

Short description: Efficient and effective maintenance of roads through improved technical knowledge and better management techniques. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Professional engineers. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Science laboratory instrumentation

Short description: Instrument electronics; digital electronics; computing; instrumentation; fault location; maintenance; specialization. *Commencing date:* September (or by arrangement). *Duration:* 6 months. *Qualifications:* 5 years of relevant experience. *English. Deadline for application:* —. *Fees:* To be arranged.

Organizer: Bristol Polytechnic
Coldharbour Lane, Frenchay
Bristol BS16 1QY, United Kingdom

Scientific instrumentation

Short description: Instrumental measurement; instrumental electronics; signals and signal processing; computers and programming; data analysis; analytical systems; sensors; scientific data processing; computers in scientific instrumentation; instrumental errors and optimization. *Commencing date:* September. *Duration:* 12 months. *Qualifications:* Degree or equivalent. *English. Deadline for application:* —. *Fees:* To be arranged.

Organizer: Bristol Polytechnic
Coldharbour Lane, Frenchay
Bristol BS16 1QY, United Kingdom

Site planning and housing

Short description: Implementation of site planning and new towns in developing countries: physical planning, site design, infrastructural requirements and location, traffic planning. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent, or relevant experience. *English. Deadline for application:* 2 months before commencing date. *Fees:* £3,200.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

Water supply and sanitation for low-income communities

Short description: Blockwork and concrete; mechanical and electrical plant; excavation and pipework. *Commencing date:* July. *Duration:* 6 weeks. *Qualifications:* Appropriate professional experience in a developing country involving supervision of artisans working on water-supply and sanitation programmes. *English. Deadline for application:* June. *Fees:* £2,500 (including residence and meals).

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

Development of housing projects and programmes

Short description: Planning theory and practice; cost/benefit analysis; evaluation of project through time; preparation of financial plans; financial ratios; project tenure system and ownership. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Bachelor's degree. *English. Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,950.

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

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: Electronic and pneumatic components, transmitters, operation amplifiers, transistor transducers, digital data-conversion units; arrangement of process-control units; configuration of and programs for the system; computer process-control manual; safety equipment; alarm system. *Commencing date:* Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

Work order processing

Short description: The computer system; issuing work orders; display screens for work orders; processing of different types of orders; registration of working time; decision on placing orders. *Commencing date:* Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

Formation action en automatisation de la production

Brève description : Résolution d'un problème d'automatisation posé par l'entreprise. *Début du cours :* A arranger. *Durée :* 4 à 12 mois selon le cas. *Qualifications :* Salariés de l'entreprise chargés du problème d'automatisation. Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Formation en automatique avancée et mécatronique

Brève description : Problèmes de la production, les outils indispensables à la mise en œuvre des techniques de l'automatique (robots industriels). *Début du cours :* Octobre. *Durée :* 6 mois. *Qualifications :* Techniciens supérieurs en mécanique ou électrotechnique ou niveau équivalent. Français. *Date limite d'inscription :* 2 mois avant la date de début du cours. *Droits d'inscription :* F 57 500.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Productique

Brève description : Problèmes de production, maîtrise de l'outil informatique en dessin assisté (DAO) de méthodes et programmation de machines à commande numérique. *Début du cours* : Octobre. *Durée* : 5 mois. *Qualifications* : Techniciens supérieurs ingénieurs en mécanique ou électromécanique avec 3 années d'expérience professionnelle. Français. *Date limite d'inscription* : 2 mois avant la date de début du cours. *Droits d'inscription* : F 32 000.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

CAD/CAM/CNC

Short description: Full-time attachment to the Industrial Centre to work on any one or more of the above subjects. *Commencing date*: To be arranged. *Duration*: 1-4 months. *Qualifications*: Degree or diploma holders. English. *Deadline for application*: —. *Fees*: To be arranged.

Organizer: Industrial Centre
Hong Kong Polytechnic
Hunghom, Kowloon
Hong Kong

Automated office

Short description: All aspects of office computerization 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

Mechatronics and its applications

Short description: Concept and applications of mechatronics to promote automation in the factory. *Commencing date*: To be arranged. *Duration*: 3 weeks. *Qualifications*: English. *Deadline for application*: 3 months before commencing date. *Fees*: \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Design and engineering, with personal computers

Short description: Application of personal computers by design departments of small industries in developing countries. *Commencing date*: February. *Duration*: 6 weeks. *Qualifications*: English. *Deadline for application*: 5 months before commencing date. *Fees*: To be arranged.

Organizer: European Industry Consultants
P.O. Box 3312
NL 3502 GH Utrecht, Netherlands

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:* January, July. *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. 12,500.

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

Application of microcomputers to engineering problems

Short description: Application of microcomputers in solving engineering problems; operating systems; FORTRAN programming language; computer graphics including AUTOCAD; structural calculations and designing using finite element method (FEM). *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* Degree in mechanical engineering. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Complex automation systems

Short description: Applications based on devices of INTEL DIGIT, distributed microprocessor system for complex automation. *Commencing date:* February or March. *Duration:* 3 weeks. *Qualifications:* Automation, design and production engineers. *English, Russian.* *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Industrial Institute MERA-PIAP
202 Jerozolimskie Str.
02-222 Warsaw, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

Programming and application of industrial robots

Short description: Industrial robots with high level of artificial intelligence. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* University or secondary technical education. *English.* *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Industrial Institute MERA-PIAP
202 Jerozolimskie Str.
02-222 Warsaw, Poland
Contact address:
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

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:* 12 weeks. *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

Computer-aided planning, design and geographic information systems

Short description: Application of computers for socio-economic analysis within local authorities. Use of microcomputers in solving problems of design, housing forecasting, project management, monitoring and development control. Introduction to computer programming and geographic information system. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent or practical experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* £3,200 (subject to increase).

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

Computer subjects

Short description: Introduction, lectures and "hands-on" training in writing programs for industrial and commercial applications in the popular programming languages. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

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

Smart software

Short description: Introduction to Smart word processor, communications, database, spreadsheet and graphics with project processing programming. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* —. *Deadline for application:* —. *Fees:* £275 per week.

Organizer: East Kilbride and District Eng. G.T.A. Ltd.
3 Law Place
Nerston Ind. Estate
East Kilbride G74 4PP, United Kingdom

Computer applications in management

Short description: Apply software as a management tool; use and upgrade a microcomputer; understand the capabilities of computerized systems; integrate computer applications into an organization's routine; and use major software

packages. *Commencing date:* February. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* \$US 6,150.

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

Computer programmer training

Short description: Comprehensive overview of data-processing principles and technology. *Commencing date:* January. *Duration:* 11 weeks. *Qualifications:* Bachelor's degree. *English.* *Deadline for application:* 1 month before commencing date. *Fees:* \$US 9,500.

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

Telecommunications for microcomputers

Short description: The value of telecommunications in information management; data communications concepts and terminology; transferring ASCII, word processing, databases, and spreadsheets in standard format; evaluate, design, install and maintain electronic bulletin boards; make informed choices on software, hardware and services. *Commencing date:* January. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,250.

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

Energy/Energie/Energía

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 :* —. *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* : —. *Droits d'inscription* : A arranger.

Organisateur : Imiex
200, rue du Chéra
4000 Liège, Belgique

Principles of renewable energy use

Short description: Scientific principles of renewable energy sources; technical feasibility of renewable energy systems; economic conditions for the use of renewable energy; components of small-scale energy supply systems; analysis, simulation and design of energy supply systems; case studies and experimental work. *Commencing date*: October. *Duration*: 11 months. *Qualifications*: Bachelor's degree or equivalent academic training. *Deadline for application*: January. *Fees*: DM 15,000.

Organizer: Department of Physics
University of Oldenburg
P.O. Box 2503
D-W-2900 Oldenburg, Germany

Distribution system equipment and techniques

Short description: In-depth understanding of the essential elements of distribution technology and practice. *Commencing date*: To be arranged. *Duration*: 50 weeks. *Qualifications*: Power utility technical personnel. English. *Deadline for application*: —. *Fees*: £Ir 9,214.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Distribution technology and practice for engineers

Short description: Specialized programme directed towards integrating engineers into the distribution function. Formal training in the essentials of distribution technology and "hands-on" training on an extensive range of distribution equipment and networks. *Commencing date*: To be arranged. *Duration*: 12 weeks. *Qualifications*: Graduate engineers. English. *Deadline for application*: —. *Fees*: £Ir 5,865.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Fossil-fuel power-plant operation

Short description: For power-plant operators and those being prepared for supervisory responsibility. Power-station technology and operation. *Commencing date*: To be

arranged. *Duration*: 26 weeks. *Qualifications*: Power-plant operators/supervisors. English. *Deadline for application*: —. *Fees*: To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Management accounting in a power utility

Short description: Upgrading the knowledge and expertise of middle-level executives in the accounting function. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: Executives in the accounting function. English. *Deadline for application*: —. *Fees*: To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Metering practices and testing procedures

Short description: Electric energy measurement intended for power-utility technicians who need to develop specialized metering skills and knowledge. *Commencing date*: To be arranged. *Duration*: 6 weeks. *Qualifications*: Existing or prospective metering technicians. English. *Deadline for application*: —. *Fees*: £Ir 1,718.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Operation and maintenance of distribution networks

Short description: For technicians and operatives engaged in the operation and maintenance of distribution networks. Skills for routine distribution-network operations. *Commencing date*: To be arranged. *Duration*: 10 weeks. *Qualifications*: Distribution-network technicians and operatives. English. *Deadline for application*: —. *Fees*: To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Power-distribution systems

Short description: Power-utility plant applied principles; HV substations and operating area activities; distribution-systems operations. *Commencing date*: To be arranged. *Duration*: 15 weeks. *Qualifications*: Distribution personnel. English. *Deadline for application*: —. *Fees*: To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Power-plant technology and operation for engineers

Short description: For power-station shift-charge engineers and prospective operations superintendents. Power-plant operation, efficiency and availability, with an emphasis on safety of personnel and plant. *Commencing date:* To be arranged. *Duration:* 32 weeks. *Qualifications:* Power-station shift-charge engineers/power-utility middle managers. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Power-utility management

Short description: Post-graduate course for successful executives of all disciplines who are engaged in a management career and who wish to broaden their knowledge of the general management of a modern electric-power utility so as to equip them for upward mobility. *Commencing date:* January. *Duration:* 6 months. *Qualifications:* University graduates or similar academic or professional qualifications. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Protection and control of distribution/transmission power systems

Short description: Engineering expertise in the application of power-utility protection relaying, including control schemes and instrumentation. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Power-system engineers. English. *Deadline for application:* —. *Fees:* £1r 6,183.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Technical skills for distribution/transmission systems

Short description: Technical development of power-utility trainees in the distribution/transmission function. *Commencing date:* To be arranged. *Duration:* 75 weeks. *Qualifications:* Technical staff. English. *Deadline for application:* —. *Fees:* £1r 14,410.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Energy management

Short description: Design and implementation of measures for improving energy utilization and productivity at the plant level. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Rural energy planning and environment

Short description: For district-level and regional officials in sectors of rural economy: rationalize rural energy and environment policy as related to the overall rural economy, and solve energy problems through efficient analysis and planning.
Commencing date: May. *Duration:* 9 weeks. *Qualifications:* Bachelor's or master's degree or equivalent; 2 years of professional experience. English. *Deadline for application:* February. *Fees:* f. 6,000.

Organizer: University of Twente, Enschede
in collaboration with
International Institute for Aerospace Survey and Earth Sciences
Enschede
Contact address:
University of Twente
Technology and Development Group
P.O. Box 217
7500 AE Enschede, Netherlands

Energy management

Short description: Methods to help reduce energy consumption in energy-intensive plants; design changes, re-vamp studies; computerized modelling and optimization techniques; techniques the host organization has employed to reduce its energy usage.
Commencing date: September. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

Organizer: ICI Chemicals and Polymers Ltd.
Process Plant Services
Room 103 N Building
Billingham, Cleveland TS23 1LB, United Kingdom

Environment/Environnement/Medio ambiente

Environmental protection, energy management and optimization

Short description: Control and monitoring of energy inputs; minimizing pollution of air and water; dispersion and analysis of airborne pollutants; waste-water control, separation of waste water and cooling water, water purification; competence of fire brigade, safety instructions, alarm systems; storage of hazardous materials.
Commencing date: Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

Dépollution des effluents de l'industrie textile

Brève description : La pollution engendrée par l'industrie textile; les sous-produits; la récupération de la chaleur. *Début du cours :* mars, avril ou mai. *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
69A, 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. English or French. *Deadline for application*: —. *Fees*: Approximately BF 40,000.

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

Resource conservation and environmental protection

Short description: International co-operation efforts, and technical measures to achieve resource conservation and environment protection. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: English. *Deadline for application*: 3 months before commencing date. *Fees*: \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Anaerobic waste-water treatment

Short description: Design, construction, operation and maintenance of anaerobic installations. *Commencing date*: June. *Duration*: 6 weeks. *Qualifications*: Bachelor's degree in civil, chemical or agricultural engineering. English. *Deadline for application*: 6 weeks before commencing date. *Fees*: f. 4,000.

Organizers: International Institute for Hydraulic and Environmental Engineering (IHE) and Wageningen Agricultural University
Contact address
International Institute for Hydraulic and Environmental Engineering (IHE)
P.O. Box 3015
2601 DA Delft, Netherlands

Environmental science and technology

Short description: Methods for understanding and counteracting harmful effects on the environment (air, soil and water) and of various kinds of pollution; industrialization, irrigation, fertilizers and pesticides, deforestation etc. *Commencing date*: October. *Duration*: 11 months (6 additional months for master's programme). *Qualifications*: Bachelor's degree in biology, chemistry or chemical engineering or related science. English. *Deadline for application*: 2 months before commencing date. *Fees*: f. 7,000, including field trips.

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

Low-cost water supply and sanitation

Short description: Various technologies and approaches in the field of low-cost water supply and sanitation; application of that knowledge in practical situations.
Commencing date: June. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree in civil, sanitary, mechanical or chemical engineering. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* f. 4,000.

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

Sanitary engineering

Short description: Water supply and sanitation in rural and urbanized areas, design of water and waste-water treatment plants and of water distribution and waste-water collection systems. *Commencing date:* October. *Duration:* 11 months (6 additional months for master's programme). *Qualifications:* Bachelor's degree in civil, sanitary, mechanical or chemical engineering. English. *Deadline for application:* August. *Fees:* f. 7,000, including field trips.

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

Water-quality management

Short description: Water-quality management in river and lake basins, deltas and estuaries for decision-makers and water experts involved in water-resources management. *Commencing date:* June. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree in civil, sanitary, mechanical or chemical engineering. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* f. 4,000.

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

Effluent treatment in coating divisions

Short description: Water and its quality for technological processes; rinsing problems; sewage treatment; recovery of valuable components; utilization of wastes. *Commencing date:* To be arranged. *Duration:* 3-4 weeks. *Qualifications:* Engineers, technical high-school graduates. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Institute of Precision Mechanics
3 Duchnicka Str.
00-967 Warsaw, Poland
Contact address
Office for the Promotion of Progress in Science, Technology and
Development
Wspolna 1/3
00-529 Warsaw, Poland

Community water supply and sanitation for development workers

Short description: Survey techniques; social appraisals; health; rural water supply; water treatment and distribution; management. *Commencing date:* April. *Duration:* 10 weeks. *Qualifications:* Appropriate professional experience; degree or equivalent. *English.* *Deadline for application:* February. *Fees:* Approximately £4,650 (including meals and accommodation).

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

Management in the water sector

Short description: Managing the continuing operations and maintenance of a total water system. Specifically aimed at those engaged in the water sector and related organizations. *Commencing date:* To be arranged. *Duration:* 8 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

Effluent treatment and disposal of tannery wastes

Short description: Current legislation for disposal of tannery wastes in various countries; treatment of tannery waste; hands-on analysis of effluents and experiments in aeration, coagulation, filtration and recycling of lime sulphide and chrome liquors. *Commencing date:* To be arranged. *Duration:* 4 weeks or longer. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

Organizer: National Leatherellers Centre
Nene College
Moulton Park
Northampton NN2 7AL, United Kingdom

Project preparation for environmental engineering

Short description: Interrelationships between the social, health, technical, economic, financial, institutional and environmental components. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience; degree or equivalent. *English.* *Deadline for application:* July. *Fees:* Approximately £5,500 (including meals and accommodation).

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

Water analysis and quality

Short description: Post-graduate diploma course for chemists and other scientists involved in water supply and sanitation in developing countries. Theory, laboratory and on-site testing; chemical, physical and bacteriological analysis; water treatment. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Appropriate degree or equivalent

qualification and practical experience. English. *Deadline for application*: February. *Fees*: Approximately £6,000 (including meals and accommodation).

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

Environmental management for international development

Short description: Building environmental ethics; ecological economics (strategies for environmentally sustainable development); controlling pollution; developing management and assessment tools; and developing environmental policy options. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: Bachelor's degree. English. *Deadline for application*: 2 months before commencing date. *Fees*: \$US 2,950.

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

Tannery water treatment

Short description: Treatment of tannery waste liquors; analysis of effluents; aeration, coagulation, filtration. *Commencing date*: October. *Duration*: 40 days. *Qualifications*: Professional qualifications. English. *Deadline for application*: 2 months before commencing date. *Fees*: To be arranged.

Organizer: Joint UNIDO/Yugoslavia Centre
P.O. Box 323,
21000 Novi Sad, Yugoslavia

Industrial design/Design industriel/Diseño industrial

Industrial design

Short description: 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*: None.

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

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

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*: 12 weeks.

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

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

Formation intensive à l'informatique

Brève description : Formation à la conception et au développement d'applications informatiques : informatique système; système d'information; informatique industrielle. *Début du cours :* Septembre. *Durée :* 8 mois. *Qualifications :* Ingénieurs, baccalauréat, avec 3 ou 4 ans d'expérience dans un domaine scientifique. Français. *Date limite d'inscription :* 15 jours avant le début du cours. *Droits d'inscription :* F 30 700.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Production-management information systems

Short description: Analysis, design and implementation of production-management information systems. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 200.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Management information systems

Short description: Manual and mechanical systems, computer technology and systems, control systems. *Commencing date:* March. *Duration:* 12 weeks. *Qualifications:* Graduates. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* £4,100.

Organizer: Royal Institute of Public Administration
Regent's College,
Inner Circle, Regent's Park
London NW1 4NS, United Kingdom

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 in computer memory; principles of designing a system of automatic indexing of Russian texts. *Commencing date:* September (or to be arranged). *Duration:* 4 weeks. *Qualifications:* University degree;

engaged in automatic information processing. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Institute of Scientific and Technical Information
20a, Usiyevicha
125219 Moscow, Union of Soviet Socialist Republics
Contact address:
UNIDO/USSR Training Center
20, 1st Schipovsky per.
113093 Moscow, Union of Soviet Socialist Republics

Information technology

Short description: Reference literature of science and technology; structure of the literature; services of the various information sources in those fields. *Commencing date:* September. *Duration:* 4 months. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately \$US 550.

Organizer: University of Wisconsin-Milwaukee
School of Library and Information Science
P.O. Box 413
Milwaukee, WI 53201, United States of America

Library automation

Short description: Current status of automation and networking activities among libraries; problems included in library automation. *Commencing date:* September. *Duration:* 4 months. *Qualifications:* English. *Deadline for application:* April. *Fees:* Approximately \$US 550.

Organizer: University of Wisconsin-Milwaukee
School of Library and Information Science
P.O. Box 413
Milwaukee, WI 53201, United States of America

Microcomputers for information resources management

Short description: Use and applications of microcomputers in various library and information-management functions. *Commencing date:* May. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* April. *Fees:* Approximately \$US 500.

Organizer: University of Wisconsin-Milwaukee
School of Library and Information Science
P.O. Box 413
Milwaukee, WI 53201, United States of America

Online information retrieval

Short description: Organizational, operational and developmental aspects of online data bases services, overview of the online community. *Commencing date:* September. *Duration:* 4 months. *Qualifications:* English. *Deadline for application:* April. *Fees:* Approximately \$US 550.

Organizer: University of Wisconsin-Milwaukee
School of Library and Information Science
P.O. Box 413
Milwaukee, WI 53201, United States of America

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

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 15 000-40 000 par mois.

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

Transport-oriented location planning

Short description: National economy and managerial economy aspects of location planning for industrial projects; 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
D-O-8010 Dresden, Germany

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*: March. *Fees*: To be arranged.

Organizer: TCIB/TCAC University of Transport and Communication
"Friedrich List"
Friedrich-List-Platz 1
D-O-8010 Dresden, Germany

Production planning and control

Short description: Organization; theory of production; work methods; manpower planning; bookkeeping and accounting; material-requirements planning; layout planning and line balancing; aviation maintenance; statistics; planning; scheduling and controlling. *Commencing date*: September. *Duration*: 10 weeks. *Qualifications*: Relevant professional experience. English. *Deadline for application*: —. *Fees*: DM 19,450.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Projets de développement communautaire et de création de revenus pour les jeunes

Brève description : Principes et méthodes du développement communautaire; travail en groupe; psychologie des adolescents; animation de groupes de jeunes; formation professionnelle; travail indépendant; organisation de projets de création de revenus; approche multidisciplinaire collective des projets de planification. *Début du cours :* Mai. *Durée :* 12 semaines. *Qualifications :* Formation professionnelle appropriée; 5 années d'expérience au moins de l'action sociale auprès des jeunes. Français. *Date limite d'inscription :* 3 mois avant le début du stage. *Droits d'inscription :* —.

Organisateur : The Golda Meir Mount Carmel International Training Centre
P.O. Box 6111
Haifa 31060, Israël

Adresse de l'organisme à contacter :

Pour tous renseignements complémentaires et les formulaires de demande d'admission, s'adresser aux missions diplomatiques ou consulaires israéliennes.

Organization of income-generating projects in small communities

Short description: Principles and methods of community development; basic economics; working with groups; human relations; co-operation; organization of income-generating projects; feasibility studies; production management, marketing and sales promotion; financial management; observation visits; practical projects. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* Persons engaged in promoting employment for women, organizing income-generating projects and/or involved in small-scale industries or businesses; with relevant professional training and 5 years experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* —.

Organizer: The Golda Meir Mount Carmel International Training Centre
P.O. Box 6111
Haifa 31060, Israel

Contact address:

Further information and application forms also available from Israeli Diplomatic or Consular Representatives.

Regional development planning

Short description: Fundamental concepts and current practices in regional development planning. *Commencing date:* April. *Duration:* 2 months. *Qualifications:* Government officials, researchers, trainers working in this field. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

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

Industrial estates and complexes

Short description: Management and planning aspects of industrial estates and complex development. Personalized introductions on development planning of industry and infrastructure, physical planning, location aspects, environmental planning, investment and costs, lay-out development, optimization. Programme includes further self-study of selected literature and field observations. *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
P.O. Box 21468
3001 AL Rotterdam, Netherlands

Community technology for rural development

Short description: Agriculture; water supply; sanitation; building; power; industry; roads; bridges; integrated rural development. *Commencing date:* September. *Duration:* 10 weeks. *Qualifications:* Relevant professional experience and/or degree or equivalent. *English.* *Deadline for application:* July. *Fees:* Approximately £5,000 (including meals and accommodation).

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

District-development planning and remote sensing

Short description: Organization and methods of decentralized rural development planning at local-authority or regional/subnational levels, focusing on employment planning and small-scale industrialization. Natural resource evaluation for rural planning using satellite images. Role playing and plan-preparation exercise. Lectures and seminars on rural development, project-appraisal, management problems, information technology. *Commencing date:* January. *Duration:* 14 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £4,300.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

District-development planning for developing countries

Short description: Organization and methods of decentralized rural development planning at local-authority or regional/subnational levels. Focus on employment planning and small-scale industrialization. Techniques of spatial analysis, district-information systems and computer maps. Role playing and plan-preparation exercise. Lectures and seminars on rural development. Project appraisal, management and implementation problems and information technology. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent, or practical experience. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* £3,200.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

Metropolitan planning for developing countries

Short description: Skills for organizing a 'structure' response to the mushrooming growth of metropolitan areas. Spontaneous housing areas, inadequate infrastructure, unemployment and under-employment, organizational problems. Applies structure-

plan methodology to case-study city from a developing country. Project appraisal, management and implementation problems, introduction to information technology. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent, or practical experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* £3,200.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

Women, technology and development policies

Short description: Economic, social and cultural roles of women, and the impact of technology on the process of development planning and implementation. Examples of successful projects to formulate policies for employment, small-scale industry, services and income-generating activities. Rural development, project appraisal and information technology. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Degree or equivalent, or practical experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* £3,200.

Organizer: Institute of Planning Studies
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

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

Brève description : Exposés et études de cas en relation avec la genèse d'idées de projets industriels, leur développement, l'étude de leur faisabilité, leur évaluation du point de vue de l'investisseur privé et de celui des gestionnaires publics, leur intégration dans un plan directeur de développement industriel. 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. *Début du cours :* A arranger. *Durée :* A arranger. *Qualifications :* Formation universitaire plus expérience professionnelle minimum de 2 ans. Français. *Date limite d'inscription :* 3 mois avant la date de début du cours. *Droits d'inscription :* A arranger.

Organisateur : Bureau d'ingénieurs-conseils Cadic-Gombert SA
123a, chaussée de Charleroi, boîte 7
1060 Bruxelles, Belgique

Investment engineering

Short description: Management and planning of projects; co-ordinating investments into the economic structure; technical issues of plant design. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Degree in engineering. English. *Deadline for application:* March. *Fees:* To be arranged.

Organizer: "Otto von Guericke" University of Technology
P.O. Box 124
D-O-3010 Magdeburg, Germany

Housing construction process management

Short description: Lectures, discussions, exercises, directed studies; excursions and selected complementary course units; introduction to project management and organization; planning and monitoring techniques; management of aided self-help projects. *Commencing date:* August. *Duration:* 19 weeks. *Qualifications:* Bachelor's degree or equivalent in a relevant field of study. English. *Deadline for application:* May. *Fees:* f. 10,000.

Organizer: Institute for Housing Studies (IHS)
Weena 718
P.O. Box 20718
3001 JA Rotterdam, Netherlands

Project management and programme administration

Short description: Training for managers and officials from developing countries. Recognize and define problems, and find solutions. *Commencing date:* February, April, September. *Duration:* 6 weeks. *Qualifications:* English, French. *Deadline for application:* 1 month before commencing date. *Fees:* f. 14,500.

Organizer: Management for Development Foundation (MDF)
Bosrand 28
P.O. Box 430
6710 BK Ede, Netherlands

Industrial project preparation, evaluation and financing

Short description: Basic concepts and tools of market, technical, financial and economic analysis enabling to prepare pre-investment studies and evaluate investment projects. Practical exercises and case-studies, including a computer software package (COMFAR). *Commencing date:* June. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* April. *Fees:* None.

Organizer: Central School of Planning and Statistics
Niepodleglosci 152
02-554 Warsaw, Poland

Development finance institutions (management and design)

Short description: For staff and prospective staff of banks and finance institutions in developing countries. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* University degree or senior-level experience. English. *Deadline for application:* March. *Fees:* Approximately £5,800.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Financial management

Short description: The role of Ministries of Finance, central banks and public enterprises in financial management. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Senior finance officials. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicolas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Implementation of rural projects and programmes

Short description: Field visits: computer workshop management; decision making, organization, motivation, managing change, conflict resolution and negotiation, logistics, CPM and managing finances. *Commencing date:* January and on request. *Duration:* 12 weeks. *Qualifications:* University degree or extensive experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £6,500.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Managing economic development

Short description: Skills in strategy formulation analysis, staff management, communication, management information systems, marketing and financial management; study visits. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent, with substantial experience. English. *Deadline for application:* May. *Fees:* Approximately £6,750.

Organizer: Aston Business School
Aston University
Aston Triangle
Birmingham B4 7ET, United Kingdom

Planning and appraisal of agro-industrial projects

Short description: Identification, design, appraisal, management and implementation of agro-industrial projects; co-ordination of the agricultural, industrial and commercial aspects of such projects. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* University degree and several years of relevant experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Development and Project Planning Centre
University of Bradford
Bradford BD7 1DP, United Kingdom

Planning and appraisal of industrial investments

Short description: Methods of identifying, appraising, financing and monitoring industrial development projects. *Commencing date:* January. *Duration:* 12 weeks. *Qualifi-*

cations: University degree and several years of relevant experience. English. Deadline for application: 1 month before commencing date. Fees: To be arranged.

