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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

# 1992

**GUIDE TO TRAINING OPPORTUNITIES  
FOR INDUSTRIAL DEVELOPMENT**

**(Twentieth issue)**

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

**(Vingtième édition)**

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

**(Vigésima 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 twentieth 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, 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.

The classification of courses is basically branch-oriented. This means that subjects dealing with an industrial function, but relevant only to a given industrial branch, will be included in the section referring to that branch. For example, a course on “Quality control in ammonium-urea plants” will appear in section “Chemical industries”. Similarly, an effort was made to put emphasis on the basic activity when classifying courses relevant to more than one industrial function: 3. a course on “Computer application in management” will be listed in section “Management and industrial administration”.

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 1992", 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 twenty-first issue of the *Guide*, which will cover courses offered in 1993, is scheduled to appear in late 1992.

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## Préface

Le présent *Répertoire* des possibilités de formation industrielle offertes aux cadres de pays en développement est la vingtième 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.

Les stages sont classés essentiellement par secteur industriel. Les sujets traitant d'une fonction industrielle, mais n'intéressant qu'un secteur industriel particulier, relèvent ainsi de la section concernant ce secteur. Par exemple, un stage sur le "contrôle de la qualité dans les usines d'ammoniac et d'urée" figurera dans la section "industrie chimique". De même, on s'est employé à mettre en évidence l'activité principale pour classer des stages se rapportant à deux fonctions industrielles ou plus : un stage sur "l'application de l'informatique à la gestion" aura donc sa place dans la section "gestion et administration industrielle".

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 des 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 1992", 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 vingt et unième édition du *Répertoire*, qui indiquera les possibilités de formation offertes pour l'année 1993, devrait être publiée à la fin de 1992.

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## Prefacio

La presente compilación de oportunidades de capacitación industrial para personal de países en desarrollo constituye la vigésima 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 de 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 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.

Los cursos se clasifican fundamentalmente por normas. Esto significa que los temas relativos a una función industrial, pero pertinentes tan sólo a una rama determinada, figurarán en la sección referente a esa rama. Por ejemplo, un curso sobre "Control de calidad en fábricas de amonio-urea" aparece en la sección "Industrias químicas". Análogamente, se procuró destacar la actividad básica al clasificar cursos concernientes a más de una función industrial; p. ej., un curso sobre "Aplicación de la informática en la gestión" figurará en la sección "Gestión y administración industrial".

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 1992", 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. *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 primera edición del *Repertorio*, que comprenderá los cursos que vayan a ofrecerse en 1993, está prevista para finales de 1992.

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## **Chapter I. Training opportunities offered by UNIDO**

UNIDO organizes group-training programmes for technical and managerial personnel in industry and industrial institutions in developing countries, in co-operation with Governments, firms and organizations having specialized knowledge and experience in a particular field. The training offered includes 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 UNIDO training activities scheduled for 1992, 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  
Department of Industrial Operations  
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. La formation proposée comprend 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 toutes les activités de formation de l'ONUDI prévues pour 1992 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  
Département des opérations industrielles  
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. La capacitación ofrecida incluye 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 actividades de capacitación de la ONUDI previstos para 1992 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 concierne 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 Perfeccionamiento de Recursos Humanos Industriales  
Departamento de Operaciones Industriales  
Organización de las Naciones Unidas para el Desarrollo Industrial  
P.O. Box 300  
A-1400 Viena (Austria)

## JANUARY/JANVIER/ENERO

### **Production management in manufacturing industry**

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

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

## MARCH/MARS/MARZO

### **Industrial utilization of medicinal plants**

*Short description:* Presentation and discussion covering the following aspects: assessment of medicinal plants and potential in developing countries; process technology—use of polyvalent pilot plants, standardization of methods of analysis, clinical assessment and regulatory requirements, marketing. *Duration:* 4 days. *Invited countries:* Interregional programme. *Qualifications:* Post-graduate degree and extensive experience in pharmaceutical industry. English.

*Host institution:* Inverni della Beffa Group  
Milan, Italy

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

*Short description:* Planning, execution and supervision 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:* 12 weeks. *Invited countries:* Regional programme for Asia. *Qualifications:* Engineers in railway maintenance and repair. English

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

*Venues.* Derby, United Kingdom  
Bangkok, Thailand

### **Seminar on technology and financing**

*Short description.* Lectures and discussions on issues relating to the financing of transfer, acquisition, adaptation and development of technology. *Duration:* 1 week. March or April. *Invited countries:* Regional programme for Latin America. *Qualifications.* University degree or extensive experience in matters related to the transfer, development, adaptation and financing of technology. Spanish.