Organizer: Development and Project Planning Centre
University of Bradford
Bradford BD7 1DP, United Kingdom

Procurement for development projects

Short description: Procurement skills needed to develop corporate strategies, the ability to recognize opportunities and to prepare for such negotiations. Commencing date: To be arranged. Duration: 4 weeks. Qualifications: Officers in government departments and ministries. English. Deadline for application: 1 month before commencing date. Fees: To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicolas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Project management

Short description: Managing complex projects; identifying the critical success factors for successful management of projects. Commencing date: June. 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

Public finance and financial management

Short description: A practical course in public finance and financial management. Commencing date: To be arranged. Duration: 3 months. Qualifications: University degree or proven administrative experience. English. Deadline for application: 1 month before commencing date. Fees: Approximately £2,800.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Financial management

Short description: Overview of accounting; types of accounts; financial statement analysis; preparation of financial statements; types of financial decisions; discounted cash-flow analysis; capital budgeting; making investment decisions; privatization; and computer applications. Commencing date: February. Duration: 3 weeks. Qualifications:

Bachelor's degree. English. Deadline for application: 2 months before commencing date. **Fees:** \$US 2,250.

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

Project analysis

Short description: Analyze 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. **Commencing date:** February. **Duration:** 4 weeks. **Qualifications:** Bachelor's degree or equivalent. **English. Deadline for application:** 2 months before commencing date. **Fees:** \$US 2,950.

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

Project analysis certificate programme

Short description: Project analysis; project management; computer workshop; and principles of management-information systems. **Commencing date:** February. **Duration:** 14 weeks. **Qualifications:** Bachelor's degree. **English. Deadline for application:** 2 months before commencing date. **Fees:** \$US 8,500.

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

Project management

Short description: Project identification; establishing project priorities; planning design; implementation; monitoring and evaluation. **Commencing date:** March. **Duration:** 4 weeks. **Qualifications:** Bachelor's degree. **English. Deadline for application:** 2 months before commencing date. **Fees:** \$US 2,950.

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

Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación

Maintenance of electric equipment and installations

Short description: Electric power supply, transformers, distribution system, switchgear, high- and low-voltage cable network, electric motors, gears and drives, dynamic balancing, preventive maintenance, measuring mechanical vibration, lifts, hoists and cranes, revisionary test on electrical equipment. **Commencing date:** Throughout the year.

except July and August. *Duration*: 4-6 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: To be arranged. *Fees*: S 27,000 per week.

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

Maintenance of instrument

Short description: Pneumatic transmitters, pneumatic computers, pneumatic control systems with P, PI, PID functions; pressure and temperature measurements and calibration, trouble-shooting, repair and calibration; electrical and electronic measuring devices, calibration of dry and wet gas-meters. *Commencing date*: Throughout the year, except July and August. *Duration*: 4-6 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: To be arranged. *Fees*: S 27,000 per week.

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

Maintenance planning

Short description: Organizing the staff, job descriptions; preventive maintenance; work orders; workplace and logistics; scheduling; material and tool administration, codes; operation manual for data processing; survey of cost centres. *Commencing date*: Throughout the year, except July and August. *Duration*: 4-6 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: To be arranged. *Fees*: S 27,000 per week.

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

Maintenance Industrielle

Brève description : 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 juillet et août. *Durée* : 1-3 mois. *Qualifications* : Technicien supérieur ou ingénieur. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

Organisateur : DGS International SA
Jubileumlaan 75
9000 Gand, Belgique

Maintenance management in metallurgy and engineering

Short description: Maintenance management, codification in maintenance, plant diagnostics and inspection, downtime and failure monitoring, repairs and spare-parts planning, computerized maintenance management. *Commencing date*: September.

Duration: 3 weeks. *Qualifications:* Managers/engineers with university degree and several years of relevant experience. English. *Deadline for application:* June. *Fees:* —.

Organizer: UNIDO-Czechoslovakia Joint Programme for Co-operation
Metallic Industries
Inorga Institute
Letenská 17
11806 Prague 1, Czechoslovakia

Formation supérieure de cadres de maintenance industrielle

Brève description : Formation complémentaire ou nouvelle en maintenance. *Début du cours :* Novembre. *Durée :* 7 mois. *Qualifications :* Ingénieurs ou assimilés, adjoints techniques ou responsables de maintenance. Français. *Date limite d'inscription :* 2 mois avant le début du cours. *Droits d'inscription :* F 36 000.

Organisateur : Institut National des Sciences Appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Airframe/engine maintenance inspector

Short description: Academic subjects, technical engineering, general engineering, aircraft engineering, engine engineering. *Commencing date:* April. *Duration:* 48 weeks. *Qualifications:* Tradesman training; 3 years of practical experience as mechanic in aircraft maintenance, overhaul, repair or modification; at least 6 months of experience in aircraft inspection. English. *Deadline for application:* —. *Fees:* DM 65,300.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Avionics maintenance inspector

Short description: Mathematics, engineering science, electric engineering, electrical measuring techniques, basic electronics, digital techniques, RF techniques, control techniques, electronic workshop practice, general aviation engineering, electrical engineering, electronic engineering. *Commencing date:* April. *Duration:* 48 weeks. *Qualifications:* Tradesman training, with at least 3 years practical experience as electric/electronic technician in the field of aircraft/equipment maintenance, overhaul, repair or modification and a minimum of 6 months experience in the field of system/equipment testing. English. *Deadline for application.* —. *Fees:* DM 65,300.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Communication equipment workshop inspector

Short description: HF-communication system/equipment-HF 220, VHF communication system/equipment-KY 196, intercommunication systems. *Commencing date:* July. *Duration:* 6 weeks. *Qualifications:* 3 years of experience as radio/navigation technician in an avionics workshop; successful completion of an aeronautical

engineering or vocational training programme: successful completion of an advanced electronics course. English. *Deadline for application*: —. *Fees*: DM 21,400.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Flight instrument workshop inspector

Short description: The atmosphere, earth magnetism, aerodynamics/kinematics, motion/acceleration, gyroscopic principles, basic electrics, measuring principles, digital techniques, flight instruments/engine control instruments, description, operation, testing, maintenance requirements. *Commencing date*: October. *Duration*: 6 weeks. *Qualifications*: 3 years of experience as instrument technician; successful completion of an aeronautical engineering or vocational training programme in flight instruments. English. *Deadline for application*: —. *Fees*: DM 21,700.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Maintenance management

Short description: Maintenance organization, technical publications and documentation, logistics support and supply, maintenance planning and scheduling, material-requirement planning, quality management, modification procedure, defects-report procedure, electronic data processing. *Commencing date*: June. *Duration*: 4 weeks. *Qualifications*: Experience in the supervision and management of maintenance, especially in aviation. English. *Deadline for application*: —. *Fees*: DM 8,200.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Transponder/DME workshop inspector

Short description: Equipment/system description KDM 706, circuit analysis and test procedures, testing and trouble-shooting. *Commencing date*: April. *Duration*: 6 weeks. *Qualifications*: 3 years of experience as radio/navigation technician in an avionic workshop; successful completion of an aeronautical engineering or vocational training programme in radio/navigation; successful completion of advanced electronics course. English. *Deadline for application*: —. *Fees*: DM 21,400.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Weather radar workshop inspector

Short description: Microwaves techniques-revision, system principles, system description, system testing, circuit analysis and test procedures, indicator, control board, processor board, signal processor, scan board, alpha numeric board, testing and trouble-shooting. *Commencing date*: June. *Duration*: 5 weeks. *Qualifications*: 3 years of experience as

radio/radar technician in an avionic workshop; successful completion of vocational training programme in radio/radar; successful completion of advanced electronics course. English. *Deadline for application*: —. *Fees*: DM 18,100.

Organizer: Dornier Luftfahrt GmbH
Training Department
Industriestrasse 1
D-W-8034 Germering, Germany

Maintenance

Short description: Regeneration of defective parts; material testing methods; diagnosis; agricultural economics; design to facilitate maintenance. *Commencing date*: June. *Duration*: 3 weeks. *Qualifications*: Engineers and technical staff in the field of agricultural machines and equipment. English. *Deadline for application*: March. *Fees*: To be arranged.

Organizer: Berlin-Wartenberg University of Engineering
Dorfstrasse
D-O-1127 Berlin, Germany

Maintenance of railway rolling stock

Short description: Maintenance cycles based on wear tests; technologies for the production of engines, goods wagons, passenger coaches and containers; diagnosis of wheelsets; application of laser for the regeneration of crankshafts, cylindrical bushings and wheelsets. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: Engineers in the field of railway vehicle maintenance, railway technicians. English, French. *Deadline for application*: To be arranged. *Fees*: —.

Organizer: Transportconsult International Berlin
Frankfurter Allee 216
D-O-1130 Berlin, Germany

Maintenance of track systems

Short description: Permanent-way instructions; application of track-laying units; testing instructions and minicomputer-aided testers; maintenance cycles; maintenance technologies and computer-aided workplace for technologists. *Commencing date*: To be arranged. *Duration*: 2, 3 and 4 weeks. *Qualifications*: Permanent-way engineers and technologists. English, French. *Deadline for application*: To be arranged. *Fees*: —.

Organizer: Transportconsult International Berlin
Frankfurter Allee 216
D-O-1130 Berlin, Germany

Maintenance and fitting of the electrical parts of vehicles

Short description: Basic knowledge of electrical and mechanical construction; practical experience necessary for the maintenance and repair of the electrical equipment of vehicles. *Commencing date*: To be arranged. *Duration*: To be arranged. *Qualifications*: Professional qualifications. English. *Deadline for application*: —. *Fees*: To be arranged.

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

Maintenance of biomedical equipment

Short description: Maintenance of x-ray, electro-medical and electro-mechanical equipment. *Commencing date:* April. *Duration:* 1 month. *Qualifications:* Bachelor's degree in electrical or electronics engineering, or 5 years of experience in a relevant field. *English.* *Deadline for application:* January. *Fees:* To be arranged.

Organizer: MEDICOR Training Centre
P.O. Box 150
1389 Budapest, Hungary

Maintenance and repair of instruments

Short description: Repair and maintenance work in several service laboratories specialized in various types of instruments. *Commencing date:* January. *Duration:* 6 months. *Qualifications:* Degree in electronic engineering; at least 3 years of experience. *English.* *Deadline for application:* September. *Fees:* SwF 4,900 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: Operation, maintenance and repair of agricultural machinery; instrumental diagnostics. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* —. *Fees:* To be arranged.

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

Video equipment maintenance techniques

Short description: Maintenance of the institutional/professional-use video equipment (monitor television, VTR, video camera, peripheral equipment and system troubleshooting). *Commencing date:* March. *Duration:* 5 weeks. *Qualifications:* Good standard of technical education; good eyesight, free of colour blindness. *English.* *Deadline for application:* To be arranged. *Fees:* ¥687,500 (including lunches on training days).

Organizer: Sony Corporation
International Cooperation Division
7-35, Kitashinagawa-6, Shinagawa
Tokyo 141, Japan

Maintenance

Short description: Maintenance organization and maintenance management for all kinds of industrial, agricultural and service-industrial purposes; machine maintenance, bearings, lubricating oils and greaves, cleaning and finishing metals, machining

processes, welding and soldering, all kinds of engines; mathematics and statistics, organization; study visits. *Commencing date:* January, August. *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 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

Increasing the durability of machines

Short description: Fatigue of materials (metals and plastics) used in various industrial machines, material wear-resistance characteristics, machine dynamics, damage of machine components due to fatigue, friction and corrosion, the most frequent failure of machine parts, technological methods enhancing their durability; regeneration, surface treatment of moving and non-moving parts, heat-diffusion treatment and protective coating, quality testing, preventive maintenance, economical aspects of part regeneration in overall life extension of machines. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Technicians and engineers specialized in mechanical engineering. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SIMP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Maintenance of chemical plants

Short description: Maintenance organizations required to effectively operate large-scale chemical plants; planning for routine maintenance and major overhauls; use of computerized systems for work scheduling and planning; techniques the host organization employs in maintaining its own chemical plants. *Commencing date:* June. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

Organizer: ICI Chemicals and Polymers Ltd.
Process Plant Services
Room 103, N Building
Billingham, Cleveland TS23 1LB, United Kingdom

Maintenance management

Short description: Maintenance-management skills and improvement of personal management skills; accurate and appropriate information for management decisions. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Managers, management trainees. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Mechanical and electrical maintenance

Short description: Practical training in the maintenance of electrical and mechanical machines and equipment. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth and Paisley, United Kingdom

Management and industrial administration/*Gestion et administration industrielle/Gestión y administración industrial*

Material management by computer

Short description: Electronic data processing, on-line stock management, automatic print-out of orders and material arrivals, inquiry-processing and maintenance system, forecasts, coding/numbering systems, defining stocking levels, system to predict failure rates, material classification codes. *Commencing date:* Throughout the year, except July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* S 27,000 per week.

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

Diagnosics d'entreprises ou de départements

Breve description : Diagnostics généraux d'entreprises, de départements ou de services; analyse des fonctions, validité des outils de gestion; fiabilité 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

Gestion des entreprises

Breve description : 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 :* 3 mois avant la date de début du cours. *Droits d'inscription :* A arranger.

Organisateur : Bureau d'ingénieurs-conseils Cadic-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

Gestion des ressources humaines de l'entreprise

Brève description : Les objectifs de la fonction de gestion du personnel de l'entreprise, son organisation, ses méthodes et techniques dans son action sur les relations entre le travailleur et l'entreprise: embauche, accueil, intégration, promotion, rémunération, formation, relations industrielles, etc. Exposés et études de cas adaptés au milieu économique et social familial aux participants. *Début du cours* : A arranger. *Durée* : A arranger. *Qualifications* : Formation universitaire; expérience professionnelle minimum de 2 ans. Français. *Date limite d'inscription* : 3 mois avant la date de début du cours. *Droits d'inscription* : A arranger.

Organisateur : Bureau d'ingénieurs-conseils Cadic-Gombert SA
123a, Chaussée de Charleroi, boîte 7
1060 Bruxelles, Belgique

Organisation et gestion des entreprises

Brève description : Stage individuel. 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* : 3 mois avant la date de début du stage. *Droits d'inscription* : A arranger.

Organisateur : Bureau d'ingénieurs-conseils Cadic-Gombert SA
123a, Chaussée de Charleroi, boîte 7
1060 Bruxelles, Belgique

Techniques et gestion de la production pour cadres

Brève description : Formation complémentaire en technique de fabrication, en organisation et gestion de la production (manuelle et assistée par ordinateur). *Début du cours* : Novembre. *Durée* : 6 mois. *Qualifications* : Cadres techniques recherchant une actualisation de leurs connaissances ou une reconversion ou ayant en vue la création d'une entreprise. Français. *Date limite d'inscription* : 2 mois avant la date de début du stage. *Droits d'inscription* : F 27 500.

Organisateur : Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Accounting and financial management in a power utility

Short description: Enhancement of professional expertise. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Senior accounting managers and financial controllers. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Customer accounting in a power utility

Short description: Upgrading of knowledge and expertise of middle-level executives in accounting/commercial areas responsible for the development and implementation of the customer-accounting function. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Executives in accounting/commercial areas. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Effective management for power utilities

Short description: Improvement of the effectiveness of executives of all disciplines who are being prepared for careers in management. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Power-utility middle managers. English. *Deadline for application:* —. *Fees:* £Ir 1,980.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Financial accounting in a power utility

Short description: Upgrading of the knowledge and expertise of middle-level executives in the accounting function. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Executives in the accounting function. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

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 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:* To be arranged.

Organizer: Institute of Public Administration
57-61 Landsdowne Road
Dublin 4, Ireland

Technical supervision and communication for power utility supervisors

Short description: Essential skills of effective supervision. *Commencing date:* To be arranged. *Duration:* Part 1: 5 weeks, part 2: 4 weeks. *Qualifications:* Technical supervisors. English. *Deadline for application:* —. *Fees:* Part 1: £Ir 1,423; part 2: £Ir 1,140; parts 1 and 2: £Ir 2,563.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Cross-cultural management

Short description: Enabling 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:* February, May, October. *Duration:* 3 weeks. *Qualifications:* Junior and senior managers from developing countries with at least 5 years of experience in transnational business activities. English. *Deadline for application:* 6 months before commencing date. *Fees:* ¥327,000.

Organizer: The Association for Overseas Technical Scholarship
30-1, Senju-azuma 1-chome, Adachi-ku
Tokyo, Japan

Effective problem solving for production managers

Short description: Identification and definition of critical work-related problems, problem solution, and development and implementation of effective problem-solving measures to improve the performance of production system and procedures. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 200.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Integrated productivity improvement

Short description: Identification of problems in the areas of designing, production and quality control, and selection of appropriate techniques for problem solving. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Plant operations management

Short description: Study and develop relevant techniques and measures for managing plant operations effectively. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Production management

Short description: The process of production, from planning to delivery; production simulation exercises and in-plant practices; production efficiency in a factory. *Commencing date:* February. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff who are (or are expected to be) in charge of production control or factory management in industries of developing countries. English. *Deadline for application:* 6 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: Skills for handling professional consultancy approaches to industrial problems. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* January. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Co-operative management and consultancy

Short description: Organizational and functional characteristics of co-operatives and their managerial and consultancy implications. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* October. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

General management for state enterprises

Short description: General management capabilities with respect to state enterprises. *Commencing date:* August. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* May. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Management and industrial development

Short description: Principles of operational management in industry. Personalized introduction to the development of product programme and market potentials, production management, technology development, investment planning and costing, operations research, licensing and international industrial collaboration; includes study of selected literature and field observations. *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
P.O. Box 30042
3001 AL Rotterdam, Netherlands

Management for general managers

Short description: General and strategic capabilities essential for improved business performance. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* October. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Managerial control and management information systems

Short description: For senior finance and accounting executives; knowledge and skills for developing and operating the control and information systems function in their organization. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* January. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Sector technology and management: food and metal products manufacturing

Short description: Operations management and technology transfer. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* October. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Alta dirección de empresas

Breve descripción: Programa de desarrollo directivo. *Fecha de iniciación:* Octubre. *Duración:* 8 meses. *Calificaciones:* Más de 10 años de experiencia en altos cargos directivos. Español. *Fecha límite de inscripción:* Septiembre. *Derechos de inscripción:* Ptas 1.250.000.

Organizador: IESE
Avenida Pearson 21
08034 Barcelona, España

Lugar: Barcelona y Madrid, España

Desarrollo directivo

Breve descripción: Programa de desarrollo directivo. *Fecha de iniciación:* Enero, octubre. *Duración:* 6 meses. *Calificaciones:* Directivos subalternos. Español. *Fecha límite de inscripción:* 4 semanas antes del curso. *Derechos de inscripción:* Ptas 1.250.000.

Organizador: IESE
Avenida Pearson 21
08034 Barcelona, España

Lugar: Barcelona y Madrid, España

Dirección general

Breve descripción: Programa de desarrollo directivo. *Fecha de iniciación:* Octubre.
Duración: 8 meses. *Calificaciones:* Experiencia en gestión general. Español. *Fecha límite de inscripción:* Septiembre. *Derechos de inscripción:* Ptas 1.250.000.

Organizador: IESE
Avenida Pearson 21
08034 Barcelona, España

Lugar: Barcelona y Madrid, España

Perfeccionamiento para directivos

Breve descripción: Perfeccionamiento para directivos. *Fecha de iniciación:* Octubre.
Duración: Para ser acordado. *Calificaciones:* Español. *Fecha límite de inscripción:* Septiembre. *Derechos de inscripción:* Ptas 980.000.

Organizador: Escuela de Organización
Gregorio del Amo 6
28040 Madrid, España

Advanced logistics management

Short description: Skills and knowledge required to control effectively logistics activities and to ensure that each activity is properly co-ordinated and integrated so as to optimize organizational efficiency. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Senior managers. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Human resource management

Short description: Manpower policies and strategies; employment conditions; employee relations; recruitment and selection; performance appraisal; records and systems; introduction of new technology; training and development. *Commencing date:* August. *Duration:* 12 weeks. *Qualifications:* Graduate-level production 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.
International Office
43 Market Place
Wetherby, West Yorkshire LS22 4LN, United Kingdom

Improving efficiency through training and internal consultancy

Short description: For managers, trainers and internal consultants involved in the design and implementation of improved working practices in their enterprise. *Commencing*

date: May. Duration: 12 weeks. Qualifications: English. Deadline for application: February. Fees: £5,500 (including accommodation).

Organizer: International Resource Development
University of Leeds International Services
Woodhouse Lane
Leeds LS2 3AR, United Kingdom

Venue: Ilkley, near Leeds.

Industrial relations

Short description: For senior managers, labour officers and industrial-relations officers; to give participants a thorough understanding of their role and to improve and practice their interpersonal skills. Commencing date: To be arranged. Duration: 4 weeks. Qualifications: First-level degree or equivalent. English. Deadline for application: 6 weeks before commencing date. Fees: To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston
Birmingham B15 1TH, United Kingdom

Infrastructure and facilities management

Short description: General concepts of management and organizations as they relate to maintenance. Commencing date: To be arranged. Duration: 12 weeks. Qualifications: Managers responsible for the maintenance of buildings, the supporting environment and services. English. Deadline for application: 1 month before commencing date. Fees: To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Maintenance management

Short description: The concept of planned maintenance as a safe, controlled and cost-effective method of performing the maintenance function. Commencing date: To be arranged. Duration: 12 weeks. Qualifications: Managers/officials with relevant experience. English. Deadline for application: 4 weeks before commencing date. Fees: £6,955 (including meals and accommodation).

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Management of agricultural and rural development

Short description: Practical course, with project undertaken overseas. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* University degree or proven managerial experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £5,500.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Management of consultants

Short description: Practical course, including visits and attachments. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* University degree or proven administrative experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £2,500.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Management for engineers and scientists

Short description: To enable engineers and scientists to make the transition from specialist to manager. Approaches to management and management techniques and their application in organizations. *Commencing date:* July, October. *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.
International Office
43 Market Place
Wetherby, West Yorkshire LS22 4LN, United Kingdom

Management in higher education institutions

Short description: Practical course, including visits and projects. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* University degree with administrative experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £5,800.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Management today

Short description: For middle managers in the public and private sector; people-management skills, particularly in the areas of communication, leadership, presentation, customer care, finance and the use of new technology. *Commencing*

date: To be arranged. *Duration:* 12 weeks. *Qualifications:* First-level degree or equivalent. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston
Birmingham B15 1TH, United Kingdom

Managing public enterprises

Short description: Policy-oriented, with visits and projects. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* University degree or proven administrative experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £5,000.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Managing technological change

Short description: Introduction and effective implementation of technological change process, with particular emphasis on information technology and management information systems. *Commencing date:* May. *Duration:* 10 weeks. *Qualifications:* Graduate-level managers. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Industrial Training Service Ltd.
International Office
43 Market Place
Wetherby, West Yorkshire LS22 4LN, United Kingdom

Manpower studies

Short description: Three key areas in the improvement of human resources: planning, management and development. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* University degree or proven managerial experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £5,800.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

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 £3,300.

Organizer: Management Consultancy
Thames Valley College
Wellington Street
Slough, Berkshire SL1 1YG, United Kingdom

Personnel management

Short description: For managers and specialists; a development opportunity for current practitioners in the public and private sectors. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* First-level degree or equivalent. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston
Birmingham B15 1TH, United Kingdom

Procurement for development projects

Short description: Management and commitment of funds within project constraints, while protecting foreign exchange. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Managers/officials with relevant experience. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £3,925 (including board and accommodation).

Organizer: Crown Agents
Manpower Development Services
St Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Production management

Short description: To develop a detailed understanding of current production management techniques and best current practice in optimizing the human resource element in production processes, as well as a wide range of intervention techniques appropriate to technical advisers to management. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Graduate-level production managers and technical advisers. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Industrial Training Service Ltd.
International Office
43 Market Place
Wetherby, West Yorkshire LS22 4LN, United Kingdom

Public enterprise management

Short description: Role, purpose and functioning of public enterprises: British experience of privatization. Specific work assignments concerned with efficiency criteria for public-sector enterprises. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* February. *Fees:* £5,500 (including accommodation).

Organizer: International Resource Development
University of Leeds
Woodhouse Lane
Leeds LS2 3AR, United Kingdom

Senior management

Short description: Practical course, with visits and projects. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent professional

experience. English. *Deadline for application:* 1 month before commencing date.
Fees: Approximately £5,000.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Site management (certificate)

Short description: Practical training in construction project management, assessment, monitoring and control of subcontractors. *Commencing date:* To be arranged.
Duration: 12 weeks. *Qualifications:* Middle and senior construction or site managers and civil engineers. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Site management (diploma)

Short description: Practical training at an advanced level in construction project management. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Middle and senior construction or site managers and civil engineers. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Supply and materials management

Short description: Expand the skills of senior and middle managers to enable them to develop existing supply procedures, plan new supply systems and integrate different supply activities within their area of responsibility. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Work-study practitioners

Short description: Work measurement, method study and systems improvement, organizational effectiveness. *Commencing date:* Throughout the year. *Duration:* 1 month. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Business administration, international business and trade

Short description: Microeconomics for management, operations management, organizational behaviour, entrepreneurship, macroeconomics, international strategy, marketing, financial accounting for management. *Commencing date:* January, March. *Duration:* 20 weeks (modules of 1 week possible). *Qualifications:* English. *Deadline for application:* 30 days before commencing date. *Fees:* To be arranged.

Organizer: Estonian Business School
Lenini Str. 12
200 100 Tallinn, Estonian SSR, Union of Soviet Socialist Republics

Venue: Training Centre
Suurupi Campus
Harju Reg., Estonian SSR, Union of Soviet Socialist Republics

General management

Short description: Management of international business activities; innovations; marketing; east-west joint ventures; quality and competitiveness control; international finance; environment and natural resources management; innovative approaches to development planning; field work in Ukrainian and Swiss companies. *Commencing date:* To be arranged. *Duration:* 12 months. *Qualifications:* University degree or equivalent; at least 3 years of experience in business and administration. English. *Deadline for application:* October. *Fees:* SwF 10,000 plus R 12,000 (including board and accommodation).

Organizer: International Management Institute (IMI)
26. Panasa Myrnogo Street
Kiev 252011, Ukrainian SSR, Union of Soviet Socialist Republics

American management programme

Short description: Skills necessary for doing business with United States organizations, including English language, United States culture, business and information management. *Commencing date:* April, October. *Duration:* 5 months (for management and communication majors), 7 months (for information management majors). *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 6,500.

Organizer: Japan-American Institute of Management Science
6660 Hawaii Kai Drive
Honolulu, Hawaii 96825, United States of America.

American management system

Short description: Management system. *Commencing date:* April, September. *Duration:* 5 months. *Qualifications:* College degree. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 6,380.

Organizer: Japan-American Institute of Management Science
6660 Hawaii Kai Drive
Honolulu, Hawaii 96825, United States of America

Human resource development

Short description: Organization and the role of human resource development; the human resource development process; establishing the human resource system; microcomputers and human resource development; managing the system; and developing a specific programme. *Commencing date:* March. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 4,500.

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

International management development

Short description: Management development; financial management; human resource management; management information systems; principles of marketing; computer workshop; and seminar in special topics. *Commencing date:* January. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 12,500.

Organizer: International Institute for Development
USDA Graduate School
600 Maryland Avenue, S.W., Room 134
Washington, D.C. 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; and evaluation. *Commencing date:* January. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,250.

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

Management analysis

Short description: Management development; systems analysis; report writing; conducting meetings; position description development; records management; forms design and analysis; making presentations; task analysis; conducting interviews; and introducing organizational change. *Commencing date:* To be arranged. *Duration:* 8 weeks.

Qualifications: Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 5,950.

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

Management information systems (MIS)

Short description: MIS principles and practices; management development criteria necessary for the successful implementation of a MIS system; MIS staffing requirements; skills needed to analyse, design and modify MIS systems; and the framework in which a MIS system can be established. *Commencing date:* April. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 3,850.

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

Management information systems (certificate programme)

Short description: Strategic management; microcomputer applications; principles of management information systems. *Commencing date:* January. *Duration:* 16 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 10,500.

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

Management roles for women in development

Short description: Mission statements; identifying key tasks and key result areas; fostering change in organizations; affirmative action and comparative worth; time management; decision making; conflict management; motivation techniques; leadership; computer applications; and women in development issues. *Commencing date:* May. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 4,450.

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

Productivity

Short description: Factors which create and define productivity; management's role in increasing productivity; balancing all resources to create the greatest impact; uniqueness and complexity of the human resource; and strategic planning. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,250.

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

Marketing and export promotion/Marketing et promotion des exportations/ Comercialización y promoción de las exportaciones

Marketing and export-trade development

Short description: Development of the marketing function, with special emphasis on export-trade development. Personalized introductions on market analysis, international trade relations, quality assurance, marketing, pricing and costing; study of selected literature and market documentations. *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
P.O. Box 21468
3001 AL Rotterdam, Netherlands

Marketing development

Short description: Marketing (basic principles, research, planning, export); organization and management; financial control; cost accounting; social skills; negotiation techniques; case-studies; study tours. *Commencing date:* January. *Duration:* 16 weeks. *Qualifications:* At least 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

International trade

Short description: Updating with the most recent and important developments in the trading system, including a review of the Tokyo and Uruguay rounds. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Middle- and senior-level officials in international trade, central banking, commerce, economic planning, finance and customs. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Marketing and marketing management

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:* 12 weeks.

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

Trade fraud

Short description: Instil and develop an awareness of the risks facing everyone engaged directly or indirectly in international trade. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Senior officials. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Marketing management

Short description: Theory of current marketing, including study tour to companies in New York and Philadelphia areas to hear executive presentations on marketing. *Commencing date:* July. *Duration:* 4 weeks. *Qualifications:* Middle- and senior-level executives. English. *Deadline for application:* —. *Fees:* \$US 9,315.

Organizer: International Marketing Institute
314 Hammond Street
Chestnut Hill, MA 02167, United States of America

Occupational safety/Prévention des accidents du travail/ Seguridad profesional

Risk management

Short description: Identification and evaluation of risks arising for a company. *Commencing date:* August, October. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £2,465.

Organizer: British Safety Council
National Safety Centre
Chancellors Road
London W6 9RS, United Kingdom

Safety management

Short description: In-depth practical knowledge of how to prevent costly damage to plant, tools and materials—as well as reducing injury and accidents and their effects on workforce productivity and morale. *Commencing date:* June, August. *Duration:*

10 weeks. *Qualifications*: English. *Deadline for application*: 1 month before commencing date. *Fees*: Approximately £4,195.

Organizer: British Safety Council
National Safety Centre
Chancellors Road
London W6 9RS, United Kingdom

Safety management

Short description: Safety organization required to sustain the safe running of chemical plants; current legislation both in the United Kingdom and international; host organization's safety systems; operation of effective safety-awareness campaigns; planning for major incidents. *Commencing date*: May. *Duration*: 3 weeks. *Qualifications*: Some experience in safety services. English. *Deadline for application*: 2 weeks before commencing date. *Fees*: To be arranged.

Organizer: ICI Chemicals and Polymers Ltd.
Process Plant Services
Room 103 N Building
Billingham, Cleveland TS23 1LB, United Kingdom

Quality control and standardization/Contrôle de la qualité et normalisation/ Control de calidad y normalización

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 CEBEC; 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

Qualité et fiabilité

Brève description : Formation à la "qualité" à l'intention des ingénieurs pour les spécialiser grâce aux techniques informatiques les plus récentes. *Début du cours* : Février. *Durée* : 4 mois. *Qualifications* : Ingénieur et technicien supérieur. Français. *Date limite d'inscription* : 2 mois avant le début du stage. *Droits d'inscription* : F 21 800.

Organisateur: Institut national des sciences appliquées de Lyon
20, avenue Albert-Einstein
69621 Villeurbanne Cedex, France

Non-destructive testing of materials

Short description: Radiology, Supersound, magnetic, fluid penetration, visual/optical, whirl current and solidity tests. *Commencing date*: Throughout the year. *Duration*: 4 7

weeks. *Qualifications:* Vocational training or technical college, with 2 years of experience. English, French, Spanish. *Deadline for application:* 6 months before commencing date. *Fees:* \$US 2,000-3,300 (including accommodation and meals).

Organizer: Szakmai Továbbképző és Atkőpző V.
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O.B. 24
1251 Budapest, Hungary

Quality control

Short description: Basic quality-control techniques (lectures, classroom discussions and in-plant exercises) and implementation of quality-control techniques in an actual production site. *Commencing date:* July. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff of developing countries responsible for quality control, production control or factory management. English. *Deadline for application:* 6 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 to company-wide quality control (lectures, plant visits, in-plant exercises and discussions), measures for the promotion of quality and productivity improvement. *Commencing date:* June, November. *Duration:* 3 weeks. *Qualifications:* Senior managers from developing countries responsible for quality and productivity improvement. English. *Deadline for application:* 6 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, July. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent; experience in quality control or a related field. English. *Deadline for application:* 2 months before commencing date. *Fees:* f. 10,500.

Organizer: International Centre for Quality and Management Sciences (ICQMS)
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:* January, July. *Duration:* 2 months.

Qualifications: Bachelor's degree or equivalent; experience in quality control or a related field. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* f. 10,500.

Organizer: International Centre for Quality and Management Sciences (ICQMS)
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, July. *Duration:* 3 months. *Qualifications:* Bachelor's degree or equivalent. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* f. 15,500.

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

Ultrasonic non-destructive material testing

Short description: Aims of non-destructive testing, physical principles, methods of ultrasonic testing, test equipment—its function and operation, detection and determination of defects and damages in materials and ready-made components, inspection of welding joints. *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* Engineers and technicians in related trades. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Association of Polish Mechanical Engineers and Technicians (SI MP)
Staff Upgrading Centre
Mickiewicza 9
01-517 Warsaw, Poland

Laboratory testing of small pumps and turbines

Short description: Specialized "hands-on" course in the hydraulic and electrical laboratory with advanced theory classes to enhance the understanding of complex hydro-power related problems. *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* Degree in mechanical, electrical or civil engineering. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* SwF 6,500-7,500 (including board and accommodation).

Organizer: SKAT-Swiss Center for Appropriate Technology at ILE
Vambüelstrasse 14
9000 St. Gallen, Switzerland

Quality engineering

Short description: Quality-management communications, materials management, information technology, statistical quality control, reliability, NDT and condition monitoring, project. *Commencing date:* September. *Duration:* 9 months. *Qualifications:* Bachelor's degree. *English.* *Deadline for application:* 2 weeks before commencing date. *Fees:* £5,500.

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

Metrological assurance of national economy

Short description: Metrological assurance in scientific research, industry (machinery, micro-electronics etc.), public health and ecological safety programmes (pollution control of water, air and soil); development of national measurement traceability systems (national primary and secondary standards, metrological centres); lectures and practical work in laboratories. *Commencing date:* September. *Duration:* To be arranged. *Qualifications:* Engineers with at least 3 years of experience in measuring techniques, metrology or quality control. *English.* *Deadline for application:* April. *Fees:* To be arranged.

Organizer: D. I. Mendeleev Institute of Metrology
19, Moskovski prospect
Leningrad 198005, Union of Soviet Socialist Republics

Small-scale industries and entrepreneurship/Petites industries et entrepreneurs/Pequeñas industrias y los empresarios

Entrepreneur development

Short description: Classroom sessions covering essential business concepts for effective management and practical exposure through attachments at relevant firms, on-site observation, visits to trade fairs and exhibitions, business meetings with entrepreneurs and discussions with representatives of 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

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

Credit appraisal for small and medium industries

Short description: Skills in credit appraisal for small and medium industries. *Commencing date:* September. *Duration:* 3 weeks. *Qualifications:* *English.* *Deadline for application:* 3 months before commencing date. *Fees:* \$US 100.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Management consultancy

Short description: To upgrade the skills of consultants in rendering management consultancy services to small and medium industries, and to enable them to specialize

in either production management or marketing and distribution. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 200.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Energy management in small- and medium-scale industries

Short description: Analysis of the role of energy in production processes; choice of energy sources; 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 (RVB)
Maastricht
Contact address:
University of Twente
Technology and Development Group
P.O. Box 217
7500 AE Enschede, Netherlands

Financial management

Short description: Up-to-date knowledge and skills in accounting and finance for managers and advisers of small- and medium-sized enterprises. *Commencing date:* August. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* May. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

International marketing and export for small- and medium-sized firms

Short description: Principles and basic concepts; strategic decisions in international marketing; international marketing research; product, distribution and pricing decisions; communications; international marketing; exporting; case-studies; plant visits. *Commencing date:* January, July. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent experience in a relevant field. English. *Deadline for application:* 2 months before commencing date. *Fees:* f. 10,500.

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 consultancy, entrepreneurship development and strategic management of a consultancy firm. *Commencing date:* August. *Duration:* 3 months. *Qualifications:* Bachelor's degree. English. *Deadline for application:* May. *Fees:* f. 15,500.

Organizer: Netherlands International Institute for Management (RVB)
P.O. Box 1203
6201 BE Maastricht, Netherlands

Developing income-generating enterprise

Short description: To improve the ability of staff of voluntary organizations and others who are concerned to provide assistance of any kind to micro enterprises. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £3,750 (including accommodation).

Organizer: The Enterprise Development Centre
Cranfield School of Management
Cranfield, Bedfordshire MK43 0AL, United Kingdom

Finance for enterprise

Short description: Skills for bankers and staff of other financial institutions involved in extending finance to new and small enterprises. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £2,900 (including accommodation)

Organizer: The Enterprise Development Centre
Cranfield School of Management
Cranfield, Bedfordshire MK43 0AL, United Kingdom

Integrated approaches to promoting and developing small business

Short description: Skills to design, implement and manage a full range of small business promotion, development and support programmes. *Commencing date:* April. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* March. *Fees:* £5,950 (including meals and accommodation).

Organizer: International Programmes
Small Business Centre
Durham University Business School
Mill Hill Lane
Durham DH1 3LB, United Kingdom

New and small enterprise promotion

Short description: For staff of government and other organizations involved in the promotion of small-scale enterprises. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £5,250 (including accommodation).

Organizer: The Enterprise Development Centre
Cranfield School of Management
Cranfield, Bedfordshire MK43 0AL, United Kingdom

Promotion and development of women's enterprise in developing countries

Short description: For senior and middle managers concerned with the promotion of women's small business and enterprise. Skills for establishing and managing a programme designed specifically to meet the needs of women's business development. *Commencing date:* September. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* July. *Fees:* £4,350 (including meals and accommodation).

Organizer: International Programmes
Small Business Centre
Durham University Business School
Mill Hill Lane
Durham DH1 3LB, United Kingdom

Management development for co-operatives

Short description: Review and understand leadership and management principles; observe and interact with United States co-operative executives; evaluate mechanisms and processes to improve management practices; be exposed to a wide variety of management and co-operative issues. *Commencing date:* July. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 3,750.

Organizer: International Institute for Development
USDA Graduate School
600 Maryland Avenue, S.W., Room 134
Washington, D.C. 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 dispenser 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

Instructional techniques

Short description: Principles of learning; communications cycle; planning and preparing; training objectives; presentation skills; questioning techniques; feedback and validation. *Commencing date:* March. *Duration:* 4 weeks. *Qualifications:* Technical and administrative personnel with an aptitude for teaching the skills in which they themselves are proficient. English. *Deadline for application:* —. *Fees:* DM 9,100.

Organizer: Dormier Luftfahrt GmbH
Training Department
Industriestrasse 1
D.W-8034 Germering, Germany

Training management

Short description: Planning, scheduling and controlling; design of training courses and syllabi; interviewing techniques; validation of training; instructor performance assessment; training budgets and cost control. *Commencing date:* April. *Duration:* 4 weeks. *Qualifications:* At least 3 years of formal classroom training experience, general management experience. English. *Deadline for application:* —. *Fees:* DM 11,250.

Organizer: Dormier Luftfahrt GmbH
Training Department
Industriestrasse 1
D.W-8034 Germering, Germany

Designing and developing training systems and materials

Short description: Training system models; adult education; learning psychology; instructional design; development of materials for individual learning; management and evaluation of courses. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Trainers with at least 2 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 4,400 (including meals and accommodation).

Organizer: National Centre for Educational Technology
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Developing self-instructional multi-media information centres (SIMMIC) for vocational and service training

Short description: Functions of a SIMMIC; task analysis to meet the needs; developing media libraries; case studies; work in a SIMMIC; practice in different fields of work; self-instruction; selection and evaluation of media and information; use of PCs for retrieving and disseminating information. *Commencing date:* September. *Duration:* 3 weeks. *Qualifications:* Librarians and/or teachers. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 1,900 (including meals and accommodation).

Organizer: National Centre for Educational Technology
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Teaching communication skills

Short description: Basic principles of teaching as communication; communication skills; analysis of case studies; practice in situational analysis; the role of video in self-assessment; video practice. *Commencing date:* May. *Duration:* 4 weeks. *Qualifications:* Teachers (elementary or secondary levels). English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 2,200 (including meals and accommodation).

Organizer: National Centre for Educational Technology
Budapest, Hungary.
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Training course design

Short description: Job specification/description; definition of instructional goals and objectives; curriculum planning; task analysis; evaluation and measurement; the role and design of media for vocational training. *Commencing date:* August. *Duration:*

4 weeks. *Qualifications:* University degree or professional experience in vocational training. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,200 (including meals and accommodation).

Organizer: National Centre for Educational Technology
Budapest, Hungary
Contact address:
IDEX INTER-ED
P.O. Box 24
1251 Budapest, Hungary

Designing and developing your own training material

Short description: Attitudes to change in adults; factors affecting motivation of adults; skills for effective discussion leading in senior training courses; preparation and use of training aids and training packages; action-learning and project-based training. *Commencing date:* April. *Duration:* 10 weeks. *Qualifications:* Trainers with at least 2 years of experience. *English.* *Deadline for application:* March. *Fees:* To be arranged.

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:* July. *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:* September. *Duration:* 10 weeks. *Qualifications:* Candidates who have recently been appointed to training posts or are likely to receive appointment. *English.* *Deadline for application:* August. *Fees:* To be arranged.

Organizer: Institute of Public Administration
57-61 Lansdowne Road
Dublin 4, Ireland

Training of power-utility trainers

Short description: Training needs analysis and setting of objectives; learning processes relevant to industrial training; skills for conducting training sessions. *Commencing*

date: To be arranged. *Duration:* 12 weeks. *Qualifications:* Trainers, teachers and instructors at all organizational levels. English. *Deadline for application:* —. *Fees:* £1r 3,501.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Training of trainers in developing countries

Short description: Instructional techniques; job analysis; programme planning; supervision; on-the-job training. *Commencing date:* Throughout the year. *Duration:* 2 weeks-1 year. *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

Developing and managing the training function

Short description: All aspects of managing an effective organization; college-based work, live projects in STA training centres throughout the United Kingdom and visits to industrial, training and educational establishments. *Commencing date:* To be arranged. *Duration:* 10 weeks. *Qualifications:* Directors or senior managers of national public or private sector industries and training organizations. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: STA College
Duchams Lane
Letchworth, Hertfordshire SG6 1BE, United Kingdom

Management and methods of training

Short description: For training managers or those about to undertake responsibility for corporate training. Full range of skills allied to extensive practical work for an increased effectiveness in this important area. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* First level degree or equivalent. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston
Birmingham B15 1TH, United Kingdom

Management of training within organizations

Short description: Organization and management of the training function within organizations. Successful completion of the course and a major project leads to the award of the diploma in training management. *Commencing date:* February, June, November. *Duration:* 7 weeks. *Qualifications:* Certificate in training and development or equivalent. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £2,100.

Organizer: Management Consultancy
Thames Valley College
Wellington Street
Slough, Berkshire SL1 1YG, United Kingdom

Managing the training function

Short description: Formulation of training and developing policy, assessment of training needs, designing of learning/development methods, delivery of training and the setting up and operation of training facilities. *Commencing date:* August. *Duration:* 12 weeks. *Qualifications:* Training officers, advisers and line managers with responsibility for training. *English.* *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

Organizer: Industrial Training Service Ltd.
International Office
43 Market Place
Wetherby, West Yorkshire LS22 4LN, United Kingdom

Overseas training officers' programme

Short description: Philosophies, methods and practices in training; meet with trainers from other countries and share ideas and experiences in theory and practice. *Commencing date:* To be arranged. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: British Association for Commercial and Industrial Education
(BACIE)
16 Park Crescent
London W1N 4AP, United Kingdom

Training and development

Short description: Systematic training, training design, training needs diagnosis, training resources and methods, job analysis, recruitment and selection, interpersonal skills. *Commencing date:* Throughout the year. *Duration:* 20 days, divided into two modules of ten days separated by a project period. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road, West Didsbury
Manchester M20 8QA, United Kingdom

Training for enterprise

Short description: Improve the skills of trainers who are involved in the training of small-scale business people, extension workers and others whose job it is to assist small-scale businesses. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £2,900 (including accommodation).

Organizer: The Enterprise Development Centre
Cranfield School of Management
Cranfield, Bedfordshire MK43 0AL, United Kingdom

Training—its design and management

Short description: Managing the training function; linking training to organizational goals and manpower plans. *Commencing date:* To be arranged. *Duration:* 12 weeks.

Qualifications: For managers and officials responsible for human resource development. English. **Deadline for application:** 1 month before commencing date. **Fees:** To be arranged.

Organizer: Crown Agents
Manpower Development Services
St. Nicolas House
Sutton, Surrey SM1 1EL, United Kingdom

Venue: Crown Agents
Management Training Centre
Marine Parade
Worthing, Sussex BN11 3PW, United Kingdom

Training of trainers

Short description: For trainers, managers of training and staff of training institutions in developing countries. **Commencing date:** January. **Duration:** 3 months. **Qualifications:** Relevant training experience. English. **Deadline for application:** 1 month before commencing date. **Fees:** To be arranged.

Organizer: OCET
Manchester University
Oxford Road
Manchester M13 9PL, United Kingdom

Training techniques for training officers

Short description: Basic training skills, including assessing training needs and organizing and designing training. **Commencing date:** January, April, September. **Duration:** 8 weeks. **Qualifications:** English. **Deadline for application:** 4 weeks before commencing date. **Fees:** Approximately £2,400.

Organizer: Management Consultancy
Thames Valley College
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:** May. **Duration:** 4 weeks. **Qualifications:** Bachelor's degree. English. **Deadline for application:** 2 months before commencing date. **Fees:** \$US 2,950.

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

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B. DEVELOPING COUNTRIES/PAYS EN DÉVELOPPEMENT/ PAÍSES EN DESARROLLO

1. INDUSTRIAL BRANCHES/SECTEURS INDUSTRIELS/ RAMAS INDUSTRIALES

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

Maîtrise de l'habitat dans les pays en développement

Brève description : Conception en tenant compte de la régionalisation et du facteur socio-économique; industrie des matériaux de construction, recherche et financement; industrie de la construction et l'auto-construction. *Début du cours* : Mai. *Durée* : 6 mois. *Qualifications* : Français, anglais. *Date limite d'inscription* : Janvier. *Droits d'inscription* : —.

Organisateur : SOVERHA
Les Sociétés VERRET-HABITAT
Delmas 19, n° 30
Port-au-Prince, Haïti

Cement manufacturing technology

Short description: Raw materials—geology and mining aspects; raw-mix design and burnability; raw-meal preparation and clinkerization; measures for productivity improvement; instrumentation and process control; quality assurance; modern concepts in plant maintenance; environmental improvement and ecology. *Commencing date*: To be arranged. *Duration*: 1 month. *Qualifications*: Degree or diploma in science/engineering. English. *Deadline for application*: —. *Fees*: \$US 1,500.

Organizer: National Council for Cement and Building Materials
M-10, South Extension Part-II, Ring Road
New Delhi 110 049, India

Quality control in cement manufacture

Short description: Raw materials—quality requirements and evaluation; raw-mix design and burnability; coal quality and its relevance to clinker quality; effect of operational parameters on quality control; role of standard reference materials and product specification; consumer protection and quality assurance programmes; quality control management. *Commencing date*: February. *Duration*: 1 month. *Qualifications*: Degree in chemistry or analytical chemistry. *Deadline for application*: 2 months before commencing date. *Fees*: \$US 1,500.

Organizer: National Council for Cement and Building Materials
M-10, South Extension Part-II, Ring Road
New Delhi 110 049, India

Cement technology

Short description: Raw materials—quality requirements and evaluation; raw-mix design and burnability; cement chemistry; fuels; raw-meal preparation and clinkerization; instrumentation, process control and optimization; quality assurance schemes; energy conservation measures; environmental improvement and ecology; modern developments in packing and transportation of cement; uses of cement. *Commencing date:* July. *Duration:* 9 months. *Qualifications:* Degree or diploma in science/engineering. *Deadline for application:* June. *Fees:* \$US 12,500.

Organizer: National Council for Cement and Building Materials
M-10, South Extension Part-II, Ring Road
New Delhi 110 049, India

Cement industry

Short description: General training in cement production technology, quality control, maintenance and energy saving. *Commencing date:* May. *Duration:* 4 weeks. *Qualifications:* Degree in chemical, mechanical, electrical engineering or chemistry, with about 5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* —.

Organizer: Turkish Cement Manufacturers' Association
P.O. Box 8 Bakanliklar
Ankara, Turkey

Chemical industries/Industrie chimique/Industrias químicas

Curso básico de tecnología del caucho

Breve descripción: Control de calidad, formulaciones, procesado. *Fecha de iniciación:* Marzo o abril. *Duración:* 8 meses. *Calificaciones:* Aprobación por examen. Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* Para ser acordado.

Organizadores: CTTIC
C.C. 157
1650 San Martín
Buenos Aires, Argentina
Dirección de la entidad a contactar:
INTI
Avda. Leandro N. Alem 1067
1001 Buenos Aires, Argentina

Curso superior de tecnología del caucho

Breve descripción: Físico-química de altos polímeros, materias primas, procesos. *Fecha de iniciación:* Abril. *Duración:* 8 meses. *Calificaciones:* Aprobación por examen. Español. *Fecha límite de inscripción:* Abril. *Derechos de inscripción:* Para ser acordado.

Organizadores: CTTIC
C.C. 157
1650 San Martín
Buenos Aires, Argentina
Dirección de la entidad a contactar:
INTI
Avda. Leandro N. Alem 1067
1001 Buenos Aires, Argentina

Envases y embalajes de plástico

Breve descripción: Control de calidad de materia prima y producto final: selección de materiales; migración y permeabilidad; aptitud bromatológica. *Fecha de iniciación:* Para ser acordado. *Duración:* 1-3 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* Para ser acordado.

Organizador: CTTIP
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Materiales plásticos reforzados

Breve descripción: Propiedades químicas y mecánicas; aplicaciones; procesos de fabricación; control de calidad. *Fecha de iniciación:* Para ser acordado. *Duración:* 1-4 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* Para ser acordado.

Organizador: CTTIP
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Tecnología del caucho

Breve descripción: Cursos intensivos con temario a requerimiento de los interesados. *Fecha de iniciación:* Para ser acordado. *Duración:* Para ser acordado. *Calificaciones:* Español o inglés. *Fecha límite de inscripción:* —. *Derechos de inscripción:* Para ser acordado.

Organizadores: CTTIC
C.C. 157
1650 San Martín
Buenos Aires, Argentina
Dirección de la entidad a contactar:
INTI
Avda. Leandro N. Alem 1067
1001 Buenos Aires, Argentina

Corrosion and inspection

Short description: Corrosion reasons, testing equipment and non-destructive tests. *Commencing date:* Throughout the year. *Duration:* 8-12 weeks. *Qualifications:* Diploma in metallurgical engineering or material science technology. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Operation of petrochemical plants

Short description: In-plant training in different operations of naphtha cracking and the production of various petrochemicals. *Commencing date:* Throughout the year.

Duration: 8-12 weeks. *Qualifications:* Degree in chemical engineering. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Quality control

Short description: Testing of various raw materials used in the petrochemical industries. *Commencing date:* Throughout the year. *Duration:* 8-12 weeks. *Qualifications:* Postgraduation in chemistry. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Fertilizer plant operation

Short description: Management, production planning and control, maintenance planning, pollution control, instrumentation technology. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Degree in engineering, up to 2 years experience in fertilizer industry. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 1,875 (including board and lodging).

Organizer: TÜGSAŞ
Eğitim Genel Müdürlüğü
Konya Devlet Yolu No. 70
06330 Ankara, Turkey

Fertilizer industry

Short description: On-the-job training in different aspects of the fertilizer industry. Can be tailored according to needs. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: TÜGSAŞ
Eğitim Genel Müdürlüğü
Konya Devlet Yolu No. 70
06330 Ankara, Turkey

Utilization of medicinal and aromatic plants in pharmaceutical and related industries

Short description: Production of raw materials and formulation into pharmaceuticals and cosmetics, using medicinal and aromatic plants. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Chemists, pharmacists or chemical engineers with 5 years of related experience. English. *Deadline for application:* June. *Fees:* \$US 1,250.

Organizer: Anadolu University
Medicinal Plants Research Centre
26470 Eskişehir, Turkey

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

Operación de subestaciones eléctricas

Breve descripción: Características de las máquinas sincrónicas; compartimiento de la máquina en carga con distintos tipos de carga: potencia activa y reactiva; regulación del alternador; acoplamiento del alternador a la red. *Fecha de iniciación:* Septiembre. *Duración:* 6 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* Agosto. *Derechos de inscripción:* \$US 1.000.

Organizador: Instituto Nacional de Capacitación Profesional (INACAP)
Av. Chesterton 7028, Casilla 27005
Correo 27, Santiago, Chile

Digital electronics

Short description: Number systems, switching functions, combinational logic networks; logic gates, flip-flops, sequential circuits, arithmetic circuits; code conversion error, detection and correction; general principles of working of frequency counters and timers. *Commencing date:* March, April, July, December. *Duration:* 4 weeks. *Qualifications:* Diploma in electronics or electrical engineering or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Linear and digital ICs

Short description: Op. amp.: ideal op. amp. specifications, inverting and non-inverting amplifiers and applications; timer IC: functional block diagrams, operating modes, monostable, astable and time delay; applications. Voltage regulators; analogue digital, digital analogue converters, digital IC. Displays, IC specifications, combinational logic network, flip-flops, sequential circuits. *Commencing date:* January. *Duration:* 44 weeks. *Qualifications:* Diploma in electronics engineering. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Medical electronics

Short description: Physics, basic physiology and anatomy, electrical machines, electronic components, electrical and electronic service equipment, electromedical equipment; safety and standards of medical equipment, biomedical transducers; selection, use and servicing of electromedical equipment. Laboratory experiments. Repair and maintenance of biomedical equipment. *Commencing date:* October. *Duration:*

48 weeks. *Qualifications:* Relevant higher national certificate, diploma, degree or equivalent. *English. Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Radio technician

Short description: Basic electronics; radio receiver theory; radio receiver assembly; fault detection. *Commencing date:* June. *Duration:* 4 weeks. *Qualifications:* Relevant national certificate, diploma, degree or equivalent. *English. Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Solid-state power electronics

Short description: Power electronics; diode and uncontrolled rectifiers; thyristors; power semi-conductor device protection; power module, junction temperature, dissipation, heat sink, cooling, thermal analysis, pulse and surge current, series/parallel arrays. *Commencing date:* April, September. *Duration:* 4 weeks. *Qualifications:* Diploma in electrical or electronics engineering. *English. Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Transducers, controllers and recorders

Short description: Transducers: definition, classification of transducers, general characteristics, parametric transducers; transducers generating transducers, thermocouples, photo-electric transducers, Piezo electric transducers. Controllers: control systems, control modes, tuning of controllers, servicing and calibration. Recorders: pneumatic recorders, electronic recorders, multichannel recorders, construction, use, servicing and calibration of recorders. *Commencing date:* January, April. *Duration:* 4 weeks. *Qualifications:* Diploma in electronics electrical, mechanical or instrumentation engineering. *English. Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Electricité d'entretien

Brève description : Lois fondamentales de l'électricité, mesures et calculs; schéma électrique, câblage industriel et électromécanique. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 1 700 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Electricité d'entretien industriel

Brève description : Révision et consolidation des connaissances nécessaires pour l'entretien électrique en industrie. Pratique en atelier sur diverses pièces électromécaniques; initiation à la soudure; organisation du travail. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 1 800 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Food-processing industries/Industrie alimentaire/Industrias alimentarias

Control de calidad en alimentos

Breve descripción: Especialización en el control de calidad de frutas y hortalizas procesadas. *Fecha de iniciación*: Enero, marzo, junio y septiembre. *Duración*: 1-12 meses. *Calificaciones*: Español, portugués, inglés. *Fecha límite de inscripción*: 2 meses antes del curso. *Derechos de inscripción*: —.

Organizador: Instituto Nacional de Metrología
Normalización Calidad Industrial (INMETRO)
Av. Ns das Graças 50
25400 Xerem, Brasil

Certificación de calidad de productos alimentarios no tradicionales para la exportación

Breve descripción: Fortalecer las bases para lograr el incremento de las exportaciones de productos alimentarios no tradicionales a terceros mercados, como un factor coadyuvante al desarrollo socioeconómico del país. *Fecha de iniciación*: Enero, marzo, junio y septiembre. *Duración*: 1-12 meses. *Calificaciones*: Español. *Fecha límite de inscripción*: 2 meses antes del curso. *Derechos de inscripción*: —.

Organizador: Instituto Nacional de Normalización
Matías Cousiño 64, 6º piso
Santiago, Chile

Control de calidad en alimentos

Breve descripción: Especialización en el control de calidad de frutas y hortalizas procesadas. *Fecha de iniciación*: Enero, marzo, junio y septiembre. *Duración*: 1-12

meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Superintendencia de Industria y Comercio
Centro de Control de Calidad y Metrología
Cra. 37 No. 52-95, Piso 4
Apartado aéreo 51064, Bogotá-2
Bogotá D.E., Colombia

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:* July. *Fees:* \$US 2,540.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad-500 045, India

Utilization of animal by-products

Short description: Utilization and processing of animal by-products such as protein meals, bone products, animal blood products etc.; glue and gelatine, pet food; utilization of keratinous proteins; different methods of rendering; pilot-scale preparations. *Commencing date:* To be arranged. *Duration:* 4 months-1 year. *Qualifications:* Secondary school, with some experience in the chosen field. English. *Deadline for application:* 3 months before commencing date. *Fees:* Rs 7,500 per month.

Organizer: Central Leather Research Institute
Adyar
Madras-600 020, India
Contact address:
International Scientific Collaboration
Council of Scientific and Industrial Research
Anusandhan Bhavan
Rafi Marg
New Delhi-110 001, India

Promotion and development of agro-allied industries

Short description: Governmental policies in respect of agro-industries; identification of alternative strategies for the promotion and development of agro-allied industries in Nigeria; development of insight into various groups of industries broadly categorized as agro-businesses. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Senior executives of public or private agro-businesses. English. *Deadline for application:* —. *Fees:* N2,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Conservation et transformation des fruits et légumes

Brève description : Initiation aux techniques de base de la conservation et de la transformation de fruits tropicaux. *Début du cours :* Février. *Durée :* 2-4 semaines.

Qualifications : Français. *Date limite d'inscription* : 2 mois avant la date de début du cours. *Droits d'inscription* : \$US 1 400.

Organisateur : ITA
B.P. 2765
Route des Pères Maristes
Dakar, Sénégal

Contrôle de qualité des denrées alimentaires

Brève description : Analyses microbiologiques, chimiques et sensorielles; détermination des taux en micotoxines des aliments; traitement des stocks. *Début du cours* : Mi-janvier. *Durée* : 2-8 semaines. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : \$US 1 400.

Organisateur : ITA
B.P. 2765
Route des Pères Maristes
Dakar, Sénégal

Techniques de transformation des farines composées

Brève description : Techniques de panification à base de farines composées (mil ou maïs et blé); pâtisserie; transformations primaires (mouture, décorticage, brisure); gestion d'une boulangerie-pâtisserie. *Début du cours* : Février. *Durée* : 3-8 semaines. *Qualifications* : Français. *Date limite d'inscription* : Janvier. *Droits d'inscription* : \$US 1 400.

Organisateur : ITA
B.P. 2765
Route des Pères Maristes
Dakar, Sénégal

Techniques de transformation des poissons et produits halieutiques

Brève description : Techniques de séchage, salage et fumage; congélation et contrôle de qualité; visites d'usines et de centres pilotes de transformation. *Début du cours* : Novembre et février. *Durée* : 2-8 semaines. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant la date de début du cours. *Droits d'inscription* : \$US 1 400.

Organisateur : ITA
B.P. 2765
Route des Pères Maristes
Dakar, Sénégal

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

Control de calidad en cueros

Breve descripción: Especialización en control de calidad en cuero de todo tipo. *Fecha de iniciación*: Enero, marzo, junio y septiembre. *Duración*: 1-12 meses. *Calificaciones*: Español, italiano, inglés. *Fecha límite de inscripción*: 2 meses antes del curso. *Derechos de inscripción*: —.

Organizador: Centro de Investigación de Tecnología del Cuero (CTEC)
Avda. 52 entre 121 y 122
1900 La Plata, Argentina

Leather processing

Short description: Theory and practice in leather processing, including: beamhouse, tanning, retanning, finishing, quality control and effluent treatment. *Commencing date:* June. *Duration:* 3 weeks. *Qualifications:* Portuguese, Spanish. *Deadline for application:* March. *Fees:* \$US 300.

Organizer: Escola de Curtimento SENAI
Rua Gregorio Matos, 111
93600 Estancia Velha RS, Brazil
Contact address:
SENAI
International Cooperation Directory
SBN - Bloco B, Edificio Roberto Simonsen
5º andar
70040 Brasilia (DF), Brazil

Quality control of finished leather

Short description: Physical and chemical control of leather; use of different articles with quality control; interpretation of test results. *Commencing date:* October. *Duration:* 3 weeks. *Qualifications:* Portuguese, French, Spanish. *Deadline for application:* July. *Fees:* \$US 1,000.

Organizer: Instituto de Pesquisas Tecnológicas do Estado de São Paulo S/A
Divisão de Produtos Florestais, Têxteis e Couros
Agrupamento de Tecnologia de Couros e Calçados
Caixa Postal 7141
01000 São Paulo SP., Brazil

Control de calidad en cueros

Breve descripción: Especialización en control de calidad en cueros de todo tipo. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, italiano, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Superintendencia de Industria y Comercio,
Centro de Control de Calidad y Metrología
Cra. 37 No. 52-95, piso 4
Apartado aéreo 51064, Bogotá-2
Bogotá D.E., Colombia

Advanced leather-processing technology, including finishing of leathers

Short description: Tailor-made courses in leather-processing technology, with emphasis on tanning and finishing of all kinds of leathers, including cattle and buffalo hides, goat and sheep skins; physical and chemical testing of leathers. *Commencing date:* To be arranged. *Duration:* 4 months-1 year. *Qualifications:* Secondary school, with some experience in the chosen field. English. *Deadline for application:* 3 months before commencing date. *Fees:* Ra. 7,500 per month.

Organizer: Central Leather Research Institute
Adyar
Madras-600 020, India
Contact address:
International Scientific Collaboration
Council of Scientific and Industrial Research
Anusandhan Bhavan
Rafi Marg
New Delhi-110 001, India

Footwear manufacture

Short description: Different sizing systems, shoe design and pattern making, clicking and closing, fabrication of different types of footwear, shoe-finishing techniques, quality control and testing of footwear. *Commencing date:* To be arranged. *Duration:* 4 months-1 year. *Qualifications:* Secondary school, with some experience in the chosen field. *English.* *Deadline for application:* 3 months before commencing date. *Fees:* Rs. 10,000 per month.

Organizer: Central Leather Research Institute
Adyar
Madras-600 020, India
Contact address:
International Scientific Collaboration
Council of Scientific and Industrial Research
Anusandhan Bhavan
Rafi Marg
New Delhi-110 001, India

Design and manufacture of leather goods

Short description: Pattern cutting, drawing and designing leather goods such as wallets, handbags, suitcases etc.; fabrication, casting and marketing of leather goods. *Commencing date:* March. *Duration:* 11 months. *Qualifications:* Secondary school. *English.* *Deadline for application:* January. *Fees:* Rs. 5,000 per month.

Organizer: Central Leather Research Institute
Adyar
Madras-600 020, India
Contact address:
International Scientific Collaboration
Council of Scientific and Industrial Research
Anusandhan Bhavan
Rafi Marg
New Delhi-110 001, India

Manufacture of leather goods

Short description: Theory and practice of pattern cutting, various unit operations; use of tools and machines in leather-goods manufacture; fabrication of small leather goods, medium to heavy leather goods, handbags and suitcases. *Commencing date:* To be arranged. *Duration:* 4 months-1 year. *Qualifications:* Secondary school, with some experience in the chosen field. *English.* *Deadline for application:* 3 months before commencing date. *Fees:* Rs. 7,500 per month.

Organizer: Central Leather Research Institute
Adyar
Madras-600 020, India
Contact address:
International Scientific Collaboration
Council of Scientific and Industrial Research
Anusandhan Bhavan
Rafi Marg
New Delhi-110 001, India

Leather gloves manufacturing technology

Short description: Basic skills in fancy leather gloves manufacturing. *Commencing date:* January, May, September. *Duration:* 4 months. *Qualifications:* Matriculation. *English.*

Deadline for application: 2 months before commencing date. *Fees:* Rs. 2,600 per month, including board.

Organizer: Leather Industry Development Organization
P.O. Box 1231
Islamabad, Pakistan
Contact address:
Leather Products Development Centre
Adda Pasrurian, Imambargah Road
Sialkot, Pakistan

Leather-garments manufacturing technology

Short description: Designing, pattern making, cutting, manufacturing and planning techniques for leather garment production. *Commencing date:* January. *Duration:* 1 year. *Qualifications:* Matriculation. English. *Deadline for application:* 5 December. *Fees:* Rs. 2,600 per month, including board.

Organizer: Leather Industry Development Organization
P.O. Box 1231
Islamabad, Pakistan
Contact address:
Leather Products Development Centre
IV-D, 14/7, Razia apartments
Hakim Ibn-E-Sina Road
Nazimabad
P.O. Box 2375
Karachi, Pakistan

Leather goods manufacturing technology

Short description: Designing, pattern making, planning layout, cutting; display and presentation of leather goods. *Commencing date:* January. *Duration:* 1 year. *Qualifications:* Matriculation. English. *Deadline for application:* December. *Fees:* Rs. 2,700 per month, including board.

Organizers: Leather Industry Development Organization
P.O. Box 1231
Islamabad, Pakistan
Contact address:
Leather Products Development Centre
IV-D, 14/7, Razia apartments
Hakim Ibn-E-Sina Road
Nazimabad
P.O. Box 2375
Karachi, Pakistan

Mechanical and metalworking industries¹

**Industrie de construction mécanique et de transformation de métaux/
Industrias mecánicas y de transformación de metales**

Metalworking

Short description: Updating skills and knowledge of technicians in the following broad areas: tool design; tool and die making; precision tool room; production technology; met. and engineering inspection; machine tool maintenance; industrial hydraulic and pneumatic controls; electrical maintenance; heat treatment and material testing;

advanced welding; industrial chemistry; P.C.I.; advanced heat engines; NC/CNC centre. *Commencing date:* Throughout the year. *Duration:* 2-12 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

Organizer: Directorate General of Employment and Training
Shram Shakti Bhavan
2 & 4, Rafi Marg
New Delhi 110 001, India
With a copy to:
Advanced Training Institute, D.G.E. and T.
Ministry of Labour, G.O.I.
Guindy
Madras 600 032, India

Operation, maintenance and repair of farm machinery

Short description: On-the-job training in selection, operation, maintenance and repair of I.C. engines, tractors and allied agricultural machinery; improved farming techniques. *Commencing date:* September, December. *Duration:* 18 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 5 months before commencing date. *Fees:* None.

Organizer: Central Farm Machinery Training and Testing Institute
Tractor Nagar
Budni (M.P.) 466 445, India
Applications to be routed through:
Ministry of External Affairs
Government of India
New Delhi, India

Press operation

Short description: On-the-job training in different types of presses, including fine blanking with theoretical instructions on press setting, details of press tools etc. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* March. *Fees:* \$US 3,000.

Organizer: NTTF
Plot No. 23/24, II phase
Peenya Industrial Area
Bangalore 560 058, India

Selection, operation, maintenance, testing and evaluation of farm machinery

Short description: The syllabus is prepared according to the requirements of the fellow and sponsoring authority. *Commencing date:* August. *Duration:* 4-9 months. *Qualifications:* Professional qualification. English. *Deadline for application:* January. *Fees:* None.

Organizer: Central Farm Machinery Training and Testing Institute
Tractor Nagar
Budni (M.P.) 466 445, India
Applications to be routed through:
Ministry of External Affairs
Government of India
New Delhi, India

Spark and wire EDM operation

Short description: Training in spark erosion and wire EDM machines, with theoretical instruction. *Commencing date:* June. *Duration:* 3 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* May. *Fees:* \$US 750.

Organizer: NTTF
Plot No. 23/24, II phase
Peenya Industrial Area
Bangalore 560 058, India

Tool design

Short description: Design practice, tool-room practice, process planning, materials for tooling, design of special cutting tools, gauges, jigs and fixtures, design of sheet-metal working tools, dies for metal casting, metrology and quality assurance. *Commencing date:* August. *Duration:* 1 year. *Qualification:* Diploma in mechanical engineering. *English.* *Deadline for application:* April. *Fees:* \$US 2,600.

Organizer: Central Institute of Tool Design
Balanagar
Hyderabad, 500 037, A.P., India

Advanced drafting techniques

Short description: Orthographic projection system; 1st, 2nd, 3rd and 4th angle projection systems; rejection of 2nd and 4th; 1st and 3rd angles as industrial standards. Review of isometric, obliquish sectional and auxiliary views. Limits, fits and tolerance and its application. Types of screw threads and their use. Gears, gear materials and calculations for spur gears. Practice in making orthographic views from isometric views and from machine components. Practice in making isometric views from orthographic views. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* 10 days before commencing date. *Fees:* \$US 520.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Basic drafting techniques

Short description: Basic drafting principles, type of lines and their application, orthographic projection system; isometric and oblique views; auxiliary views, sectional views; drawing practice of 2/3 views; limits, fits and tolerance; screw threads and their applications; gears, gear materials, engineering materials; heat treatment. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Basic NC machining operations

Short description: Machine tools installed in NC shop and conventional nomenclature for displacement of slides (Z, X and Y axis). The concept of cutting speed, feed and depth of cut for various metal removal processes; part programming in NC language; using

preparatory G-functions, feed, spindle and tool functions; auxiliary M-functions. Use of conversational programming like symbolic FAPT 3T for turning centre and EJAPT for EDM wire cut. Operation of optical grinder for toolings to be used on turning centre. Operation of mould cavities; cavity milling by copy-milling machines. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Diploma or degree in mechanical engineering, or sufficient experience with NC machines. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Basic pneumatic course

Short description: Compressed air production and distribution; symbols of pneumatic components and operational principles; construction of pneumatic valves and cylinders. Exercises on pneumatic circuits using valves and cylinders. Practical application of pneumatic to different manufacturing problems and laboratory practice. Electro-pneumatics, introduction and conversion of pneumatic circuits to electro-pneumatics. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Basic welding techniques

Short description: Safety measures, material and equipment used; practice in gas and electric welding on square-butt weld, corner weld, fillet weld, pipe-butt weld, branch-pipe weld, single V-butt weld and cast-iron weld. Gas cutting; brazing practice, selection of current and electrode for electric welding. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Cutting-tool and gauge design techniques

Short description: Flat form and circular form tools, tool signatures, recommended angles for high-speed steel (HSS) for cutting different materials. Designing flat form tools and circular form tools. Introduction to gearing. Designing of milling cutters; broach designing; designing of standard cutting tools (twist drills, milling cutters, reamers). Tolerance and conventional inspection gauges. Designing of plug, snap, depth and taper gauges, and special gauges as required. Threads and designing thread-plug and thread-ring gauges. Material specification. Heat-treatment process and surface finish required for gauges. *Commencing date:* January, April, July, October. *Duration:* 10 weeks. *Qualifications:* Diploma or degree in mechanical engineering or sufficient experience in cutting-tool and gauge design. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Inspection and quality control techniques

Short description: Introduction to measuring instruments, use of vernier caliper, micrometer, protector dial indicator and gauge block; checking of threads, different ways of measurement, tapers; use of comparators, visual gauge, micrometer; use of magnaflux for crack detection and metal monitoring. Gear checking, universal length measuring, ultrasonic flaw detector, roundness measuring machine. Proper use of electronic comparator and production gauges. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Jig and fixture design techniques

Short description: Basic design principles, general principles of location, locating and clamping devices, classification of jigs for drilling operations. Fixtures, fixtures for milling operations; broaching fixtures. Limits, fits and tolerance. Screw threads; gears. Heat-treatment processes. *Commencing date:* January, April, July, October. *Duration:* 10 weeks. *Qualifications:* Diploma or degree in mechanical engineering or sufficient experience in jig and fixture design. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Machine-shop practice

Short description: Safety care and maintenance of machine tools. Measuring instruments, lathes, various turning operations, materials and types of tools speed and feed, cutting different types of threads, milling and other operations. Use of milling cutters, dividing head; cutting of spur, bevel, helical and worm gears. *Commencing date:* January, April, July, October. *Duration:* 10 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Pattern-making techniques

Short description: Proper use and care of bench and hand tools, demonstration of pattern shop machinery; materials used, blue-print reading, exercises in pattern making; demonstration in foundry work as related to pattern making. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozpur Road
Lahore 54600, Pakistan

Precision die- and tool-making techniques

Short description: Safety; use of precision tools; study and practice of various types of lathes; cutting various types of threads; study and practice of different types of milling machines; cutting spur, bevel, helical and worm gears. Precision surface and cylindrical grinding machines, profile- and thread-grinding machines, grinding wheels and types. Use of sine bar, gear shaping and hobbing, lapping, honing and use of oil stones; jig boring and jig grinding. *Commencing date:* January, April, July, October. *Duration:* 10 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before the commencing date. *Fees:* \$US: 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Press-tool and mould design techniques

Short description: Die design, blank and blanking dies; punches, punch plates, finger stops, automatic stops, stripper, selection of die set, fasteners. Type of dies: piercing, blanking, multi-station progressive die; bending, notching, drawing, forming, combination curling, trimming. Moulds: design principles in part design, general construction and types of moulds. Cooling system, ejector system, shrinkage, feed system, venting. *Commencing date:* January, April, July, October. *Duration:* 10 weeks. *Qualifications:* Diploma or degree in mechanical engineering or sufficient experience in press-tool and mould design. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Chaudronnerie

Brève description : Consolidation et développement des acquis théoriques et pratiques du métier. Poses d'encastres; exercice de synthèse, travaux sur tuyauterie. Technique de commandement. Relations humaines. *Début du cours :* Octobre. *Durée :* 36 semaines. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* Juillet. *Droits d'inscription :* FCFA 2 100 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438 Avenue Félix Eboué
Dakar, Sénégal

Chaudronnerie Industrielle

Brève description : Traçage, soudage au chalumeau, oxycoupage, arc-forgeage, réalisation de diverses petites pièces et chaudronnerie. Spécialisation. *Début du cours :* Octobre. *Durée :* 36 semaines. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* Juillet. *Droits d'inscription :* FCFA 2 100 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Fraisage

Brève description : Surfaçage, sciage, rainurage; affûtage des fraises; dessin, gamme d'usinage. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 200 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Hydraulique et moteur diesel

Brève description : Schémas et divers éléments en hydraulique; moteurs diesel - réglage, calage. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 000 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Hydraulique et pneumatique engins

Brève description : Consolidation et développement des connaissances théoriques et pratiques en hydraulique et pneumatique : étude des composants et leurs rôles; organisation du travail. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 000 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Mécanique d'entretien industriel

Brève description : Usinage; métrologie; travaux sur machines-outils; visite et réparation. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 1 700 000.

Organisateur : Centre industriel de formation et de perfectionnement de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Mécanique d'entretien industriel

Brève description : Travaux d'ajustage; étude approfondie en dessin technique; expertise et remise en état des vannes, pompes et ensembles mécaniques. Affûtage des outils;

initiation soudage et électricité. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 000 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Mécanique moteur (essence-diesel)

Brève description : Technologie du moteur (fonctionnement théorique); démontage et étude organique du moteur; métrologie dimensionnelle appliquée; expertise, mesure, calage, réglage. *Début du cours* : Octobre. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 500 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Moteur/injection

Brève description : Visite d'expertise; étude du montage, formation en injection; contrôle de contrainte, électricité autovisite, soudage au chalumeau et à l'arc; organisation du travail. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 000 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Perfectionnement/polyvalence

Brève description : Formation auxiliaire en vue de rendre un agent polyvalent ou de le perfectionner. Initiation à l'option choisie; cours théorique renforcé par pratique élémentaire en atelier. *Début du cours* : Tout au long de l'année. *Durée* : 8-14 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Soudage/découpage

Brève description : Technologie générale; positions en soudure : plat, angle, intérieur, extérieur, corniche, verticale. *Début du cours* : Octobre. *Durée* : 36 semaines.

Qualifications : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 500 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Tournage

Brève description : Dressage, cylindrage, alésage, filetage, affûtage des outils, dessin gamme d'usinage. *Début du cours* : Octobre. *Durée* : 36 semaines. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : Juillet. *Droits d'inscription* : FCFA 2 000 000.

Organisateur : Centre industriel de formation et de perfectionnement
de Dakar-Marine (CIFP)
B.P. 438
Avenue Félix Eboué
Dakar, Sénégal

Electric-arc welding (E-1)

Short description: Basic principles of butt and fillet weld in different positions. Welding of butt and fillet joints, V-joints, I-joints in plates and profiles; electrical principles, welding equipment and materials, thermal cutting, safety measures. *Commencing date*: Throughout the year. *Duration*: 2 weeks. *Qualifications*: Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 300.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Electric-arc welding (E-2)

Short description: Different welding positions on V-joints, fillet joints, profiles; materials and geometrics; welding procedures, weld-joint preparation, welding faults, internal stress and strains. *Commencing date*: Throughout the year. *Duration*: 4 weeks. *Qualifications*: Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 700.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Electric-arc welding (E-3)

Short description: Butt and fillet joints in different positions on plates of 4-12 mm thickness. *Commencing date*: Throughout the year. *Duration*: 2 weeks. *Qualifications*: Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 400.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Gas welding (G-1)

Short description: Gas welding of I-joints on plates and pipes in different positions; welding gases, welding equipment, flame, welding material, thermal cutting and safety measures. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application:* —. *Fees:* \$US 300.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Gas welding (G-2)

Short description: Horizontal fixed pipes of 40-150 mm thickness; butt welds with I- and V-joints in all welding positions; material, overview of welding procedures, joint preparation, welding defects. *Commencing date:* Throughout the year. *Duration:* 4 weeks. *Qualifications:* Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application:* —. *Fees:* \$US 700.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Gas welding (G-3)

Short description: Practical training; welding of vertical pipes of 40-150 mm diameter in "q" and "s" positions. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application:* —. *Fees:* \$US 400.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Mag welding (St-1)

Short description: Fillet joints, I- and V-joints on plates in different positions; basic electronic principles, equipment, materials and safety. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application:* —. *Fees:* \$US 450.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Mag welding (St-2)

Short description: Fillet joints, I- and V-joints on plates of different positions and of different thickness; materials, welding principles, weld preparation and weld defects. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* Degree in

engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 500.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Tig welding (St-1)

Short description: Welding of butt-, I- and V-joints on plates of different thicknesses and in different welding positions: mag-welding principles, apparatuses, methods of elimination of defects, materials, thermal cutting and safety. *Commencing date*: Throughout the year. *Qualifications*: Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 400.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Tig welding (St-2)

Short description: Butt and fillet welding of plates in different positions; materials, welding procedures, weld preparation and welding defects. *Commencing date*: Throughout the year. *Duration*: 2 weeks. *Qualifications*: Degree in engineering or 2 years of welding experience. English or Turkish. *Deadline for application*: —. *Fees*: \$US 500.

Organizer: Welding Technology Center
Metallurgical Engineering Department
Middle East Technical University
Ankara, Turkey

Metallurgical industries/Industrie métallurgique/Industrias metalúrgicas

Posgrado en siderurgia

Breve descripción: Revisión de ciencia básica y tecnología de los procesos de reducción, aceración y operaciones de laminado en caliente y frío. Práctica de lo visto en teoría en distintas plantas siderúrgicas. *Fecha de iniciación*: Marzo. *Duración*: 10 meses. *Calificaciones*: Español. *Fecha límite de inscripción*: 3 meses antes del curso. *Derechos de inscripción*: Para ser acordado.

Organizador: Instituto Argentino de Siderurgia
Pasaje Carlos María Della Paolera 226
1104 Buenos Aires, Argentina

Moulding machine operators

Short description: On-the-job training on different injection-moulding machines: controlled injection-moulding machine, compression-moulding machines etc. *Commencing date*: May. *Duration*: 12 weeks. *Qualifications*: Professional qualifications. English. *Deadline for application*: April. *Fees*: \$US 3,000.

Organizer: NTTF
Plot No. 23/24, II phase
Peenya Industrial Area
Bangalore 560 058, India

Basic foundry techniques

Short description: Moulding sand and its classification; sand moulding and core making, sand testing, melting practice. Basic foundry metallurgy, machine moulding, cleaning and finishing of castings. Casting defects and their remedies. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Basic protective coating techniques

Short description: Safety, loading/unloading pickling tanks, rinsing, tanks required for different kinds of plating, liquors; anode/cathode bars; mixing chemicals, rheostats; voltmeters, amperimeters; rectifiers and motor generators; practice of copper, nickel, bronze, cadmium and zinc plating, electro-polishing on metals. *Commencing date:* January, April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Foundry engineering

Short description: Sand and bentonite testing. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Diploma in metallurgy/mechanical engineering. English. *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Foundry engineering

Short description: Melting and casting of ferrous and non-ferrous metals. *Commencing date:* To be arranged. *Duration:* 4-8 weeks. *Qualifications:* Diploma or degree in mechanical engineering metallurgy. *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Heat-treatment techniques

Short description: Safety, various types of heat treatment, hardening, tempering, quenching, cyaniding, annealing and normalizing different steels. Spark testing, heat treatment of tool steels, high-speed steels, carbonizing. *Commencing date:* January,

April, July, October. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 10 days before commencing date. *Fees:* \$US 52.

Organizer: Pakistan Industrial Technical Assistance Centre
Ferozepur Road
Lahore 54600, Pakistan

Metallurgy

Short description: Chemical and physical properties of metals. *Commencing date:* To be arranged. *Duration:* 4-8 weeks. *Qualifications:* Diploma in metallurgy/chemistry. English. *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore, 54770, Pakistan

Metallurgy

Short description: Heat treatment of ferrous and non-ferrous metals. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Diploma in metallurgy/mechanical engineering. English. *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Metallurgy/metal working

Short description: Rolling and forging of metals. *Commencing date:* To be arranged. *Duration:* 4-8 weeks. *Qualifications:* Diploma in metallurgy/mechanical engineering. English. *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Integrated iron and steel works

Short description: Industrial safety, basic oxygen furnaces and continuous casting operations, hot-rolling mill operations, cold-rolling mill and finishing lines operations, metallurgical quality control, blast furnace operations. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* Degree in engineering. English. *Deadline for application:* May. *Fees:* —.

Organizer: Erdemir
Eregli Iron and Steel Company
Eregli, Turkey

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

Packaging technology

Short description: Concept of packaging, packaging materials, methods, package embellishments and printing; standards of quality control, packaging and marketing; packaging economics, packaging management; visits to industrial plants; laboratory

familiarization: project work. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* Graduation. English. *Deadline for application:* August. *Fees:* SUS 1,000.

Organizer: Indian Institute of Packaging
E-2, MIDC Area, P.B. 9432
Chakala, Andheri (East)
Bombay 400 093, India

Packaging (certificate course)

Short description: Packaging materials, their properties and applications; quality control and evaluation of packaging; standardization, cost reduction and variety reduction in packaging; packaging of products, management in packaging, storage and inventory control for packaging materials and packages, printing techniques. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* Graduation. English. *Deadline for application:* August. *Fees:* SUS 1,000 for overseas participants; Rs 3,500 for local participants.

Organizer: Indian Institute of Packaging
E-2, MIDC Area, P.B. 9432
Chakala, Andheri (East)
Bombay 400 093, India

Textile industries/Industrie textile/Industrias textiles

Basic work study

Short description: Introducing basic work-study concepts and industrial engineering in the textile industry. *Commencing date:* To be arranged. *Duration:* 18 days. *Qualifications:* Bachelor's degree in textile technology and 3-5 years experience as assistant; or masters degree. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Instructors for spinning fitters (drawing frames, roving frames and ring frames)

Short description: In-plant training preparing instructors for fitters; by employing the "analytical methods productivity system" (AMPS) instructors will help to streamline the work of fitters on a scientific basis. *Commencing date:* To be arranged. *Duration:* 10-12 weeks. *Qualifications:* Matriculation with 3 years experience in the area in which training is sought. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Instructors for spinning operators

Short description. Acquaint instructors with the latest techniques to train the new as well as already working operators by using the "analytical methods productivity system"

(AMPS). *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Matriculation with 5 years experience as supervisor. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Instructors for weaving fitters (looms)

Short description: In-plant training: by employing the "analytical methods productivity system" (AMPS) instructors will help to streamline the work of fitters on a scientific basis. *Commencing date:* To be arranged. *Duration:* 72 days. *Qualifications:* Matriculation with 5 years experience as weaving fitter. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Instructors for weavers

Short description: Latest techniques to train new as well as already working weavers by using the "analytical methods productivity system" (AMPS). *Commencing date:* To be arranged. *Duration:* 18 days. *Qualifications:* Matriculation with 5 years experience as weaving supervisor. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Quality control (spinning)

Short description: Scientific textile testing and quality-control techniques; statistical processing; analysis and interpretation of data for quality control. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Bachelor's degree with 5 years experience in quality control (spinning). *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Quality control and testing in wet textile processing

Short description: Upgrading skills of people engaged in quality control in wet processing; testing methods and implementation of quality-control techniques. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Diploma in textile chemistry with 3 years experience in quality control. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Spinning supervisors

Short description: Upgrading of technical know-how and solid scientific basis for spinning supervisors; management skills, fault detection and rectification. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Diploma in textiles with 5 years experience. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
G.P.O. Box 479
Karachi, Pakistan

Cotton textiles

Short description: Raw materials; technology of spinning, weaving, printing and dyeing; process-control techniques for cotton textiles. *Commencing date:* September/October 1991. *Duration:* 26 days. *Qualifications:* Textile or mechanical engineers; at least 3 years of experience in textile industry. English. *Deadline for application:* 30 May 1991. *Fees:* \$US 50 per day (including room and board).

Organizer: Sümerbank Arastirma
Geliştirme ve Eğitim İşletmesi
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

Fabricación de muebles y manufacturas

Breve descripción: Ebanistería, tapicería, pintura y acabados de la madera. *Fecha de iniciación:* Febrero. *Duración:* 4 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* Diciembre 1990. *Derechos de inscripción:* Para ser acordado.

Organizador: Oficina de Cooperación Técnica Internacional
Calle 57 No. 8-69, Torre Norte Piso 5
Bogotá, Colombia

Industrie du bois dans l'habitat, l'artisanat et l'énergétique dans les pays en développement

Brève description: Politique nationale, culture du bois, transformation industrielle et artisanale; sous-traitance du bois; constructions en bois (maisons, ponts et autres). *Début du cours:* Mai/juin. *Durée:* 6 mois. *Qualifications:* Français. *Date limite d'inscription:* Janvier. *Droits d'inscription:* —.

Organisateur: Les Sociétés Verret-Habitat (SOVERHA)
Delmas 19, n° 30
Port-au-Prince, Haiti

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

Metrología Industrial

Breve descripción: Calibración, comprobación y verificación de los instrumentos de medida y control, empleados en los procesos industriales. *Fecha de iniciación:* Enero,

marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro de Investigación de Tecnología del Cuero (CTEC)
Avda. 52 entre 121 y 122
1900 La Plata, Argentina

Digital circuits in process instrumentation

Short description: Number systems; arithmetic circuits; basic principles of analog/digital, digital/analog converter; logic circuit design; program logic controller, interfacing with drives, handling of ICs and its replacement in the circuit. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Diploma in electrical, electronics, or instrumentation engineering or Bachelor of Science with experience in process instrumentation. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Electromechanical and pneumatic instrumentation

Short description: Transducers, strain gauge, linear displacement, pressure, vibration, flow rate, level measurement; pneumatic components, basic principle of working of flapper nozzle relays; pneumatic recorders, pneumatic controllers, final control element. *Commencing date:* September. *Duration:* 3 weeks. *Qualifications:* Diploma in electrical, electronics, instrumentation or mechanical engineering with experience in process instrumentation or B.Sc. with at least 1 year of experience in process industries. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Introduction to microprocessor-based process-control system

Short description: Review of transducers, introduction to process controller modes; analog to digital converter and D to A converter; microprocessor architecture instruction sets; output devices; data handling, serial - parallel conversion and vice versa, interfacing technique, program writing for control of process parameter. *Commencing date:* March, July, October. *Duration:* 4 weeks. *Qualifications:* Diploma in electrical, electronics or instrumentation engineering with 1 year experience in process instrumentation. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Process instrumentation

Short description: Electrical engineering, electronic devices and circuits, electrical measurements and instruments; control system theory, process parameters, electronic instruments, analysers, recorders and optical instruments, data process and telemetry, fluid power. Laboratory experiments: repair, maintenance, test and calibration of instruments. *Commencing date:* October. *Duration:* 48 weeks. *Qualifications:* Relevant higher national certificate, diploma, degree or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Process instrumentation and control

Short description: Process parameter measurement; different analyses; measuring instruments; automatic control, loop system, on/off control; safety in instrumentation. *Commencing date:* June, November. *Duration:* 6 weeks. *Qualifications:* B.Sc. or diploma in engineering instrumentation. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Metrología

Breve descripción: Calibración, comprobación y verificación de los instrumentos de medida y control, empleados en los procesos industriales. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro Investigación y Asistencia Tecnológica del Estado de Guanajuato (CIATEG)
Apartado Postal 890 C.P.
37000 León, Gto., México

Community water supply and sanitation for developing countries

Short description: Upgrading of know-how and skills of engineers from provincial waterworks and sanitation agencies; implementation of water-supply and sanitation projects. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* August. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Hydrometeorological measurements and data-analysis techniques

Short description: Planning, design and operation of hydrometeorological field stations using modern instruments; processing, analysis and interpretation of collected data.

Commencing date: September. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* July. *Fees:* \$US 2,500.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Integrated farming system management

Short description: Increased food production through integrated farming; techniques and their application. Also designed for agricultural extension workers and middle-management personnel. *Commencing date:* May. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* March. *Fees:* \$US 2,500.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Irrigation project rehabilitation and management

Short description: Causes of poor performance of irrigation projects; design criteria for rehabilitation and management capability through proper water allocation; planning, implementation, monitoring and evaluation techniques; farmers' participation and intergovernmental agencies' interaction. *Commencing date:* February. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Irrigation system management

Short description: Designed for engineers and agricultural scientists; evaluation of existing field conditions of irrigation systems; improvement of their operation; management efficiency, particularly for rice-based cropping system; organizational, social and economic aspects and farmers' involvement in project management. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* May. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Planning and design of small-scale irrigation projects

Short description: Designed for engineers and irrigation planners. Planning and design of small irrigation systems incorporating proper operation and management criteria, particularly under the conditions of insufficient input data. *Commencing date:* February. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

2. INDUSTRIAL FUNCTIONS/FONCTIONS INDUSTRIELLES/ FUNCIONES INDUSTRIALES

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

Business data processing

Short description: Elements of Cobol language, writing a Cobol programme, programming practices, business applications, systems analysis and design. *Commencing date:* June. *Duration:* 4 weeks. *Qualifications:* Diploma in engineering or graduation in economics or mathematics. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Computer programming

Short description: Data-processing fundamentals, principles, advantages and disadvantages; concepts, terms and techniques for electronic information/data processing; flowcharting, logic building and program writing; case studies. *Commencing date:* To be arranged. *Duration:* 6-8 weeks. *Qualifications:* Good basic education. English. *Deadline for application:* 2 months before commencing date. *Fees:* Residential: \$US 500-1,500 per week; non-residential: \$US 350 per week.

Organizer: Computer Management Centre
33A, Chowringhee Road, 5th Floor
Calcutta 700 071, India

Venue: Calcutta or at customers' locations

Computer programming

Short description: Introduction to digital computers; system architecture-peripherals; operating procedure. Computer programming BASIC: introduction, flow-charting, basic statements, BASIC-GT calls. *Commencing date:* December. *Duration:* 3 weeks. *Qualifications:* Diploma in engineering or graduation. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Microprocessors

Short description: Number systems, code conversion, assembly language, machine language, single-chip microcomputers, PROM, RAM, ROM, EPROM etc :

microcomputer architecture; memory interfacing, peripheral interfacing devices (INTEL family); microprocessor development systems, introduction to 16-bit microprocessors; industrial applications. *Commencing date:* May, August, November. *Duration:* 4 weeks. *Qualifications:* Diploma in electronics or electrical engineering or equivalent. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Problem solving with Fortran

Short description: Organization of a computer; high-level languages; algorithms and their representation; flow charts; programming constructs and pseudo code. Fortran programs: theory and programming practice in numerical analysis, examples of linear equations as a mathematical model, statistical computing (variance, correlation etc.). *Commencing date:* July. *Duration:* 4 weeks. *Qualifications:* Diploma in engineering or B.Sc. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Computer ability for management

Short description: To create computer awareness in managers and executive directors; computers as a tool in decision-making. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Decision-makers in the public and private sector. English. *Deadline for application:* 2 months before commencing date. *Fees:* N1,900.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Computer applications in training and education

Short description: The computer as an effective tool to enhance learning and training; instructional techniques for computer-based instruction. *Commencing date:* May. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* March. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Microcomputer applications in irrigation-water management

Short description: Improved water management through the use of microcomputers; programming and processing techniques for proper utilization and management of

water resources. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* May. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Data networks and computer communication

Short description: Introduction to data networks and layered network architecture; data communication and channels; delay models in data networks; multi-access communication; flow control. *Commencing date:* August. *Duration:* 2 weeks. *Qualifications:* B.Sc. in electronic engineering or equivalent. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,300 (including board and lodging).

Organizer: Electrical and Electronic Engineering Department
Boğaziçi University
80815 Bebek
Istanbul, Turkey

Microcomputer applications in communication and control

Short description: Interfacing techniques in communication; asynchronous and synchronous communication, standards; voice and data switching; MODEM control; microprocessor-controlled communication gear; digital control fundamentals; PID control; A/D and D/A conversion; stepper-motor control; "hands-on" experience: laboratory testing of microprocessor controlled PBX, P assisted RF synthesizer, A/D and D/A conversion, various PID control experiments. *Commencing date:* August. *Duration:* 3 weeks. *Qualifications:* Professional qualifications, background in microprocessors. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,900 (including board and lodging).

Organizer: Electrical and Electronic Engineering Department
Boğaziçi University
80815 Bebek
Istanbul, Turkey

8-bit microprocessors

Short description: Introduction to 8-bit microprocessors; microprocessor hardware; assembly language programming of the MC6801 family; parallel and asynchronous serial I/O; interfacing of non-standard units; A/D and D/A conversion; interrupts and timed operations; various peripheral controllers like DMA, CRTIC, FDC; "hands-on" experience: laboratory experiments to reinforce programming skills in interfacing, A/D and D/A conversion, and control. *Commencing date:* August. *Duration:* 3 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,900 (including board and lodging).

Organizer: Electrical and Electronic Engineering Department
Boğaziçi University
80815 Bebek
Istanbul, Turkey

16/32-bit microprocessors

Short description: 16/32-bit microprocessors, the 680X0 family; assembly language programming of the 680X0 family; 680X0 family peripheral chips; hardware architecture of computers and controllers using the 680X0 family; "hands-on" experience: assembly language programming of the 680X0 family using Apple

Macintosh computers; testing of programs on 68000-based microcomputers. *Commencing date:* August. *Duration:* 2 weeks. *Qualifications:* Microprocessor background. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,300 (including board and lodging).

Organizer: Electrical and Electronic Engineering Department
Bogaziçi University
80815 Bebek
Istanbul, Turkey

Energy/Energie/Energía

Thermal and photovoltaic application of solar energy

Short description: Fundamentals and application of solar energy, solar heating and cooling with active and passive systems, solar drying, photovoltaic power generation, autonomous PV power systems. *Commencing date:* August. *Duration:* 1 month. *Qualifications:* Degree in engineering. English. *Deadline for application:* 7 months before commencing date. *Fees:* \$US 1,000.

Organizer: Ege University
Solar Energy Institute
35100 Bornova
Izmir, Turkey

Environment/Environnement/Medio ambiente

Environmental impact assessment and review

Short description: Approaches, procedures and techniques in carrying out the EIA review in the light of pragmatic and utilitarian principles, reconciling the realization of both economic development and environment quality objectives. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* July. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Toxic and hazardous waste management

Short description: Enhancement of environmental quality, specifically of public health, through proper treatment and disposal of toxic and hazardous wastes; planning and design considerations involved in the development of treatment and disposal systems for hazardous wastes. *Commencing date:* March. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* January. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

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

Sistemas de información en la organización

Breve descripción: Nueva concepción de los sistemas de información, en los que se integren de manera armónica y eficiente la tecnología informática avanzada, el complejo manejo de los problemas en la organización y las herramientas de modelaje matemático para la toma de decisiones. *Fecha de iniciación:* Enero. *Duración:* 17 meses de tiempo parcial. *Calificaciones:* Ingenieros o profesionales con experiencia en el área de sistemas. Español. *Fecha límite de inscripción:* Diciembre 1990. *Derechos de inscripción:* \$Col 1.000.000.

Organizador: Departamento de Ingeniería Industrial Universidad de los Andes
Apartado aéreo 4976
Bogotá, Colombia

Information storage and retrieval systems

Short description: Methods of information processing and organization; 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:* July. *Fees:* \$US 2,540.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad-500 045, India

Management information for decision-making

Short description: To familiarize participants with important management information concepts and to equip them with skills which are vital for effective business communication. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Industrial extension officers, officials of finance and investment organizations, entrepreneurs, senior managers, senior government officials, researchers and data bank personnel. English. *Deadline for application:* 2 months before commencing date. *Fees:* N1,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Industrial information officers

Short description: Knowledge and skills for an effective industry information officer. *Commencing date:* July. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* April. *Fees:* \$US 3,600.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City 1101, Philippines

Information officers

Short description: Increase of productivity through proper management of industrial information. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree or equivalent. *English.* *Deadline for application:* February. *Fees:* \$US 3,300.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City 1101, Philippines

Industrial planning and programming/ Planificación et programmation industrielles/ Planeamiento y programación industrial

Rural physical infrastructure development

Short description: Planning, design, implementation and management of rural physical infrastructures: roads, domestic water supply, small-scale water resources for agriculture and other facilities for rural development. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* September. *Fees:* \$US 3,200.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

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

Gerencia de contabilidad y finanzas

Breve descripción: Gerencia empresarial, contabilidad gerencial, contabilidad de costos para la toma de decisiones, administración financiera, preparación y control de presupuestos, política y estrategia financieras. *Fecha de iniciación:* La Paz: marzo; Cochabamba: enero. *Duración:* 150 horas. *Calificaciones:* Título profesional, con experiencia en el área de contabilidad y finanzas. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$b 1.000.

Organizador: Instituto para el Desarrollo de Empresarios y Administradores
"IDEA"
La Paz: Av. Camacho No. 1485, Edificio La Urbana, 3er. Piso
Casilla 10508
La Paz, Bolivia
Cochabamba: Calle Sucre E-0336, 2do. Piso
Edificio Cámara de Comercio
Casilla 3376
Cochabamba, Bolivia

Preparation of feasibility studies

Short description: Basic qualities of a good project feasibility report; importance of project feasibility studies as a basis for sound financial decisions; methodology for the

preparation of feasibility studies for a project. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Appraisal officers of banks and small-scale industries credit schemes, bank managers, loan syndicators, management consultants, industrial officers and other persons involved in developmental finance in public or private institutions. English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Project feasibility studies

Short description: Practice in project feasibility studies through field work and case studies. *Commencing date:* April. *Duration:* 4 weeks. *Qualifications:* Project evaluators, promoters from financial institutions, industrial extension officers. English. *Deadline for application:* March. *Fees:* N2,650.

Organizer: Centre for Management Development (CMD)
PMB 21578
Ikeja, Nigeria

Project planning, appraisal and evaluation

Short description: Planning, appraisal, evaluation and effective monitoring of industrial projects. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Persons concerned with corporate finance, investment promotion, planning and appraisal. English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,600.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Preparation of feasibility studies

Short description: Economics, finance, management, marketing and engineering. *Commencing date:* January. *Duration:* 6 months. *Qualifications:* Master's degree in economics or business administration or B.Sc. in engineering. English. *Deadline for application:* 6 months before commencing date. *Fees:* \$US 200.

Organizer: IACP
State Life Building No. 3
Dr. Ziauddin Ahmed Road
Karachi, Pakistan

Project development and management

Short description: Tools and techniques to develop, monitor, supervise and control projects successfully. *Commencing date:* October. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* July. *Fees:* \$US 3,000.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City, 1101 Philippines

Project study preparation

Short description: Techniques in identifying venture opportunities and in preparing a project feasibility study. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* April. *Fees:* \$US 3,900.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City, 1101 Philippines

Cost accounting

Short description: Know-how and skills for effective cost accounting. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Graduation. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* £S 500.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Project management

Short description: Development of project-management skills, with special emphasis on irrigation, agriculture and rural development projects. *Commencing date:* June. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* April. *Fees:* \$US 2,500.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Project monitoring and evaluation

Short description: Skills and techniques for project implementation and monitoring and for a successful hand-over of a project. *Commencing date:* June. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* April. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación

Mantenimiento Industrial

Breve descripción: Administrar y dirigir el mantenimiento de máquinas industriales, equipo pesado y agrícola; detectar, diagnosticar y resolver problemas técnicos de los sistemas mecánicos convencionales, neumáticos, hidráulicos, eléctricos y de lubrica-

ción. Fecha de iniciación: febrero. *Duración:* 11 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* Para ser acordado.

Organizador: Oficina de Cooperación Técnica Internacional
Calle 57 No. 8-69, Torre Norte Piso 5
Bogotá, Colombia

Consumer electronics

Short description: Electrical engineering; electronic devices and circuits, test equipment, electronic drafting, audio system, pulse techniques, radio receivers, television systems and receivers, colour television etc.; repair and servicing of audio and video equipment. *Commencing date:* October. *Duration:* 48 weeks. *Qualifications:* Relevant higher national certificate, diploma or degree or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Industrial electronics

Short description: Electrical engineering, electronic devices and circuits, electronic measurements and measuring instruments, data acquisition, transmission and processing, power electronics, control systems, applied electronics; repair and maintenance of industrial equipment. *Commencing date:* October. *Duration:* 48 weeks. *Qualifications:* Relevant higher national certificate, diploma or degree or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance and repair of electronic test equipment

Short description: Operating procedures and working principles of electronic and test equipment such as: digital multimeter, digital electronic counter, oscilloscope, pulse generator, function generator; maintenance and repair of electronic test equipment CRO and digital multimeter. *Commencing date:* January, July, September. *Duration:* 4 weeks. *Qualifications:* Diploma in electronics or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance and servicing of colour television receivers

Short description: Colour cameras of various types, colour systems NTSC, SECAM and PAL; systematic diagnosis and correction of faults in colour television receivers.

Commencing date: January, February, November. *Duration:* 4 weeks. *Qualifications:* Relevant national certificate, diploma or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance and servicing of microprocessor-based electronic test equipment

Short description: Operating principles of various types of test equipment; fault-finding/diagnostic procedures for advanced electronic test equipment. *Commencing date:* March. *Duration:* 4 weeks. *Qualifications:* Diploma in electronics engineering. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance and servicing of monochrome television receivers

Short description: Television receivers; test pattern; safety and precautions; testing equipment. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* Relevant national certificate, diploma or equivalent. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance and servicing of PCs

Short description: Types, limitations and applications of PCs; block schematic of PC system; introduction to assembly language programming; diagnostic routines; operation and use of test equipment; logical approach to locate faults; repair and rectification of defects/faults; routine preventive maintenance of PCs and peripherals. *Commencing date:* February. *Duration:* 6 weeks. *Qualifications:* Diploma in electronics engineering, with 2 years of relevant maintenance experience. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance of electromedical equipment

Short description: Role of electromedical equipment in hospitals, problems of servicing and standardization of the equipment. *Commencing date:* February, October.

Duration: 4 weeks. *Qualifications:* B.Sc. or diploma in electrical or electronics engineering. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Maintenance of petrochemical plants (electrical)

Short description: Maintenance of electric equipment such as LT and HT motors, converters, transformers and other related equipment. *Commencing date:* Throughout the year. *Duration:* 8-12 weeks. *Qualifications:* Diploma in electrical engineering. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Maintenance of petrochemical plants (Instrumentation)

Short description: Maintenance of pneumatic and electronic instruments; calibration of instruments such as controllers, valves etc. *Commencing date:* Throughout the year. *Duration:* 8-12 weeks. *Qualifications:* Diploma in instrumentation. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Maintenance of petrochemical plants (mechanical)

Short description: Maintenance of rotating equipment, stationary equipment, safety works to be observed. *Commencing date:* Throughout the year. *Duration:* 8-12 weeks. *Qualifications:* Diploma in mechanical engineering. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* \$US 300-400 per week.

Organizer: Indian Petrochemicals Corporation Limited
P.O. Petrochemicals-391 346
Dist. Vadodara, Gujarat, India

Repair and overhaul of tractors and agricultural machinery

Short description: On-the-job training in repair and overhaul of stationary engines, tractors and allied agricultural machinery. *Commencing date:* March, December. *Duration:* 6 weeks. *Qualifications:* Qualified technicians with 2 years of practical experience in the operation, maintenance and repair of farm machinery. *Deadline for application:* 5 months before commencing date. *Fees:* None.

Organizer: Central Farm Machinery Training and Testing Institute
Tractor Nagar
Budni (M.P.) 466 445, India
Applications to be routed through:
Ministry of External Affairs
Government of India,
New Delhi, India

Industrial maintenance

Short description: To overcome a major deficiency in the progress of industrialization through training in industrial maintenance. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* N3,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Maintenance management

Short description: Latest techniques in maintenance management; reduction of downtime to minimize costs and raise productivity. *Commencing date:* To be arranged. *Duration:* 1-4 weeks. *Qualifications:* Maintenance and production engineers. English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £S 6,000.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Introduction to maintenance for technicians

Short description: Maintenance planning and materials technology, maintenance of turbines; compressors and boilers; instrumentation technology; industrial safety. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Technicians (vocational school graduates) with up to 2 years experience in the fertilizer industry. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 1,250 including board and lodging.

Organizer: TÜGSAŞ
Eğitim Genel Müdürlüğü
Konva Devlet Yolu No. 70
06330 Ankara, Turkey

Management and industrial administration/ Gestion et administration industrielle/ Gestión y administración industrial

Gerencia de recursos humanos

Breve descripción: Gerencia empresarial, relaciones humanas, administración de recursos humanos, legislación laboral, organización y métodos, desarrollo organizacional. *Fecha de iniciación:* Enero. *Duración:* 150 horas. *Calificaciones:* Título profesional, con experiencia en el área de recursos humanos. Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$b 1.000.

Organizador: Instituto para el Desarrollo de Empresarios y Administradores
"IDEA"
Calle Mercado Esq. Independencia No. 95, 1er. Piso
Santa Cruz, Bolivia

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. *Duration:* 11 months. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* May. *Fees:* £C 900.

Organizer: The Mediterranean Institute of Management (MIM)
P.O. Box 536
Nicosia, Cyprus

Supervision

Short description: General supervisory and managerial principles and practice covering areas of personnel, production, marketing, accounting, quality control and industrial relations. *Commencing date:* August. *Duration:* 3 months. *Qualifications:* Supervisors or assistant managers, with 2 years experience. English. *Deadline for application:* 5 months before commencing date. *Fees:* \$M 1,500.

Organizer: National Productivity Centre
P.O. Box 64
46904 Petaling Jaya, Malaysia
Applications to be routed through:
Malaysian High Commission or Embassy

Business studies

Short description: Introduction to the administration of enterprises and organizations. *Commencing date:* October. *Duration:* 25 weeks. *Qualifications:* English, French. *Deadline for application:* June. *Fees:* To be arranged.

Organizer: School of Law, Management and Social Studies
University of Mauritius
Réduit, Mauritius

Consultancy methodology

Short description: Principles of management consultancy and the process of management policy formulation. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Senior and middle managers, consultants, industrial extension officers. English. *Deadline for application:* 2 months before commencing date. *Fees:* N3,000.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Financial management and administrative control

Short description: Financial management, administrative control and other related subjects. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* N4,000.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Increasing productivity in government ministries and parastatals

Short description: Leadership, problem-solving and functional management skills. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Senior and

middle-level management officers of government ministries and parastatals. English.
Deadline for application: 2 months before commencing date. *Fees:* N2,600.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Management consultancy

Short description: Principles of management consulting: production, finance, personnel and marketing; scientific diagnosis of managerial problems; design of solutions.
Commencing date: July. *Duration:* 5 weeks. *Qualifications:* Senior and middle managers; practising and aspiring consultants with Master's degree. *Deadline for application:* April. *Fees:* N2,000.

Organizer: Centre for Management Development
P.M.B. 21578
Ikeja, Nigeria

National industrial extension

Short description: Industrial extension as a crucial sustaining instrument for economic growth; develop generalists in industrial management, capable of handling the problems of entrepreneurs and industrialists. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Officials of industrial development centres, production managers and supervisors. English. *Deadline for application:* 2 months before commencing date. *Fees:* N4,000.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Production management, planning and control (advanced)

Short description: Principles, methods and practice of modern production-management techniques. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* N3,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Revival of sick business

Short description: Causes for sickness in industrial projects; identification of weaknesses in sick enterprises; methodology for the revival of industrial projects. *Commencing date:* June. *Duration:* 4 weeks. *Qualifications:* Persons engaged in corporate financing, project appraisals and loan syndication, management consultants, industrial officers. English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,600.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Basics of supervision

Short description: Supervisory skills; techniques for effective work planning, delegation, follow-up and coaching. *Commencing date:* To be arranged. *Duration:* 3 weeks.

Qualifications: Supervisors or senior foremen. Arabic. *Deadline for application:* 2 weeks before commencing date. *Fees:* £S 400.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Management accounting

Short description: Management accounting skills; management accounting in decision making. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* University graduates with 2 years experience in accounting. *Deadline for application:* 2 weeks before commencing date. *Fees:* £S 400-500.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Managing rural development

Short description: Skills to plan and manage the implementation of rural development programmes and projects by analysing and understanding the social, political, organizational and financial contexts of rural development. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* July. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Marketing and export promotion/Marketing et promotion des exportations/ Comercialización y promoción de las exportaciones

Gerencia de marketing

Breve descripción: Gerencia empresarial, fundamentos de marketing, investigación de mercados, estrategias de marketing, promoción y publicidad en marketing, la gerencia de ventas. *Fecha de iniciación:* La Paz: febrero; Cochabamba: enero; Santa Cruz: febrero. *Duración:* 150 horas. *Calificaciones:* Título profesional, con experiencia en el área de marketing o ventas. Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$b 1.000.

Organizador: Instituto para el Desarrollo de Empresarios y Administradores
"IDEA"

La Paz: Av. Camacho No. 1485, Edificio La Urbana, 3er. Piso
Casilla 10508
La Paz, Bolivia

Cochabamba: Calle Sucre E-0336, 2do. Piso
Edificio Cámara de Comercio
Casilla 3376
Cochabamba, Bolivia

Santa Cruz: Calle Mercado Esq. Independencia No. 95, 1er. Piso
Santa Cruz, Bolivia

Operadores de comercio de exportación

Breve descripción: Orientado a formar operadores de exportación con conocimientos técnicos y operativos suficientes para conducir, ejecutar y administrar las operaciones de exportación de una empresa exportadora. *Fecha de iniciación:* Enero. *Duración:* 280 horas. *Calificaciones:* Bachilleres en humanidades. Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$b 1,400.

Organizador: Instituto para el Desarrollo de Empresarios y Administradores
"IDEA"
Casilla 10508,
La Paz, Bolivia

Marketing sales management

Short description: Development of marketing sales capabilities in different environments. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Marketing and sales managers. English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £S 500.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Marketing operativo y estratégico

Breve descripción: Planeamiento y operativa de comercialización de productos industriales, especialmente de consumo masivo. *Fecha de iniciación:* Marzo, octubre. *Duración:* 18 jornadas. *Calificaciones:* Español. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* \$US 450.

Organizador: Ideas
Buenos Aires 479
11000 Montevideo, Uruguay

Occupational safety/Prévention des accidents du travail/ Seguridad profesional

Occupational safety and health management in industries

Short description: Work physiology, ergonomics, evaluation, measurement of physical and chemical agents, total loss control, labour laws; visits to factories, safety institutes and PPE units; discussions with government enforcement officials. *Commencing date:* To be arranged. *Duration:* 5 weeks. *Qualifications:* Degree or diploma in engineering. English. *Deadline for application:* 12 weeks before commencing date. *Fees:* \$US 5,000 (including board and lodging).

Organizer: National Model Centre for Occupational Health Services
Bharat Heavy Electricals Limited
Tiruchirapalli 620 014, Tamilnadu, India

Quality control and standardization/Contrôle de la qualité et normalisation/Control de calidad y normalización

Manejo de instrumental de laboratorio para control de calidad

Breve descripción: Especialización en el manejo de instrumental de laboratorio de control de calidad. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12

meses. *Calificaciones:* Español, portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Instituto Nacional de Metrología Normalización Calidad Industrial
(INMETRO)
Av. Ns das Graças 50
25400 Xerem, Brasil

Metrología industrial

Breve descripción: Calibración, comprobación y verificación de los instrumentos de medida y control empleados en los procesos industriales. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-2 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Instituto Nacional de Metrología Normalización Calidad Industrial
(INMETRO)
Av. Ns das Graças 50
25400 Xerem, Brasil

Metrología legal

Breve descripción: Métodos de medición, instrumentos de medida; exigencias técnicas y jurídicas reglamentadas, para garantía pública en relación con la seguridad y precisión de las mediciones. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Instituto Nacional de Metrología Normalización Calidad Industrial
(INMETRO)
Av. Ns das Graças 50
25400 Xerem, Brasil

Manejo de instrumental de laboratorio para control de calidad

Breve descripción: Especialización en el manejo de instrumental de laboratorio de control de calidad. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Instituto Nacional de Normalización
Matías Cousiño 64, 6º Piso
Santiago, Chile

Manejo de instrumental de laboratorio para control de calidad

Breve descripción: Especialización en el manejo de instrumental de laboratorio de control de calidad. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Superintendencia de Industria y Comercio
Centro de Control de Calidad y Metrología
Cra. 37 No. 52-95, Piso 4
Apartado aéreo 51064 Bogotá-2
Bogotá D.E., Colombia

Metrología industrial

Breve descripción: Calibración, comprobación y verificación de los instrumentos de medida y control, empleados en los procesos industriales. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués, inglés. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Superintendencia de Industria y Comercio
Centro de Control de Calidad y Metrología
Cra. 37 No. 52-95, Piso 4
Apartado aéreo 51064 Bogotá-2
Bogotá D.E., Colombia

Manejo de instrumental de laboratorio para control de calidad

Breve descripción: Especialización en el manejo de instrumental de laboratorio de control de calidad. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español, portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro de Investigación y Asistencia Tecnológica del Estado de Guanajuato (CIATEG)
Apartado Postal 890 C.P.
37000 León, Gto., México

Metrología legal

Breve descripción: Métodos de medición, instrumentos de medida; exigencias técnicas y jurídicas reglamentadas para garantía pública en relación con la seguridad y precisión de las mediciones. *Fecha de iniciación:* Enero, marzo, junio y septiembre. *Duración:* 1-12 meses. *Calificaciones:* Español y portugués. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

Organizador: Centro de Investigación y Asistencia Tecnológica del Estado de Guanajuato (CIATEG)
Apartado Postal 890 C. P.
37000 León, Gto., México

Standardization and quality control

Short description: Relationship between quality and standards of products and the level and direction of industrial development. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Small-scale industries and entrepreneurship/Petites industries et entrepreneurs/Pequeñas industrias y los empresarios

Financing small industry

Short description: 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:* July. *Fees:* \$US 2,540.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad 500 045, India

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:* July. *Fees:* \$US 3,600.

Organizer: National Institute of Small Industry Extension Training (NISIET)
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:* July. *Fees:* \$US 3,600.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad 500 045, India

Financing of small-scale industries

Short description: Stimulate the thinking of persons responsible for the promotion and development of small industries on the efficient management of industries; improve skills in assessing, scrutinizing and appraising loan proposals. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Persons involved in developmental finance in public and private institutions. English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Integrated approach to small industries development

Short description: Advanced, comprehensive and integrated approach to small industry development; enable participants to assess the role of their respective organizations as well as their own role within the system. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Officials of banks and other institutions, who have training in small industries development. English. *Deadline for application:* 2 months before commencing date. *Fees:* N2,600.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Small business consultancy

Short description: Basic in-plant management consultancy as applied particularly to small industries; understanding of the interrelationship between the functional areas of management. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Industrial extension officers, officers responsible for small-scale industries in ministries. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* N3,500.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Industrial automation and instrumentation for small and medium-size enterprises

Short description: Design, implementation and maintenance of automation and instrumentation-control systems, particularly pneumatics, electro-pneumatics, digital electronics, programmable logic controllers and process controls. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Engineers, industrial technicians or instructors of technical schools. *English.* *Deadline for application:* June. *Fees:* \$US 3,900.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Evaluation, appraisal and monitoring of small and medium-size enterprise projects

Short description: Skills, techniques and measures for effective and efficient project appraisal and evaluation. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent; development officer/consultant. *English.* *Deadline for application:* June. *Fees:* \$US 3,600.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Industrial extension officers

Short description: Competencies and skills for rendering effective extension and consultancy services to entrepreneurs. *Commencing date:* October. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree or equivalent; extension officers and workers. *English.* *Deadline for application:* July. *Fees:* \$US 3,450.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Management consultancy

Short description: Competencies and skills for providing effective consultancy services to small enterprises. *Commencing date:* July. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree or equivalent; extension officers, consultants. *English.* *Deadline for application:* May. *Fees:* \$US 5,550.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Small industry information management

Short description: Competencies and skills for providing industrial information to entrepreneurs through proper management of information. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent; information officers/processors. *English.* *Deadline for application:* July. *Fees:* \$US 3,900.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Total quality management in small industries

Short description: Knowledge and skills for establishing total quality control. *Commencing date:* October. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent. *English.* *Deadline for application:* July. *Fees:* \$US 3,900.

Organizer: Institute for Small-Scale Industries
University of the Philippines
UP Campus
Diliman, Quezon City 1101, Philippines

Financial and marketing management

Short description: Knowledge and skills in accounting and finance; various aspects of marketing management with emphasis on practical application, particularly to advise small- and medium-scale industries. *Commencing date:* June. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* —.

Organizer: SITE Project
Thailand Management Development and Productivity Centre
Ministry of Industry
Rama 6 Road
Bangkok 10400, Thailand

Production management

Short description: Diagnosis of basic problems in production management of small-scale enterprises; solving non-structural problems in production management; provision of consultancy services to small-scale industrialists. *Commencing date:* November. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* —.

Organizer: SITE Project
Thailand Management Development and Productivity Centre
Ministry of Industry
Rama 6 Road
Bangkok 10400, Thailand

Small business management

Short description: Planning a new business venture or continuing and strengthening an existing small business; strategic business planning. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* July. *Fees:* \$US 2,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Trainer development/Formation de formateurs/ Perfeccionamiento de profesionales de capacitación

Especialización para la orientación de la formación profesional con la pequeña y mediana empresa

Breve descripción: Planeación, organización, ejecución y evaluación de programas de formación profesional; metodología de asesoría y de desarrollo tecnológico con la pequeña y mediana empresa. *Fecha de iniciación:* Julio. *Duración:* 4 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* Mayo. *Derechos de inscripción:* Para ser acordado.

Organizador: Oficina de Cooperación Técnica Internacional
Calle 57 No. 8-69, Torre Norte, Piso 5
Bogotá, Colombia

Computer engineering for instructors

Short description: Computer organization; steps in problem solving, algorithms development; programming methodology. Basic programming. Data structures; introduction to data-base management. System software; CPU architecture; control structure; I/O architecture. Operating systems, microprogramming; applications of microprocessors. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* ITI instructors with diploma in engineering or B.Sc. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramanthapur
Hyderabad 500013
Andhra Pradesh, India

Entrepreneur trainers'/motivators' programme for developing countries

Short description: Knowledge, skills and attitudes for entrepreneur trainers/motivators (ETMs) enabling them to carry out EDP-related activities effectively. *Commencing date:* January. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 3,500.

Organizer: Entrepreneurship Development Institute of India
Bhat, Chandkheda 382 424
Dist. Gandhinagar (Gujarat), India

Promotion of self-employment

Short description: Programmes and promotional techniques for accelerating self-employment; skills for 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:* July. *Fees:* \$US 2,540.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad 500 045, India

Training of computer trainers

Short description: Assessment of training needs and design of training programmes in information technology; organizing and conducting training programmes on computers for different levels; case studies, hands-on; training materials, transparencies and use of various methods for different programmes. *Commencing date:* To be arranged. *Duration:* 4-6 weeks. *Qualifications:* Managers with good communication skills. Prior exposure to computers not essential. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

Organizer: Computer Management Centre
33A, Chowringhee Road, 5th Floor
Calcutta 700 071, India

Training methods and skills

Short description: The training process; choice and use of training methods and materials; curriculum planning; 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:* July. *Fees:* \$US 2,810.

Organizer: National Institute of Small Industry Extension Training (NISIET)
Yousufguda
Hyderabad 500 045, India

Advanced management trainers' course

Short description: Designed to meet the needs of senior management educators and trainers responsible for human resources development. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* Top and senior management educators and trainers. *Deadline for application:* —. *Fees:* N2,800.

Organizer: Centre for Management Development (CMD)
PMB 21578
Ikeja, Nigeria

Trainers' development

Short description: The role of the trainer, identification of training needs at individual/organizational level, development of training objectives, training methods, curricula design, problems of adult learning, course delivery, evaluation of training effectiveness. *Commencing date:* April. *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:* February. *Fees:* N2,200.

Organizer: Centre for Management Development (CMD)
PMB 21578
Ikeja, Nigeria

Training of trainers

Short description: Presentation and instructional techniques, use of visual aids; systematic approach to develop performance-based training. *Commencing date:* To be arranged.

Duration: 4 weeks. Qualifications: English. Deadline for application: 2 months before commencing date. Fees: N2,900.

Organizer: Centre for Industrial Research and Development
Obafemi Awolowo University
Ile-Ife, Nigeria

Trainers for entrepreneurial competencies development

Short description: Upgrading of training skills to design and implement training programmes aimed at developing entrepreneurial competencies. Commencing date: June. Duration: 4 weeks. Qualifications: Bachelor's degree or equivalent; development officers or trainers. English. Deadline for application: April. Fees: \$US 3,600.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City 1101, Philippines

Trainers for entrepreneurship development

Short description: Upgrading of training skills to design, implement, monitor and control entrepreneurship development programmes; updating trainers on the latest approaches and methods in entrepreneurship development. Commencing date: September. Duration: 10 weeks. Qualifications: Bachelor's degree or equivalent; development officers or trainers. English. Deadline for application: June. Fees: \$US 4,750.

Organizer: Institute for Small-Scale Industries
University of the Philippines
E. Virata Hall, E. Jacinto Street
UP Campus
Diliman, Quezon City 1101, Philippines

Training of trainers

Short description: Design, execution and evaluation of training programmes, with special focus on management trainers. Commencing date: To be arranged. Duration: 5 weeks. Qualifications: University degree. Arabic, English. Deadline for application: 2 weeks before commencing date. Fees: £S 700.

Organizer: Management Development Centre
P.O. Box 2308
Khartoum, Sudan

Management of training centres

Short description: Technical, financial, planning and managerial capabilities for key personnel of training centres; relating training activities to the overall objectives of the organization. Commencing date: July. Duration: 4 weeks. Qualifications: English. Deadline for application: June. Fees: \$US 2,500.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

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

Human resources development (HRD) for industrial managers from developing countries

Short description: The importance of HRD in the organization; basic concepts underlying HRD in industry; elements of an HRD programme; establishment of the HRD function. *Commencing date:* February. *Duration:* 2 weeks. *Qualifications:* Top management responsibility or responsibility for HRD. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 5,000 (including accommodation, board and all materials).

Organizer: Human Resources Development International
Hofzeile 3/14
1190 Vienna, Austria

Quality assurance in (manufacturing) industry

Short description: Definition of quality; quality planning; quality control; quality-oriented organization; quality costs; methods and tools for quality assurance. *Commencing date:* To be arranged. *Duration:* 2-4 days. *Qualifications:* Management and personnel responsible for quality of products. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

Organizer: VOEST-Alpine Industrial Services Ges.m.b.H.
P.O. Box 4
4031 Linz, Austria

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

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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 savoir-faire. *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

Logistique du génie civil

Brève description : Méthodes de gestion, d'organisation et de planification des entreprises et chantiers de génie civil. *Début du cours* : Octobre. *Durée* : 40 heures. *Qualifications* : Ingénieur civil. Français. *Date limite d'inscription* : Septembre. *Droits d'inscription* : FB 5 000.

Organisateur : Département MSM
Université de Liège
Quai Banning 6
4000 Liège, Belgique

Mécanique générale

Brève description : Large éventail de sujets dans le domaine de la mécanique générale. *Début du cours* : A arranger. *Durée* : 3 mois. *Qualifications* : Qualifications professionnelles. Français, anglais, néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

Organisateur : Spoorwegmaterieel en Metaalconstructies
Kaartdijkstraat 5
8200 Bruges, Belgique

Packaging and conditioning of some alimentary liquids

Short description: Materials; retail packages; automatic and semi-automatic machinery.
Commencing date: To be arranged. *Duration:* 2 weeks. *Qualifications:* Professional qualifications and professional experience. English. *Deadline for application:* —.
Fees: To be arranged.

Organizer: Belgian Packaging Institute (BPI)
15, rue Picard
1020 Brussels, Belgium

Techniques de démolition en génie civil

Brève description: Problèmes et techniques utilisées pour la démolition d'ouvrages du génie civil (bâtiments, ponts, etc.). *Début du cours:* Novembre. *Durée:* 30 heures.
Qualifications: Ingénieur civil. Français. *Date limite d'inscription:* Octobre. *Droits d'inscription:* FB 5 000.

Organisateur: Département MSM
Université de Liège
Quai Banning 6
4000 Liège, Belgique

Transport et distribution

Brève description: Entreposage et manutention; conception des bâtiments, équipement et systèmes de contrôle; étude des transports; rentabilité des moyens de transport; contrôle budgétaire. *Début du cours:* A arranger. *Durée:* A arranger. *Qualifications:* Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand.
Date limite d'inscription: —. *Droits d'inscription:* —.

Organisateur: Helping S.A.
38, avenue Montjoie
1180 Bruxelles, Belgique

Advanced methods of casting

Short description: Production of cast metals for engineering, agriculture and building industries. *Commencing date:* September. *Duration:* 2 weeks. *Qualifications:* Managers/engineers, university degree, several years of experience. English. *Deadline for application:* June. *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. *Duration:* 1 week. *Qualifications:* University degree or equivalent. English. *Deadline for application:* February. *Fees:* —.

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

Exploration, extraction and upgrading of local industrial minerals in developing countries

Short description: Exploitation, extraction and upgrading of industrial minerals (kaolin, bentonite etc.) and modern ways of their application. *Commencing date:* May. *Duration:* 2 weeks. *Qualifications:* University degree in chemistry, geology, or a related field. *English.* *Deadline for application:* January. *Fees:* —.

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

Metallurgical testing for integrated iron and steel plants

Short description: Ore and material testing in metallurgical industry; pilot laboratory; staff training; research and development. *Commencing date:* November. *Duration:* 2 weeks. *Qualifications:* Managers/engineers, university degree, several years of experience. *English.* *Deadline for application:* September. *Fees:* —.

Organizer: UNIDO-Czechoslovakia Joint Programme for Co-operation
Metallic Industries
Inorga Institute
Letenská 17
118 06 Prague 1, Czechoslovakia

Process control, modelling and optimization

Short description: Measuring and automation of control; control computers; modern methods of process control (adaption and optimization); mathematical models; modelling and simulation; computer-aided control-system design; model-aided process-control systems. *Commencing date:* October. *Duration:* 2 weeks. *Qualifications:* Managers/engineers, university degree, several years of experience. *English.* *Deadline for application:* August. *Fees:* —.

Organizer: UNIDO-Czechoslovakia Joint Programme for Co-operation
Metallic Industries
Inorga Institute
Letenská 17
118 06 Prague 1, Czechoslovakia

Single-piece and small-batch production control in engineering

Short description: Production control design; transaction programming; technological preparation of production; planning and control of engineering production; production documentation; operative production control; production-control systems with mainframe computer/personal computers. *Commencing date:* November. *Duration:* 2 weeks. *Qualifications:* Managers/engineers, university degree, several years of experience. *English.* *Deadline for application:* September. *Fees:* —.

Organizer: UNIDO-Czechoslovakia Joint Programme for Co-operation
Metallic Industries
Inorga Institute
Letenská 17
118 06 Prague 1, Czechoslovakia

Welding in production of small lots and unique parts

Short description: Choice of welding processes for manufacturing; quality assurance of the final products. *Commencing date:* September. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* August. *Fees:* \$US 300.

Organizer: Welding Research Institute (VÜZ)
Februárového vítazstva 71
832 59 Bratislava, Czechoslovakia

Maintenance in cement plants

Short description: Maintenance strategies, systems and organizations; preventive/predictive measures; fault/wear detection and maintenance execution. *Commencing date:* Late summer. *Duration:* 2 weeks. *Qualifications:* Technical, managerial and supervisory personnel in cement industry with at least 1 year of experience. *Deadline for application:* 3 months before commencing date. *Fees:* Dkr 45,000.

Organizer: E. L. Smidth & Co.
Plant Services Division
77 Vigerslev Allé
2500 Valby, Copenhagen, Denmark

Adhésifs

Brève description : Sessions d'étude de courte durée sur : constituants, formulation, fabrication et application des adhésifs. *Début du cours :* A arranger. *Durée :* 20 heures. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* 1 mois avant le début du stage. *Droits d'inscription :* F 3 700.

Organisateur : ITECH Lyon
181/183 avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, France

Analyse de la valeur

Brève description : Stages de courte durée sur : méthodes de maîtrise des coûts et de compétitivité; conception des produits; le cahier de charges fonctionnel; la conception pour un coût objectif C.C.O.; entraînement; analyse de la valeur administrative; analyse de la valeur et achats; amélioration de l'organisation; estimation des coûts industriels; analyse de la valeur et procédés industriels; techniques de créativité. *Début du cours :* Toute l'année. *Durée :* 2-5 jours. *Qualifications :* Qualifications professionnelles. Français. *Date limite d'inscription :* 1 mois avant le début du cours. *Droits d'inscription :* —.

Organisateur : Association française de normalisation (AFNOR) AFAV
Tour Europe, Cedex 07
92049 Paris La Défense, France

CAD conception et dessin assistés par ordinateur

Brève description : Découverte des possibilités des logiciels de CAD et de calcul des structures tant en ce qui concerne la conception que l'établissement du métré et des plans d'une réalisation; utilisation de logiciels tridimensionnels fonctionnant sur micro-ordinateur; manipulation de logiciels. *Début du cours :* A arranger. *Durée :* 2 semaines. *Qualifications :* Professionnels du bâtiment, constructeurs, architectes, maîtres d'oeuvre, urbanistes, décorateurs, métreurs, maîtres d'ouvrages, techniciens

de bureaux d'études. Français. *Date limite d'inscription* : 2 mois avant la date de début du cours. *Droits d'inscription* : F 13 000.

Organisateur : CERLAB/ENSTIM
1, rue Gaston-Boissier
75015 Paris, France

DC and low-frequency calibration techniques

Short description: Choice of several calibration procedures depending on available equipment, identification of systematic errors, calibration of usual measuring equipment or components, calculation of the total uncertainty of the measurement process. *Commencing date*: To be arranged. *Duration*: 8 days. *Qualifications*: Engineers, supervisors or senior technicians. English. *Deadline for application*: 1 month before commencing date. *Fees*: F 13,500.

Organizer: CERLAB/LCIE
1, rue Gaston-Boissier
75015 Paris, France

Définition géométrique et tolérancement

Brève description : Comprendre les règles de cotation et les situer les unes par rapport aux autres. Permettre aux participants de maîtriser les outils qui constituent les normes de dessin pour résoudre leurs problèmes propres. *Début du cours* : Mars/avril, octobre/novembre. *Durée* : 4 jours. *Qualifications* : Cadres et techniciens des services études, méthodes, contrôle. Français. *Date limite d'inscription* : 1 mois avant le début du cours. *Droits d'inscription* : —.

Organisateur : Association française de normalisation (AFNOR)
Tour Europe, Cedex 07
92049 Paris La Défense, France

Diagnostic qualité

Brève description : Stages de courte durée sur : qualité des services; l'assurance de la qualité; entraînement pratique à l'assurance qualité; êtes-vous prêts pour la certification d'entreprise ? Objectifs : la certification d'entreprise; entraînement pratique de l'auditeur qualité à la relation auditeur-audit; AMDEC; ateliers de génie logiciel; diagnostic qualité; industries agro-alimentaires et qualité; l'autocontrôle dans les industries agro-alimentaires; l'assurance qualité dans les industries chimiques. *Début du cours* : Toute l'année. *Durée* : 2-4 jours. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : 1 mois avant le début du cours. *Droits d'inscription* : —.

Organisateur : Association française de normalisation (AFNOR)
Tour Europe, Cedex 07
92049 Paris La Défense, France

Encres

Brève description : Sessions d'étude de courte durée sur : constituants, fabrication et application des encres. *Début du cours* : A arranger. *Durée* : 20 heures. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : 1 mois avant le début du cours. *Droits d'inscription* : F 3 700.

Organisateur : ITECH Lyon
181/183, avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, France

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 production; 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 :** A arranger. **Durée :** 2-6 jours. **Qualifications :** Français. **Date limite d'inscription :** 1 mois avant le début du cours. **Droits 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 :** 2-5 jours. **Qualifications :** Français. **Date limite d'inscription :** 1 mois avant le 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

Matières plastiques

Brève description : Sessions d'étude de courte durée sur : matériaux thermoplastiques; coloration; injection; application à la CAO des outillages d'injection; extrusion; collage des matières plastiques; soudure et décoration. **Début du cours :** A arranger. **Durée :** 28-39 heures. **Qualifications :** Qualifications professionnelles. Français. **Date limite d'inscription :** 1 mois avant le début du stage. **Droits d'inscription :** F 5 200-7 000.

Organisateur : ITECH Lyon
181/183, avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, France

Matières textiles

Brève description : Sessions d'étude de courte durée sur : les matières textiles; étude des mélanges; moulinage, texturation; tissage; tissus façonnés; bonneterie; teinture et apprêts; marketing industriel. **Début du cours :** A arranger. **Durée :** 12-50 heures. **Qualifications :** Qualifications professionnelles. Français. **Date limite d'inscription :** 1 mois avant le début du stage. **Droits d'inscription :** F 2 500-6 000.

Organisateur : ITECH Lyon
181/183, avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, France

Microbiologie des aliments

Brève description : Cours de courte durée sur : principaux micro-organismes rencontrés dans les aliments; maîtrise et contrôle de la microbiologie des aliments; microbiologie des viandes et des produits carnés; microbiologie des laits et des produits laitiers; microbiologie des boissons; microbiologie des produits de la mer. *Début du cours* : Mai, septembre, octobre. *Durée* : 1-2 semaines. *Qualifications* : Français. *Date limite d'inscription* : 2 semaines avant le début du cours. *Droits d'inscription* : F 4 600-7 400.

Organisateur : Institut Pasteur de Lille
B.P. 245
59019 Lille Cedex, France

Peintures

Brève description : Sessions d'étude de courte durée sur : initiation aux peintures; constituants; formulation; fabrication; mise à la teinte; contrôle peinture; cahier des charges bâtiments-industrie; diagnostic des défauts. *Début du cours* : A arranger. *Durée* : 12-40 heures. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : 1 mois avant le début du stage. *Droits d'inscription* : F 2 300-5 000.

Organisateur : ITECH Lyon
181/183, avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, France

RF and microwave calibration techniques

Short description: Choice of several calibration procedures depending on available equipment, identification of systematic errors, calibration of usual measuring equipment or components, calculation of the total uncertainty of the measurement process. *Commencing date*: To be arranged. *Duration*: 8 days. *Qualifications*: Engineers, supervisors or senior technicians. English. *Deadline for application*: 1 month before commencing date. *Fee*: F 13,500.

Organizer: CERLAB/LCIE
1, rue Gaston-Boissier
75015 Paris, France

Tannage

Brève description : Sessions d'étude de courte durée sur : rivière tannage pour bovins; teinture et nuancement; retannage; rivière tannage pour ovins et caprins; tannage pour double face; stainage; teinture-nourriture du stain en mégisserie; finissage. *Début du cours* : A arranger. *Durée* : 36 heures. *Qualifications* : Qualifications professionnelles. Français. *Date limite d'inscription* : 1 mois avant le début du stage. *Droits d'inscription* : F 3 820.

Organisateur : ITECH Lyon
181/183, avenue Jean-Jaurès
B.P. 7034
69342 Lyon Cedex, 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:* March. *Fees:* To be arranged.

Organizer: Cottbus University of Technology
Karl-Marx Strasse 17
D-O-7500 Cottbus, Germany

Damage research in commodity science

Short description: Possible damage during transport, storage and distribution; damage as indicator of environmental influences. *Commencing date:* September. *Duration:* 6 days. *Qualifications:* German. *Deadline for application:* July. *Fees:* To be arranged.

Organizer: Handelshochschule Leipzig
PSF 640
D-O-7010 Leipzig, Germany

Measuring techniques of process analysis

Short description: The measurement of concentrations; 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:* March. *Fees:* To be arranged.

Organizer: Köthen University of Engineering
Bemburger Strasse 52-57
D-O-4370 Köthen, Germany

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:* March. *Fees:* To be arranged.

Organizer: Carl Schorlemmer Technical University
Otto-Nuschke-Strasse
D-O-4200 Leuna-Merseburg, Germany

CAD/CAM technology for plastic-mould making

Short description: Application of CAD/CAM technology for injection-mould design, based on case studies, from computer modelling to fabrication of the mould. *Commencing date:* August. *Duration:* 4 days. *Qualifications:* Chinese, with English terminology. *Deadline for application:* 1 day before commencing date. *Fees:* \$US 200.

Organizer: Hong Kong Productivity Centre
P.O. Box 99027 TST
Post Office, Hong Kong

Environmental management and technology for small and medium enterprises

Short description: Practical knowledge in solving environmental problems and identifying the most appropriate control alternatives. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$HK 4,000.

Organizer: Hong Kong Productivity Council
Environmental Management Division
68 Sung Wong Toi Road
2/F, Unit C, Freder Centre
Tokwawan, Kowloon, Hong Kong

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

Surface-mount technology

Short description: Short courses on: surface-mount technology design; analytical techniques in surface-mount technology; surface-mount technology manufacturing processes. *Commencing date:* March-September. *Duration:* 1-2 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$HK 750-1,350.

Organizer: Hong Kong Productivity Council
Electronics Services Division
7/F, 45 Hiu Yuen Road, Uniden Building
Kwun Tong, Kowloon, Hong Kong

Lignin degradation and practical utilization

Short description: Agricultural biomass for mushroom production; compost-making using communal sewage-sludge and lignocellulotic wastes; biomass for starter cultures; bioconversion of lignocellulotic biomass. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Degree in chemical engineering, biology or equivalent. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 400.

Organizer: Central Food Research Institute
Herman Ottó ut 15
1022 Budapest, Hungary

Managing instrumentation service centres

Short description: Effective and economic utilization of instruments through national instruments and measuring technique centres, such as the Instrument and Measuring Technique Service of the Hungarian Academy of Science. *Commencing date:* November. *Duration:* 2 weeks. *Qualifications:* Degree in engineering or Bachelor of Science; at least 2 years of experience. English. *Deadline for application:* April. *Fees:* SwF 3,900 per week (including accommodation and meals).

Organizer: Instrument and Measuring Technique Service of the Hungarian
Academy of Science (MTA-MMSZ)
P.O. Box 58
Szakasits A. utca 59-61
1502 Budapest, Hungary
In collaboration with
Organization for International Technical Scientific Co-operation
(TESCO)
Rosenberg hszp. utca 21
1054 Budapest, Hungary

Quality management

Short description: Managerial tasks to elaborate, introduce and run an effective quality system; evaluation of the effectiveness, measurement of the system elements (including quality cost); system audit; formulation of a quality programme and quality policy. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* University degree. English. *Deadline for application:* 4 months before commencing date. *Fees:* \$US 1,500.

Organizer: Institute for Quality Control in the Textile Industry
P.O. Box 27
1428 Budapest, Hungary

Quality systems (quality control and quality assurance)

Short description: Introduction of the quality system; task and responsibilities of the personnel involved; quality manual; measurement of quality; quality cost analyses; quality system audit and improvement of the system; reliability studies. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* University degree. English. *Deadline for application:* 4 months before commencing date. *Fees:* \$US 2,500.

Organizer: Institute for Quality Control in the Textile Industry
P.O. Box 27
1428 Budapest, Hungary

Financial and accounting management in a power utility

Short description: To broaden and develop executives' understanding of financial and accounting management. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Power utility management staff. English. *Deadline for application:* —. *Fees:* £Ir 1,106.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

General management in a power utility

Short description: For executives with functional expertise in their own fields wishing to develop their knowledge and skills in general management. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Power utility engineers, financial and accounting executives. English. *Deadline for application:* —. *Fees:* £Ir 1,106.

Organizer: ESB International
Stephen Court
18-21 St. Stephens Green
Dublin 2, Ireland

Modern management

Short description: Short courses on: company planning; computer science, programming logic, operating systems; information networks; computer languages; relational data base systems; word processing systems; investment in information systems; strategies for innovation. *Commencing date:* To be arranged. *Duration:* 2-5 days. *Qualifications:* Italian (English and French on request). *Deadline for application:* —. *Fees:* To be arranged.

Organizer: ELEA Spa.
Via Larga, 8
20122 Milan, Italy

Automation for small and medium industries

Short description: Knowledge and techniques for designing and installing automated production systems for small and medium industries. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Corporate management

Short description: Basic strategies in corporate management: organization, production, marketing, financing, personnel management; the human aspect of corporate management: motivation, leadership, education and training; the Japanese experience. *Commencing date:* November. *Duration:* 2 weeks. *Qualifications:* Senior executives responsible for the overall management of an organization in developing countries. English. *Deadline for application:* 6 months before commencing date. *Fees:* ¥327,000.

Organizer: The Association for Overseas Technical Scholarship
30-1, Senju-azuma 1-chome, Adachi-ku
Tokyo, Japan

Information technology applications in service industry

Short description: Impact of information technology and scope for IT application in service sector. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Japanese business

Short description: Japanese management system, corporate strategy, technological innovation; plant visits to observe factory operations and managerial activities. *Commencing date:* August. *Duration:* 1 week. *Qualifications:* Top businessmen or top managers of public corporations in developing countries. English. *Deadline for application:* 6 months before commencing date. *Fees:* ¥180,000.

Organizer: The Association for Overseas Technical Scholarship
30-1, Senju-azuma 1-chome, Adachi-ku
Tokyo, Japan

Management

Short description: Short courses on: banking management; human resource management and productivity; managing organizational change; technology management. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Packaging design and engineering

Short description: Modern techniques, standards and codes of practice in packaging, improvement of packaging, especially for export. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Role of foreign investment in development

Short description: Impact of foreign investment in development; measures needed to make its role more effective; its relation to regional economic co-operation and host-country development. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Rural employment generation

Short description: Effects of policies on rural employment generation; factors of successful cases. *Commencing date:* To be arranged. *Duration:* 11 days. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 50.

Organizer: Asian Productivity Organization
8-4-14, Akasaka, Minato-ku
Tokyo 107, Japan

Effective manager

Short description: Dimensions of the enterprise; management hierarchies; marketing dimensions; planning and decision-making; control techniques. *Commencing date:* 2 March (Morocco); 2 November (Monaco). *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 1,600.

Organizer: Spectrum Training International SA, Panama
P.O. Box 252
98005 Monaco, Monaco

Venue: Morocco; Monaco

Efficient reading skills

Short description: Courses in Arabic and English for managers to improve reading speed and comprehension. *Commencing date:* 1 June, 7 September (English); 8 June, 14 September (Arabic). *Duration:* 5 days. *Qualifications:* Arabic or English. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 800.

Organizer: Spectrum Training International SA, Panama
P.O. Box 252
98005 Monaco, Monaco

Venue: Egypt; United Kingdom

Financial management and control

Short description: Investment budgets; measures of control; computer systems; integrated control systems; financial committees. *Commencing date:* 2 March (Morocco); 2 November (Monaco). *Duration:* 2 weeks. *Qualifications:* English, Arabic. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 1,600.

Organizer: Spectrum Training International SA, Panama
P.O. Box 252
98005 Monaco, Monaco

Venue: Morocco; Monaco

Management of petroleum enterprises

Short description: Assessment of the international scene; structural problems; management planning; retrieving off-shore oil; safety and security. *Commencing date:* 1 June (Egypt); 7 September (United Kingdom). *Duration:* 2 weeks. *Qualifications:* English, Arabic. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 1,600 non-residential.

Organizer: Spectrum Training International SA, Panama
P.O. Box 252
98005 Monaco, Monaco

Venue: Egypt; United Kingdom

Bucket dredging

Short description: Soil mechanics, dumping grounds, bucket dredge, maintenance, survey, instrumentation, estimating, planning, tendering, contracting, safety, environmental impact. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Senior technical and operational staff of dredging institutes and consultants. *Deadline for application:* 3 weeks before commencing date. *Fees:* f. 29,900.

Organizer: DEMAS
P.O. Box 403
2260 AK Leidschendam, Netherlands

Venue: DEMAS
Vlietweg 17
2266 KA Leidschendam, 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 Centre for Polymeric Materials
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:* To be arranged.

Organizer: TNO Metal Research Institute
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:* To be arranged. *Duration:* 4 days. *Qualifications:* Technical high school. *English.* *Deadline for application:* —. *Fees:* To be arranged.

Organizer: TNO Division of Technology for Society
Department for Industrial Safety
P.O. Box 342
7300 AH Apeldoorn, Netherlands

Petroleum management

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: Updated, comprehensive review of the state of the art in aluminium production. *Commencing date:* May. *Duration:* 5 days. *Qualifications:* *English.* *Deadline for application:* April. *Fees:* NKr 12,000-13,000 (including luncheons).

Organizer: Institute of Inorganic Chemistry
The Norwegian Institute of Technology
7034 Trondheim, Norway

Increasing the durability of high-speed steel tools

Short description: Methods of life extension of high-speed steel tools by means of thermochemical treatment in gas atmospheres and in fluidized bed. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Engineers, graduates of technical high school. *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

Integrated development programming for refining, petrochemical, chemical and other process industries

Short description: For middle- and upper-level executives. Integrated development programming (IDP) using decision-support system; case studies; guidelines for application of IDP methodology using MIDA computer system. *Commencing date:* June. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* February. *Fees:* \$US 1,200.

Organizer: Joint Systems Research Department
Academy of Mining and Metallurgy and Industrial Chemistry
Research Institute
30-059 Krakow, Poland

Plastic coatings

Short description: Technologies of powder, plastisoles and dispersion coatings, including coating materials and process equipment. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Engineers, graduates of technical high school, skilled workers. 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

Certificación

Breve descripción: Cursos breves sobre: certificación; la calidad y el mercado único europeo; responsabilidad por productos y N+C; normalización y certificación para universitarios. *Fecha de iniciación:* Para ser acordado. *Duración:* 1 día. *Calificaciones:* Español. *Fecha límite de inscripción:* 1 semana antes del curso. *Derechos de inscripción:* —.

Organizador: AENOR (División Comercial)
Fernández de la Hoz 52
28010 Madrid, España

Active control of sound and vibration

Short description: Control of one-dimensional propagating sound fields, single-channel feedforward controller design, control of enclosed sound fields; multi-degree of freedom vibrating systems; practical examples. *Commencing date:* April. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £595.

Organizer: ISVR
University of Southampton
Southampton, Hampshire SO9 5NH, United Kingdom

Analysis of environmental materials, including water

Short description: Inductively coupled plasma spectrochemical analysis—the analysis of water and environmental materials. *Commencing date:* To be arranged. *Duration:*

4 days. *Qualifications:* Qualified and experienced in modern chemical techniques. *English. Deadline for application:* 6 weeks before commencing date. *Fees:* £750.

Organizer: Short Course Support Unit
Sheffield City Polytechnic
43 Broomgrove Road
Sheffield S10 2NA, United Kingdom

Applied pneumatics

Short description: Comprehensive introduction to applied pneumatics, using a simulator panel to give experience of practical circuits. *Commencing date:* Throughout the year. *Duration:* 6 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth, Paisley, United Kingdom

Architectural management

Short description: Management of the design process, project and construction management, contract procedures, organization, control and finance. *Commencing date:* January, September. *Duration:* To be arranged. *Qualifications:* Full membership of a chartered institution in construction. *English. Deadline for application:* —. *Fees:* To be arranged.

Organizer: School of Architecture
University of Nottingham
University Park
Nottingham NG7 2RD, United Kingdom

AUTOCAD 4351

Short description: Introduction to AUTOCAD design and draughting program using modern computer systems. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Approximately £275 per week.

Organizer: East Kilbride and District Engineering G.T.A. Ltd.
3, Law Place
Nerston Industrial Estate
East Kilbride G74 4PP, Scotland, United Kingdom

Business management

Short description: Short courses on: business strategy; construction management; internal consultancy; management; project management. *Commencing date:* To be arranged. *Duration:* 5 days-2 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

Computer-aided design 2D-3D

Short description: No prior knowledge of Macintosh's graphical user interface required. Emphasis on the use of the sophisticated Intergraph CAD package on the Mac platform. *Commencing date:* June. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Approximately £1,200.

Organizer: Systec Training
Nene College
St. George's Avenue
Northampton NN2 6JD, United Kingdom

Computer-aided manufacture

Short description: Introduction to mechanical CAD and draughting using AUTOCAD. *Commencing date:* May. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Approximately £1,200.

Organizer: Systec Training
Nene College
St. George's Avenue
Northampton NN2 6JD, United Kingdom

Computer applications

Short description: Short courses on: microprocessors; programming languages; object-oriented programming; functional programming; system design; interactive computer graphics; computer networks; programming the finite element method. *Commencing date:* To be arranged. *Duration:* 1-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Computers in maintenance

Short description: To acquaint maintenance managers with modern computer application to maintenance problems and to provide hands-on experience. *Commencing date:* To be arranged. *Duration:* 2 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £320.

Organizer: Wolfson Maintenance
University of Manchester
Simon Building
Oxford Road
Manchester M13 9PL, United Kingdom

Condition-based maintenance

Short description: Condition-based maintenance techniques and practical experience in the use of monitoring instrumentation. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Wolfson Maintenance
University of Manchester
Simon Building
Oxford Road
Manchester M13 9PL, United Kingdom

Corrosion monitoring

Short description: Corrosion monitoring; corrosion in oil and gas industries; principles of corrosion. *Commencing date:* To be arranged. *Duration:* 5 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: Appreciation of the vital role maintenance plays in the profitability of the company. *Commencing date:* To be arranged. *Duration:* 2 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £320.

Organizer: Wolfson Maintenance
University of Manchester
Simon Building
Oxford Road
Manchester M13 9PL, United Kingdom

Courses on request

Short description: Short courses on: workshop machine/welding technology; small tool manufacturing; environmental engineering and waste management; brassware manufacturing; electroplating; technology of builders; manufacturing technology. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: School of Materials, Mechanical and Manufacturing Engineering
Sheffield City Polytechnic
Pond Street
Sheffield S1 1WB, United Kingdom

Design and construction in timber

Short description: Timber as an engineering material; worked examples; construction techniques. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Diploma or degree in civil/structural engineering or building. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* £1,525.

Organizer: Timber Research and Development Association (TRADA)
Overseas Operations
Stocking Lane, Hughenden Valley
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

Electronics

Short description: Introduction to solid-state devices, their uses in different types of electronic circuitry; fault-finding and repair. *Commencing date:* Throughout the year. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth, Paisley, United Kingdom

Engineering

Short description: Short courses on: quantitative techniques in maintenance management; dynamic testing of materials; signal-processing techniques for engineers; fluid mechanics and heat transfer; laser techniques and opto-electronics in industrial measurement. *Commencing date:* January-October. *Duration:* 2-5 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £195-495.

Organizer: Continuing Education Unit
Department of Engineering
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Engineering drawing

Short description: Fundamentals and principles of engineering drawing and practical experience. *Commencing date:* April. *Duration:* 2 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £250.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Environmental protection

Short description: Short courses on: combined sewer design; environmental impact assessment for engineers; sodium-iodide detectors; radiological safety. *Commencing date:* To be arranged. *Duration:* 2-3 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* £170-325.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Experimental techniques in fluid mechanics and heat transfer

Short description: Intensive course comprising of lectures, demonstrations and laboratory visits. *Commencing date:* September. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £550.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Furniture-industry development

Short description: Short courses on: production management, design and marketing for furniture companies; furniture packaging; dimensional control through measurement; effective panel construction; upholstery fabrics; improving management performance.

Commencing date: To be arranged. *Duration:* 1 day. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £145.

Organizer: Furniture Industry Research Association
Maxwell Road
Stevenage, Hertfordshire SG1 2EW, United Kingdom

Gamma spectrometry

Short description: Practical training with back-up lectures; demonstration of the latest equipment. *Commencing date:* April, June, October. *Duration:* 3 days. *Qualifications:* Graduate research workers, health physicists. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £500.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Health and safety

Short description: Short courses on: occupational hygiene; safety engineering; health and safety for managers; occupational health/medicine. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Technical or professional qualifications. English. *Deadline for application:* 1-2 months before commencing date. *Fees:* To be arranged.

Organizer: Amarc (Tes) Ltd.
Hebburn Management Centre
Ellison Street
Hebburn, Tyne & Wear NE31 1YN, United Kingdom

Hospital equipment

Short description: Short courses on: biomedical equipment maintenance management; biomedical equipment practice; medical gas and vacuum systems management; medical gas and vacuum systems practice; sterilizer testing; sterilizer management for engineers; technical skills for sterile supply staff; boiler-house practice; lift servicing; ventilation and air conditioning; electrical/electronics foundation; microprocessor control; industrial electronics; electrical applications in health-care buildings; contracts for capital works; planning health building schemes; building for engineers; contracts for minor capital works. *Commencing date:* February-November. *Duration:* 3-10 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* £385-1,480.

Organizer: NHS Training Authority
Eastwood Park, Falfield
Wotton-under-Edge, Gloucestershire GL12 8DA, United Kingdom

Image processing

Short description: Provides the engineer with a working knowledge of image processing and gives an appreciation of the technical and commercial potential of the technology. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £595.

Organizer: ISVR
University of Southampton
Southampton SO9 5NH, Hampshire, United Kingdom

Industrial control systems

Short description: Outlines features of feedback control systems. *Commencing date:* May.
Duration: 3 days. *Qualifications:* Background in technical control systems and instrumentation. English. *Deadline for application:* 1 month before commencing date.
Fees: Approximately £350.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Industrial hydraulics

Short description: For maintenance personnel and all those involved in industrial hydraulics. Comprehensive introduction to industrial hydraulics using a simulator panel to give experience of practical circuits. *Commencing date:* Throughout the year.
Duration: 6 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom
Venue: Dudley, Grangemouth, Paisley, United Kingdom

Inspection and maintenance of air-conditioning systems

Short description: Maintenance of fans and ducts; filters; testing and balancing air-handling systems. *Commencing date:* January, March, June, September, November.
Duration: 5 days. *Qualifications:* Mechanical/electrical background. English. *Deadline for application:* 1 month before commencing date. *Fees:* £630.

Organizer: Haden Maintenance Training
23-27 Gladstone Road
Croydon, Surrey CRO 2BQ, United Kingdom

Inspection and maintenance of reciprocating refrigeration systems

Short description: Basic refrigeration principles; identifying components and reading temperatures. *Commencing date:* Throughout the year. *Duration:* 5 days.
Qualifications: Mechanical/electrical background. English. *Deadline for application:* 1 month before commencing date. *Fees:* £630.

Organizer: Haden Maintenance Training
23-27 Gladstone Road
Croydon, Surrey CRO 2BQ, United Kingdom

Leather familiarization

Short description: Broad overview of leather and its manufacture with emphasis on the recognition of quality for suppliers (of chemicals and machinery) or users (shoemakers, upholstery and clothing manufacturers, fashion buyers) of leather. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

Organizer: National Leathersellers Centre
Nene College
Moulton Park
Northampton NN2 7AL, United Kingdom

Leather technology

Short description: Update in new finishing methods, soft leather, advances in the beanhouse, alternatives to chrome. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280.

Organizer: National Leathersellers Centre
Nene College
Moulton Park
Northampton NN2 7AL, United Kingdom

Management

Short description: Short courses on: basic supervision skills; basic management skills; leadership, team-building and team development, productivity and quality improvement. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 2-3 months before commencing date. *Fees:* Approximately £650.

Organizer: Amarc (Tes) Ltd.
Hebburn Management Centre
Ellison Street
Hebburn, Tyne & Wear NE31 1YN, United Kingdom

Management problems

Short description: Effective maintenance management; project management; production management; production control; value engineering and analysis; quality management. *Commencing date:* Throughout the year. *Duration:* 2, 3 and 5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

Organizer: PERA
Nottingham Road
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

Management skills

Short description: Short courses on: developing management skills; developing the entrepreneurial organization; quality assurance; auditor training. *Commencing date:* Throughout the year. *Duration:* 2-5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £225-700.

Organizer: RGIT Welltrain
Short Course Training Centre
Kepplestone House
Viewfield Road
Aberdeen AB9 2PF, Scotland, United Kingdom

Management techniques

Short description: Short courses on: accountancy; engineering; information technology; quality-system assessment; computer-aided engineering; management. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: Short Course Support Unit
Sheffield City Polytechnic
43 Broomgrove Road
Sheffield S10 2NA, United Kingdom

Management topics

Short description: Short courses on: assertiveness and personal authority; counselling for managers; refreshing technical reports. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Managing negotiation

Short description: For senior line managers and industrial-relations specialists, to develop their negotiation and interpersonal skills in the areas of collective bargaining and employee relations. *Commencing date:* May, August. *Duration:* 2 weeks. *Qualifications:* First-level degree or equivalent. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston, Birmingham B15 1TH, United Kingdom

Maintenance techniques

Short description: Short courses on: computers and maintenance; cost-effective maintenance; condition-based maintenance, quantitative techniques in maintenance management. *Commencing date:* February-November. *Duration:* 1-4 days. *Qualifications:* Technicians/managers. English. *Deadline for application:* 1 month before commencing date. *Fees:* £240-550.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Noise control

Short description: Short courses on: noise control for engineers in processing industries; community noise and vibration; statistical energy analysis; clinical audiology; engine noise and vibration control; advanced course on noise and vibration. *Commencing date:* March-September. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £500-600.

Organizer: ISVR
University of Southampton
Southampton, Hampshire SO9 5NH, United Kingdom

Nuclear technology

Short description: Theory and experimental work. *Commencing date:* September. *Duration:* 5 days. *Qualifications:* Graduate or equivalent experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £500.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Oil and gas engineering

Short description: Short courses on: drilling with oil-based muds in high-pressure zones; off-shore installation management; new exotic materials for oil and gas engineering; well planning and design. *Commencing date:* Throughout the year. *Duration:* 2-4 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £260-325.

Organizer: RGIT Welltrain
Short Course Training Centre
Keppelestone House
Viewfield Road
Aberdeen AB9 2PF, Scotland, United Kingdom

Operation and control of steam-generating plants

Short description: Principles of boiler-plant design and operation. *Commencing date:* February. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £350.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Packaging

Short description: Short courses on: packaging in industry; new packaging ideas; principles of packaging; retail package testing; practical distribution packaging. *Commencing date:* February, June. *Duration:* 2-4 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £350-700.

Organizer: PIRA Packaging
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

Petrochemical training programmes

Short description: Short courses on: capital projects in oil, gas and petrochemicals—managing development and implementation; production economics; process facilities for handling oil and natural gas; financial management, audit and control; petroleum resource financing; petroleum negotiation workshop; joint ventures for oilfield operations; government and the oil industry—relationships and regulations; prospect evaluation and reservoir appraisal for development planning; introduction to oilfield exploration and production; workings of the oil industry—structure and economics of the global markets; maintaining jet-fuel quality in a growth market—the impact of processing options and new test techniques; diesel-fuel quality trends—the growing role of additives; gasoline technology and economics—specifications, blending and market developments; process oils and functional fluids in industrial applications; lubricants formulation and application; the metalworking fluids business; synthetic lubricants—the state of market development and inter-product competition; managing the international lubricants business; the petrochemical industry—insights and concepts for decision-makers; petrochemicals—international marketing, contracts and trading; petrochemical markets and economics—the impact of feedstocks and costs on competitiveness and business strategy; understanding the international petrochemicals business—technology, markets and economics; economics and operations of bunkering; tanker chartering and supply—tactics and decision-making; practical forecasting of international oil trade and the tanker markets; gas contract negotiation and implementation; gas project planning, development and financing; the power generation dilemma—fuel selection, the environment and new technologies; natural

gas conversion—petrochemicals and transport fuels from gas; natural gas and the consumer—planning and managing city and urban gas supply networks; gas sales for industry—technology, economics and inter-fuel competition; national and international gas contracts—commercial factors and negotiations; the international gas market—pipeline and LNG trade and trading; the "gas chain" concept—structure, workings and economics of the gas industry; natural gas development, production and utilization—the technical issues; natural gas in the energy economy, marketing petroleum fuels to industry and commerce—distributing, pricing and contract management; the international aviation fuels market—supply, pricing and contracts; retail marketing—planning, economics and future developments; the refinery—petrochemicals interface; adding value in refinery non-fuel markets—process oils, waxes, bitumen, petroleum coke and solvents; decision support systems for supply, refining and trading using microcomputers; planning and economics of refinery upgrading; effective marketing in the international coal trade; the legal aspects of chartering, sale and insurance of oil; price-risk management in the oil industry—creative uses of oil futures, forward and options markets; LPG—supply, economics, markets and international trading; creative international trading in crude oil and petroleum products; understanding the international condensates business; competitive crude oil marketing, crude oil supply, transportation, refining and trading; petroleum economics—from crude and gas to petrochemicals; disaster management in the petroleum industry; the oil industry and pollution control; quality assurance and safety management in the petroleum industry; physical risk management in the petroleum industry; environmental management in the oil and petrochemicals industries; petroleum company organizational development in practice—a workshop for chief executives and directors; international oil and gas economics—workshop for directors; economic forecasting in the petroleum industry. *Commencing date:* Throughout the year. *Duration:* 1-5 days. *Qualifications:* Professional experience. *English.* *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: The College of Petroleum Studies
Sun Alliance House
New Inn Hall Street
Oxford OX1 2QD, United Kingdom

Place of the engineer in the community

Short description: Modern management concepts; philosophical considerations of the civil engineer's role and matters relating to the environment. *Commencing date:* March. *Duration:* 5 days. *Qualifications:* Graduates in civil engineering. *English.* *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £300.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Practical metallurgy

Short description: Short courses on: casting defects; casting design; cupola control; electric melting; foundry appreciation; practical ferrous metallurgy; practical non-ferrous metallurgy. *Commencing date:* Throughout the year. *Duration:* 3-10 days. *Qualifications:* *English.* *Deadline for application:* —. *Fees:* —.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley and Grangemouth, United Kingdom

Predictive maintenance

Short description: Philosophy of predictive maintenance; techniques employed by the host organization to operate its predictive maintenance plans. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

Organizer: ICI Chemicals and Polymers Ltd.
Process Plant Services
Room 103 N Building
Billingham
Cleveland TS23 1LB, United Kingdom

Process control

Short description: Short courses on: fundamentals of mechanical and pneumatic instrumentation; transmitter maintenance; industrial boiler control systems; process-control instrumentation; process-control technology; process-measurement technology. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: Educational Services
Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Production control

Short description: Short courses on: creative and practical problem solving; leadership and team management; MTM practitioners; organization and methods; production planning and control; project management; supervisors' course; total quality management. *Commencing date:* Throughout the year. *Duration:* 3-10 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road
West Didsbury
Manchester M29 8QA, United Kingdom

Reactor engineering

Short description: Introduction to reactor engineering; 30 per cent of course time spent on experiments using the University's research reactor. *Commencing date:* September. *Duration:* 2 weeks. *Qualifications:* Recent graduate entrants to nuclear engineering industry with reactor theory, needing practical experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £800.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Reactor refresher course

Short description: Designed to meet requirements of UKAEA research reactor operation teams. *Commencing date:* May, June, July. *Duration:* 5 days. *Qualifications:*

Experienced reactor operations and maintenance staff. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £600.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Safety officer

Short description: Identification and assessment of hazards in the workplace: investigate accidents and prevent recurrence; understand health and safety legislation and human and organizational problems. *Commencing date:* Throughout the year. *Duration:* 10 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Senior international manager programme

Short description: Problem solving and planning techniques; resource utilization. *Commencing date:* To be arranged. *Duration:* 10 days. *Qualifications:* First-level degree or equivalent. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* To be arranged.

Organizer: The Industrial Society International
Quadrant Court
49 Calthorpe Road
Edgbaston, Birmingham B15 1TH, United Kingdom

Sewing machine instructor

Short description: Basic skills and knowledge needed to function as instructor in the garment industry. *Commencing date:* Throughout the year. *Duration:* 10 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Signal processing

Short description: Short courses on: adaptive signal processing; digital audio-signal processing; applied digital-signal processing. *Commencing date:* April-July. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* £575-750.

Organizer: ISVR
University of Southampton
Southampton SO9 5NH, United Kingdom

Specialist engineering

Short description: Engineering and technology skills in vessels, heat exchangers and furnaces; appreciation of structural integrity assessment; piping design including stress analysis; corrosion monitoring and prevention techniques; introduction to material sciences. *Commencing date:* October. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

Organizer: ICI Chemicals and Polymers Limited
Process Plant Services
Room 103 N Building
Billingham
Cleveland TS23 1LB, United Kingdom

Supervision

Short description: Short courses on: basic supervisory skills; instructional techniques; quality assurance. *Commencing date:* Throughout the year. *Duration:* 3-10 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* —.

Organizer: METCOM Training
Fleming House
Renfrew Street
Glasgow G3 6TG, Scotland, United Kingdom

Venue: Dudley, Grangemouth, Paisley, United Kingdom

Textiles for chemists

Short description: Introduction to textile technology with special emphasis on dyeing and finishing. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* —. *Fees:* £400.

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

Textile technology

Short description: Textile fibre properties, yarn manufacture, knitting, weaving, dyeing and finishing. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fee:* £700.

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

Timber drying

Short description: Methods of drying timber (air and kiln), methods of sampling, measurement of moisture content, calculations, kiln operation and management. *Commencing date:* June, November. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 3-4 weeks before commencing date. *Fees:* £750.

Organizer: Timber Research and Development Association (TRADA)
Overseas Operations
Stocking Lane, Hughenden Valley
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

Timber grading

Short description: Necessary skills and knowledge for the grading of timber. *Commencing date:* Throughout the year. *Duration:* 2 years. *Qualifications:* English. *Deadline for application:* 3 weeks before commencing date. *Fees:* £1,525.

Organizer: Timber Research and Development Association (TRADA)
Overseas Operations
Stocking Lane, Hughenden Valley
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

Training of trainers

Short description: Basic skills and knowledge for trainers. *Commencing date:* Throughout the year. *Duration:* 2 modules of 5 days each, with an interval for project work. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Fielden House Ltd.
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Training of trainers

Short description: Short courses on: Foundation course for trainers; identification of training needs; job analysis for training; training design; training evaluation; participative method for trainers; the workplace trainer; behavioural science for trainers; advanced participative methods for trainers; the trainer as an internal consultant; managing the training function; managing distance learning; developing personal effectiveness; accelerated learning skills; coaching skills; effective presentation; influencing skills; the new supervisor—an introduction to managing people; report writing; technical report writing; the training administrator. *Commencing date:* To be arranged. *Duration:* 2-5 days. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

Organizer: British Association for Commercial and Industrial Education (BACIE)
16 Park Crescent
London W1N 4AP, United Kingdom

UNIX and C programming

Short description: The UNIX operating system and progress to shellscripts and pipes; the C language, including file handling and modular programming. *Commencing date:* February. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Approximately £1,800.

Organizer: Syntec Training
Nene College
St. George's Avenue
Northampton, NN2 6JD, United Kingdom

Vibration monitoring

Short description: Comprehensive introduction to vibration monitoring; diagnostics and cause elimination. *Commencing date:* April-September. *Duration:* 1-4 days. *Qualifi-*

cations: Technicians, higher technicians, middle and senior managers. English.
Deadline for application: 1 month before commencing date. *Fees:* To be arranged.

Organizer: OCET
University of Manchester
Oxford Road
Manchester M13 9PL, United Kingdom

Weld quality

Short description: Design, manufacture, non-destructive testing and quality of welded constructions. *Commencing date:* January, October. *Duration:* 2 weeks. *Qualifications:* Industrial experience. English. *Deadline for application:* —. *Fees:* £700.

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

Comunicación y administración

Breve descripción: La comunicación como talento básico del administrador y factores que inhiben y promueven los esfuerzos de cambio en programas para el desarrollo. *Fecha de iniciación:* Febrero, julio. *Duración:* 5 días. *Calificaciones:* Español. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* \$US 660.

Organizador: Training and Development Institute
P.O. Box 23975
Washington, D.C. 20026, United States of America

Lugar: Berkeley, California

Entrepreneurship

Short description: Short courses on: entrepreneurship for development; training of trainers and the management of training; project management and evaluation; management—communication for development; managing development with microcomputers. *Commencing date:* May-December. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 1,185-1,400.

Organizer: Training and Development Institute
P.O. Box 23975
Washington, D.C. 20026, United States of America

Global executives' and managers' seminar

Short description: The seminar teaches American managers interpersonal skills for relating to Japanese business partners and increases their understanding of Japanese business, culture and communication to promote positive business relationships with Japan. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Approximately \$US 1,500.

Organizer: Japan-America Institute of Management Science
6660 Hawaii Kai Drive
Honolulu, Hawaii 96825, United States of America

Strategic management for senior officials

Short description: Strategic planning models; role of the senior executive; managing large and complex organizations; setting a motivational climate; current research on leadership excellence; change management; trends for the future; and staffing and employee development. *Commencing date:* October. *Duration:* 2 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,250.

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

Direct production of wire from scrap

Short description: Continuous casting of non-deformable alloys and semiproducts for hot or cold deformable alloys; pilot plant demonstrations. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Technicians/graduated engineers. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 850 (including lunch).

Organizer: Slovenske Železarne
Metalurški Inštitut Ljubljana
Lepi pot 11
61000 Ljubljana, Yugoslavia

Testing of materials

Short description: Testing of mechanical, electrical and thermal properties. *Commencing date:* March. *Duration:* 1 week. *Qualifications:* Engineers, technicians. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately \$US 150 per day.

Organizer: Slovenske Železarne
Metalurški Inštitut Ljubljana
Lepi pot 11
61000 Ljubljana, Yugoslavia

B. DEVELOPING COUNTRIES/PAYS EN DÉVELOPPEMENT/ PAÍSES EN DESARROLLO

Aplicaciones de la microscopía electrónica y la microsonda electrónica a la resolución de problemas industriales

Breve descripción: Breve introducción teórica; descripción del microscopio y la microsonda; ejemplos de aplicaciones a distintos materiales; microanálisis cualitativo y cuantitativo, errores, ejemplos. *Fecha de iniciación:* Mayo. *Duración:* 5 días. *Calificaciones:* Español, inglés. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 400.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
Laboratorio de Microscopía Electrónica
Departamento Mecánica
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Control de calidad de leches en polvo

Breve descripción: Generalidades de la elaboración; efecto del calentamiento sobre los distintos componentes; calidad de composición y tecnológica; determinación de: materia grasa, proteínas, humedad, acidez, pH, tratamiento térmico, humectabilidad, dispersabilidad, solubilidad, partículas quemadas etc. *Fecha de iniciación:* Septiembre. *Duración:* 1 semana. *Calificaciones:* Español. *Fecha límite de inscripción:* Julio. *Derechos de inscripción:* \$US 150.

Organizador: CTIL-INTI
Centro de Investigaciones Tecnológicas de la Industria Láctea
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Control de calidad en el laboratorio de recibo de leche

Breve descripción: Objetivos y funcionamiento de un laboratorio de recibo de leche; pago según calidad; riqueza de los componentes. Adulteraciones: extracto seco, densidad, descenso crioscópico, conservadores. Métodos indirectos de calidad bacteriológica. *Fecha de iniciación:* Junio. *Duración:* 1 semana. *Calificaciones:* Técnicos de laboratorio lactológico. Español. *Fecha límite de inscripción:* Abril. *Derechos de inscripción:* \$US 150.

Organizador: CTIL-INTI
Centro de Investigaciones Tecnológicas de la Industria Láctea
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Corrosión del acero en el hormigón armado

Breve descripción: Introducción a la corrosión de acero en hormigón armado; influencia del diseño y los métodos de construcción de estructuras; efecto de iones agresivos;

técnicas no destructivas; métodos de protección, reparación y saneamiento de estructuras corroídas. *Fecha de iniciación:* Mayo. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 4 meses antes del curso. *Derechos de inscripción:* \$US 200.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
Laboratorio de Microscopía Electrónica
Departamento Mecánica
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Detección y control de la corrosión en la industria

Breve descripción: Elementos básicos necesarios para comprender el fenómeno de la corrosión. Identificación de los problemas: influencia de las condiciones de operación; selección de materiales y diseño adecuados; control y protección, evaluación de casos reales. *Fecha de iniciación:* Abril. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 4 meses antes del curso. *Derechos de inscripción:* \$US 200.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
Laboratorio de Microscopía Electrónica
Departamento Mecánica
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Elaboración de jamón cocido

Breve descripción: Curso teórico-práctico; se desarrollará en la planta piloto de CITECA. *Fecha de iniciación:* Para ser acordado. *Duración:* 1 semana. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* Para ser acordado.

Organizador: CITECA/INTI
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Electroforesis en alimentos

Breve descripción: Principios fundamentales de la electroforesis; electroforesis en productos lácteos, sueros, distintos tratamientos térmicos, maduración; identificación de cereales; detección de proteínas de soya en productos cárnicos, panadería, fideería, lácteos, etc. *Fecha de iniciación:* Agosto. *Duración:* 1 semana. *Calificaciones:* Técnico químico con experiencia. Español. *Fecha límite de inscripción:* Julio. *Derechos de inscripción:* \$US 150.

Organizador: CITIL-INTI
Centro de Investigaciones Tecnológicas de la Industria Láctea
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Garantía de la calidad

Breve descripción: Cursos breves sobre: garantía de la calidad; calidad en laboratorios de ensayo; auditoría de la calidad; causas de rotura; confiabilidad; el control del proceso

de fabricación; gestión total de la calidad. *Fecha de iniciación:* Febrero-agosto. *Duración:* 1-4 días. *Calificaciones:* Español. *Fecha límite de inscripción:* 15-30 días antes del curso. *Derechos de inscripción:* \$US 30-100.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
División Garantía de la Calidad
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Líquidos penetrantes

Breve descripción: Técnica no destructiva para la detección de discontinuidades superficiales en materiales metálicos y no metálicos. *Fecha de iniciación:* Abril. *Duración:* 30 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* Febrero. *Derechos de inscripción:* Para ser acordado.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Lipólisis en leche y productos lácteos

Breve descripción: Evaluación de la lipólisis en leche y productos lácteos; índice de acidez, índice de Kreis, índice de Deeth; cromatografía en fase gaseosa de ácidos grasos libres volátiles. *Fecha de iniciación:* Agosto. *Duración:* 1 semana. *Calificaciones:* Español. *Fecha límite de inscripción:* Junio. *Derechos de inscripción:* \$US 150.

Organizador: CITIL-INTI
Centro de Investigaciones Tecnológicas de la Industria Láctea
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Materiales plásticos para uso biomédico

Breve descripción: Caracterización físico-química; biocompatibilidad; propiedades y utilización; control de calidad; legislación. *Fecha de iniciación:* Para ser acordado. *Duración:* 1 semana. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$US 1,000.

Organizador: CITIP
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Partículas magnetizables

Breve descripción: Técnica no destructiva para la detección de discontinuidades superficiales y subsuperficiales en materiales magnetizables (aceros). *Fecha de iniciación:* Junio. *Duración:* 30 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* Abril. *Derechos de inscripción:* Para ser acordado.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Radiografía industrial

Breve descripción: Técnica no destructiva para la detección de discontinuidades en materiales metálicos y no metálicos. *Fecha de iniciación:* Octubre. *Duración:* 45 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* Agosto. *Derechos de inscripción:* Para ser acordado.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Ultrasonidos

Breve descripción: Técnica no destructiva para la detección de discontinuidades en materiales metálicos y no metálicos. *Fecha de iniciación:* Mayo. *Duración:* 45 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* Marzo. *Derechos de inscripción:* Para ser acordado.

Organizador: Instituto Nacional de Tecnología Industrial (INTI)
C.C. 157
1650 San Martín
Buenos Aires, Argentina

Desarrollo de la pequeña y microempresa

Breve descripción: Principios de contabilidad; costos y análisis financiero; mercadeo y ventas; principios de administración. *Fecha de iniciación:* La Paz: 15/1; 12/3; 7/5; 2/7; 27/8; 22/10. Cochabamba: 5/2; 2/4; 9/7; 8/10. Santa Cruz: 2/4; 14/5; 25/6; 30/7; 27/8; 17/9. *Duración:* 40 horas. *Calificaciones:* Español. *Fecha límite de inscripción:* —. *Derechos de inscripción:* \$b 6.145.

Organizador: Instituto para el Desarrollo de Empresarios y Administradores
"IDEA"

La Paz: Av. Camacho No. 1485, Edificio La Urbana, 3er. Piso
Casilla 10508
La Paz, Bolivia

Cochabamba: Calle Sucre E-0336, 2do. Piso
Edif. Cámara de Comercio
Casilla 3376
Cochabamba, Bolivia

Santa Cruz: Calle Mercado Esq. Independencia No. 95, 1er. Piso
Santa Cruz, Bolivia

Improvement of rabbit skin

Short description: Selection of the right race for skin; slaughter; preservation of the skin; tanning up to finishing. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* English, Spanish. *Deadline for application:* January. *Fees:* \$US 1,000.

Organizer: Instituto de Pesquisas Tecnológicas do Estado de São Paulo S/A
Divisão de Produtos Florestais, Têxteis e Couros
Agrupamento de Tecnologia de Couros e Calçados
Caixa Postal 7141
01000 São Paulo, SP., Brazil

Tanning of chicken's foot skin and turkey skin

Short description: Tanning of chicken's foot skin and turkey skin, including leather finishing. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* English, Spanish. *Deadline for application:* January. *Fees:* \$US 1,000.

Organizer: Instituto de Pesquisas Tecnológicas do Estado de São Paulo S/A
Divisão de Produtos Florestais, Têxteis e Couros
Agrupamento de Tecnologia de Couros e Calçados
Caixa Postal 7141
01000 São Paulo, SP., Brazil

Tanning of fish skin

Short description: Tanning of fish skins, with and without scales. *Commencing date:* February. *Duration:* 2 weeks. *Qualifications:* English, Spanish. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,000.

Organizer: Instituto de Pesquisas Tecnológicas do Estado de São Paulo S/A
Divisão de Produtos Florestais, Têxteis e Couros
Agrupamento de Tecnologia de Couros e Calçados
Caixa Postal 7141
01000 São Paulo, SP., Brazil

Tanning of shark skin

Short description: The shark with its many cosmopolitan species represents a great potential in skins. The course will broach aspects of shark skin tanning. *Commencing date:* March. *Duration:* 2 weeks. *Qualifications:* English, Spanish. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,000

Organizer: Instituto de Pesquisas Tecnológicas do Estado de São Paulo S/A
Divisão de Produtos Florestais, Têxteis e Couros
Agrupamento de Tecnologia de Couros e Calçados
Caixa Postal 7141
01000 São Paulo, SP., Brazil

Calibración de básculas y metodología de pesaje

Breve descripción: Capacitar a usuarios en aspectos de normalización y conocimientos afines con la responsabilidad de cuantificar productos de alto costo a través de equipos de pesaje. *Fecha de iniciación:* Julio. *Duración:* 3 días. *Calificaciones:* Diploma de aprobación. Español. *Fecha límite de inscripción:* Junio. *Derechos de inscripción:* \$US 130 (incluye almuerzo).

Organizador: CESMEC Ltda.
Av. Marathon 2595
Santiago, Chile

Técnicas de detección de defectos y fallas superficiales

Breve descripción: Detección de defectos y fallas superficiales mediante líquidos penetrantes, partículas magnéticas, réplicas metalográficas, inspección visual etc. *Fecha de iniciación:* Marzo, mayo, agosto, octubre, diciembre. *Duración:* 2 días. *Calificaciones:* Diploma de aprobación. Español. *Fecha límite de inscripción:* 30 días antes del curso. *Derechos de inscripción:* \$US 100 (incluye almuerzo).

Organizador: CESMEC Ltda.
Av. Marathon 2595
Santiago, Chile

Administración por objetivos

Breve descripción: Desarrollar en los administradores a nivel de gerencia media las habilidades necesarias para manejar sus organizaciones dentro del marco de efectividad de la organización y la autorrealización humana dentro de la empresa, interrelacionando a esta última con su entorno. *Fecha de iniciación:* Para ser acordado. *Duración:* 5 días. *Calificaciones:* Español. *Fecha límite de inscripción:* 3 meses antes del curso. *Derechos de inscripción:* \$US 250.

Organizador: ECOPETROL
Complejo Industrial de Barrancabermeja
Barrancabermeja, Colombia

Assessing entrepreneurial competencies

Short description: Improving capabilities for assessing entrepreneurial competencies of potential entrepreneurs. *Commencing date:* February. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 500.

Organizer: Entrepreneurship Development Institute of India
Bhat, Chamkhedra 382 424
Dist. Gandhinagar (Gujarat), India

Computer-aided management

Short description: For senior functional/line executives from developing countries. Identification of critical success factors affecting organizational growth/profits and computer-aided remedies; case studies, exercises, video etc. *Commencing date:* To be arranged. *Duration:* 1-3 weeks. *Qualifications:* Executives and senior managers. *English:* *Deadline for application:* 1 month before commencing date. *Fees:* Residential: \$US 500-1,500 per week; non-residential: \$US 250 per week.

Organizer: Computer Management Centre
33A, Chowringhee Road, 5th Floor
Calcutta 700 011, India

Computer programming (BASIC)

Short description: Concept of errors in computers; non-numerical algorithms; applications of BASIC in various fields; graphics. *Commencing date:* January. *Duration:* 2 weeks. *Qualifications:* Knowledge of BASIC. *English:* *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramantapur
Hyderabad 500 013, Andhra Pradesh, India

Computer programming (COBOL)

Short description: Business applications of COBOL in inventory control, income tax calculation, financial analysis etc. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Knowledge of COBOL. *English:* *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process
Instrumentation
Ramantapur
Hyderabad 500 013, Andhra Pradesh, India

Computer programming (FORTRAN)

Short description: Concept of errors in computers—numerical analysis—iterative methods. Solution of simultaneous algebraic equations. Differentiation and integration. Non-numerical algorithms. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* ATI-EPI certificate in problem-solving with FORTRAN or complete knowledge of FORTRAN language. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500 013, Andhra Pradesh, India

Computers—a management tool

Short description: Application of computers in increasing managerial productivity and efficiency; general-purpose managerial exercises; need of programming, use of software packages and necessity of tailor-made software. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Functional/line managers. *English.* *Deadline for application:* —. *Fees:* Residential: \$US 1,000-2,500 per week; non-residential: \$US 900 per week.

Organizer: Computer Management Centre
33A, Chowringhee Road, 5th Floor
Calcutta 700 071, India

Consumer electronics

Short description: Short courses on: operation and maintenance of V.C.R.; operation and maintenance of TV camera; operation and maintenance of C.C.T.V. systems. *Commencing date:* February-December. *Duration:* 2 weeks. *Qualifications:* Professional qualifications. *English.* *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500 013, Andhra Pradesh, India

Extension motivation programme

Short description: To enhance the involvement of bank managers/industrial officers in entrepreneurship development for creating better support for EDPs and potential entrepreneurs. *Commencing date:* January. *Duration:* 1 week. *Qualifications:* *English.* *Deadline for application:* 2 months before commencing date. *Fees:* \$US 500.

Organizer: Entrepreneurship Development Institute of India
Bhat, Chandkheda 382 424
Dist. Gandhinagar (Gujarat), India

Fertilizer use and promotion

Short description: Short courses on: marketing management development programme; logistics of fertilizer distribution; energy management and optimization in fertilizer industry; agricultural services and market development executive. *Commencing date:*

March-October. *Duration:* 4-12 days. *Qualifications:* Middle- to higher-level engineers and managers. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* \$US 300-700.

Organizer: The Fertilizer Association of India
10, Shaheed Jit Singh Marg
New Delhi 110 067, India

Medical electronics

Short description: Short courses on: operation and maintenance of X-ray equipment; operation and maintenance of cardiac equipment; maintenance and operation of biochemical instrumentation. *Commencing date:* February-December. *Duration:* 2 weeks. *Qualifications:* Diploma in electrical or electronics engineering or B.Sc. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* Rs 500 per month. *Hostel rent* Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramarathapur
Hyderabad 500 013, Andhra Pradesh, India

Project evaluation, feasibility and budgeting using micro-computers

Short description: Collection of project data and analysing "what-if" situations; building various modules on selected parameters and viewing results; designing early warning systems for project time and cost over-runs. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Managers, accountants and consultants engaged in project work. *English.* *Deadline for application:* —. *Fees:* Residential: \$US 1,000-2,500 per week; non-residential: \$US 850 per week.

Organizer: Computer Management Centre
33A, Chowringhee Road, 5th Floor
Calcutta 700 071, India

Strengthening entrepreneurial competencies

Short description: Identifying the level of competencies and formulating a strategy for strengthening them. For owners or managers of small-scale enterprises. *Commencing date:* March. *Duration:* 1 week. *Qualifications:* *English.* *Deadline for application:* February. *Fees:* \$US 500.

Organizer: Entrepreneurship Development Institute of India
Bhat, Chandkheda 382 424
Dist. Gandhinagar (Gujarat), India

Teachers' training in entrepreneurship

Short description: Orientation on entrepreneurship development for teachers, to help them in initiating and implementing courses on entrepreneurship in educational institutions in order to encourage students to look at entrepreneurial activity as an effective alternative to employment. *Commencing date:* March. *Duration:* 2 weeks. *Qualifications:* *English.* *Deadline for application:* February. *Fees:* \$US 1,000.

Organizer: Entrepreneurship Development Institute of India
Bhat, Chandkheda 382 424
Dist. Gandhinagar (Gujarat), India

Temperature instrumentation

Short description: Importance of temperature measurement; filled system thermometers; different types of thermocouples. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Rs 500 per month. Hostel rent Rs 300 per month.

Organizer: Advanced Training Institute for Electronics and Process Instrumentation
Ramanthapur
Hyderabad 500 013, Andhra Pradesh, India

Tool-room inspectors

Short description: Training in profile projector, digital height master, tool-maker's microscope, three-co-ordinate measuring machine and different types of inspection and measuring equipment. *Commencing date:* March. *Duration:* 1 week. *Qualifications:* Diploma in mechanical or production engineering. English. *Deadline for application:* February. *Fees:* \$US 250.

Organizer: NTTF
Plot No. 23/24, II Phase
Peenya Industrial Area
Bangalore 560 058, India

Tool-room operators (refresher course)

Short description: Different types of tool-room machines: CNC milling machine, lathe, jig-boring, jig-grinding, cylindrical grinding, surface-grinding machines etc. *Commencing date:* January. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 500.

Organizer: NTTF
Plot No. 23/24, II Phase
Peenya Industrial Area
Bangalore 560 058, India

Plastics technology (polymer techniques and technology)

Short description: Polymer chemistry, polymer physics, mechanical properties, quality control, preventive maintenance. Injection moulding, blow moulding, extrusion, thermo forming. *Commencing date:* September. *Duration:* 1 week. *Qualifications:* Production managers or supervisors with experience in plastics industry. English. *Deadline for application:* August. *Fees:* \$J 1,500.

Organizer: Jamaica Bureau of Standards
6, Winchester Road
Kingston 10, Jamaica

Quality control in industry

Short description: Basic concepts, inspection, frequency-distribution, methods of summarizing data, acceptance sampling, control charts, process capability studies, the quality system. *Commencing date:* October. *Duration:* 1 week. *Qualifications:* Professional qualifications. Industrial experience. English. *Deadline for application:* August. *Fees:* \$J 1,200.

Organizer: Jamaica Bureau of Standards
6, Winchester Road
Kingston 10, Jamaica

Improving management

Short description: Short courses on: training the trainer; microcomputer skills; software communication; finance and budgetary control; project management. *Commencing date:* To be arranged. *Duration:* 2-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* KSh 4,000-9,950.

Organizer: Price Waterhouse Associates
P.O. Box 43963
Nairobi, Kenya

Emballage et conditionnement

Brève description : Techniques d'emballage (toutes catégories de matériaux). *Début du cours :* 6 à 8 séminaires programmés sur l'année. *Durée :* 2-3 jours. *Qualifications :* Français. *Date limite d'inscription :* —. *Droits d'inscription :* DH 1 000 par jour.

Organisateur: Institut marocain de l'emballage et du conditionnement
B.P. 8006
Casa-Oasis, Maroc

Toma de decisiones

Breve descripción: Análisis de los ambientes que intervienen en el proceso de toma de decisiones a niveles organizacionales estratégicos. Metodología para el diseño, desarrollo e implementación de sistemas expertos y basados en conocimiento como soporte a la decisión organizacional utilizando información estratégica. *Fecha de iniciación:* Junio, julio. *Duración:* 5 días. *Calificaciones:* Administradores, ejecutivos con experiencia en uso de la computación como herramienta de productividad. Español, inglés. *Fecha límite de inscripción:* Mayo. *Derechos de inscripción:* Aprox. \$US 500.

Organizador: Instituto Tecnológico y de Estudios Superiores de Monterrey
Sucursal de Correos "J"
C.P. 64849
Monterrey, N.L., México

Advanced management

Short description: Short courses on: advanced production management; cash management for small businesses; EDP and setting up a new business; industrial management course; management information systems; strategic management; training need analysis and assessment. *Commencing date:* January-November. *Duration:* 5 days-2 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* N 650-1,800.

Organizer: Centre for Management Development
P.M.B. 21578
Ikeja, Nigeria

Audio-visual aids for training

Short description: Plan and produce suitable teaching aids such as graphics, charts, slides and transparencies; simple visuals using cardboard, colours etc. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Management trainers and educators. English. *Deadline for application:* 4 months before commencing date. *Fees:* N 1,500.

Organizer: Centre for Management Development
P.M.B. 21578
Ikeja, Nigeria

Metallurgy

Short description: Latest technical know-how. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Diploma in metallurgy or mechanical engineering. *English.* *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Metallurgy

Short description: Metallography of ferrous and non-ferrous metals. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Diploma in metallurgy or mechanical engineering. *English.* *Deadline for application:* —. *Fees:* \$US 50 per week.

Organizer: Metal Industry Research and Development Centre
125-A, Industrial Area
Kot Lakhpat
Lahore 54770, Pakistan

Quality control in weaving

Short description: Scientific testing and quality-control techniques to implement effective quality control in weaving mills. *Commencing date:* To be arranged. *Duration:* 10 days. *Qualifications:* Inter-science diploma, with 3 years experience in a weaving mill. *English.* *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
GPO Box 479
Karachi, Pakistan

Weaving-shed supervisors

Short description: Upgrading of the technical know-how and skills of supervisors. *Commencing date:* To be arranged. *Duration:* 12 days. *Qualifications:* Matriculation, with 4-5 years experience in a weaving shed. *English.* *Deadline for application:* —. *Fees:* To be arranged.

Organizer: Textile Industry Research and Development Centre (TIRDC)
M. Tamizuddin Khan Road
GPO Box 479
Karachi, Pakistan

Advanced tanker safety (petroleum)

Short description: Types of tankers; advanced equipment; proven safe working procedures; accident prevention. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$S 290.

Organizer: Department of Continuing Education
Singapore Polytechnic
Dover Road
0513 Singapore

Asian school on computer science

Short description: The general objective of the school is to provide advanced know-how to computer science lecturers in Asia and to give them an opportunity to share their experiences and aspirations with other Asian colleagues. *Commencing date:* December. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 800.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Business management

Short description: Short courses on: AIT-UC Berkeley advanced management programme for Asia-Pacific managers; business intelligence; organizations' growth and survival; crisis and risk management; human resource management; management of change and conflict in organizations. *Commencing date:* March-November. *Duration:* 10-14 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 2,000-2,500.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Irrigation system management

Short description: Development and management of irrigation system. *Commencing date:* August. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* June. *Fees:* \$US 1,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Small-scale water resources development

Short description: Development and management of small-scale water resource projects. *Commencing date:* March. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* February. *Fees:* \$US 1,000.

Organizer: Continuing Education Center
Asian Institute of Technology
G.P.O. Box 2754
Bangkok 10501, Thailand

Ammonia, nitric acid and ammonium nitrate production based on coal

Short description: Gasifying processes; ammonia production; production of concentrated and diluted nitric acid; ammonium nitrate production. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Engineers (chemical or mechanical). *Deadline for application:* 2 months before commencing date. *Fees:* \$US 625 (including board and lodging).

Organizer: Eğitim Genel Müdürlüğü
Konva Devlet Yolu No. 70
06330 Ankara, Turkey

Digital signal processing chips and applications

Short description: Digital signal processing chips; programming the DSP56001 for various applications and algorithms; designing hardware with the DSP56001; real-time applications in signal processing; "hands-on" experience; laboratory experiments in filtering, detection. *Commencing date:* August. *Duration:* 2 weeks. *Qualifications:* Theoretical background in digital signal processing, bachelor's degree in electrical engineering. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,300 (including board and lodging).

Organizer: Electrical and Electronic Engineering Department
Boğaziçi University
80815 Bebek
Istanbul, Turkey

Industrial pollution

Short description: Results of research and projects concerning industrial waste-water treatment and management. *Commencing date:* September. *Duration:* 3 days. *Qualifications:* Turkish. *Deadline for application:* July. *Fees:* \$US 40.

Organizer: İTÜ/İnşaat Fakültesi
Çevre Müh. Bölümü 80626 Maslak
Istanbul, Turkey

Programmable controllers

Short description: Historical overview; structure; CPV and memory organization; I/O units and their structure; programming languages; application. *Commencing date:* August. *Duration:* 1 week. *Qualifications:* Technical high school certificate. English. *Deadline for application:* May. *Fees:* \$US 750.

Organizer: Department of Electrical and Electronics Engineering
Boğaziçi University
80815 Bebek
Istanbul, Turkey

Quantitative methods in management

Short description: Short courses on: statistical data analysis; forecasting; decision analysis for management; quality control; quantitative techniques for project management. *Commencing date:* February, March. *Duration:* 4-5 days. *Qualifications:* Degree in engineering, business or science. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 200-250 (room and board: \$US 250-300).

Organizer: Industrial Engineering Department
Boğaziçi University
80815 Bebek
Istanbul, Turkey

Systems analysis and design

Short description: The system life cycle approach to system development; stages in system development: feasibility study, definition, design, implementation and testing maintenance; managerial aspects; development of an automation system. *Commencing date:* July. *Duration:* 2 weeks. *Qualifications:* Familiarity with computers and

information systems, or degree in computer science, information systems, industrial engineering or in a related field. English. *Deadline for application:* April. *Fees:* \$US 1,000.

Organizer: Department of Computer Engineering
Boğaziçi University
80815 Bebek
Istanbul, Turkey

Técnicas para dirigir

Breve descripción: Cursos breves sobre: supervisión y conducción de grupos de trabajo; técnicas, promoción, supervisión, organización y dirección de ventas; comercio internacional; administración estratégica. *Fecha de iniciación:* Mayo-noviembre. *Duración:* 6-12 jornadas. *Calificaciones:* Español. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* \$US 200-250.

Organizador: IDEAS
Buenos Aires 479
11000 Montevideo, Uruguay

Management in action

Short description: Short courses on: general management; professional management in action; training of trainers; management development; principles and practice of supervision. *Commencing date:* January- September. *Duration:* 5 days-2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* \$Z. 720-2,800.

Organizer: Zimbabwe Institute of Management
Dzidzo House, McChlery Avenue
Harare, Zimbabwe