*Host institution.* ALIDE  
Lima, Peru

### **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; 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, Zaporoshye, 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

### **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:* 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

### **Experimental workshop on high-temperature superconductivity—advanced activities**

*Short description:* The workshop will be held in the ICTM High Temperature Superconductivity Laboratory. Participants will take part in research experiments concerning the structural, optical and normal state and superconducting properties of superconducting samples. Experimental activity will aim at achieving original results which may be published in specialized journals. *Duration:* 8 weeks. *Invited countries:* Global. *Qualifications:* Post-graduate students with working experience in experimental techniques for the characterization of HTS materials.

*Host institution:* International Centre for Science and High Technology  
United Nations Industrial Development Organization  
and  
International Centre for Theoretical Physics  
International Atomic Energy Agency

*Venue:* Adriatico Guest House  
Grignano  
Trieste, Italy

### **Non-wood fibre pulping and papermaking**

*Short description:* Lectures on and discussion of a new process for non-wood fibre pulping and papermaking, with emphasis on oxygen pulping and bleaching, organosolv process, Bropulping, small-scale effluent treatment and paper coating. *Duration:* 1 week. *Invited countries:* Interregional programme. *Qualifications:* Degree in chemical engineering, chemistry or equivalent and experience in pulping and papermaking from non-wood fibrous raw materials. English.

*Host institution:* Paper Industrial Research Institute of the  
Ministry of Light Industry  
Beijing, China

### **Modern optical storage technology**

*Short description:* Methodology and practical training in the use of CD ROM and WORM, micro-CDS/ISIS software and INTIB databases; CD-ROM and WORM technology, structure of databases on CD ROM and WORM, retrieval software applications. *Duration:* 1 week. *Invited countries:* Interregional programme for INTIB national focal

points and nodes. *Qualifications:* University degree in information/informatics and/or 5 years of experience in information processing.

*Host institution:* Institute of Scientific, Technical and Economic Information  
Warsaw, Poland

### **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, delivery of training courses, training methods and techniques. *Duration:* 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**

### **Industrial project preparation, appraisal and financing**

*Short description:* Presentation and discussions of all aspects of investment project preparation and appraisal, such as investment project development cycle, market analysis, technical aspects of investment, financial analysis (investment profitability), economic appraisal, investment implementation, financing of investment projects, introduction to computer software for feasibility analysis (COMFAR); extensive case studies and short practical exercises. *Duration:* 4 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree in economics, business administration or engineering and at least 4 years of professional experience in the investment field. English.

*Host institution:* Warsaw School of Economics  
(former Central School of Planning and Statistics)  
Warsaw, Poland

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

*Short description:* Upgrade the knowledge and widen the experience of professionals responsible for the planning and coordination 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:* 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 coordination 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

### **Study tour in the cement industry**

*Short description:* Technical aspects of cement industry, raw materials, production management technologies, quality control, maintenance, energy conservation and energy saving. *Duration:* 3 weeks. *Invited countries:* Interregional programme. *Qualifications:* Senior development planners, policy and decision makers in cement industry or in a ministry/organization responsible for the development of cement industry. English.

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

## **JULY/JUILLET/JULIO**

### **New developments in high-yield pulping, secondary fibre and alkaline papermaking**

*Short description:* Lectures and discussions between participating countries about new developments in high-yield pulping, secondary fibre utilization and alkaline papermaking. *Duration:* 5 days. *Invited countries:* China, India, Indonesia, Myanmar, Thailand. *Qualifications:* Degree in chemical engineering, chemistry or equivalent and experience in pulping and papermaking. English.

*Host institution:* Forest Products Research and Development Institute  
Department of Science and Technology  
Laguna, Philippines

## **AUGUST/AOÛT/AGOSTO**

### **Fruit and vegetable processing**

*Short description:* Various subjects of fruit and vegetable technology, fruit and vegetable processing operations: mechanical processes, pasteurization, sterilization, canning, drying, cooling, freezing, packaging, quality control, biochemistry and microbiology of fruits and vegetables, marketing and economics. *Duration:* 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* University or equivalent academic background in food technology, nutrition, chemical or agricultural engineering; 1-5 years of experience. English.

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

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

*Short description:* Basic theory of welding, process 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; 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:* 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, Ukraine  
(with visits to Minsk, Leningrad, Zaporoshye, Kherson)

## SEPTEMBER/SEPTEMBRE/SEPTIEMBRE

### 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:* Diplôme d'ingénieur (ou équivalent), ayant une expérience pratique de 2 ans au moins et occupant un poste de cadre technique ou administratif. Préférence sera donnée aux candidats avec 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  
Cameroun

### 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, technology transfer and labour employment, financing industrial development, project preparation, project appraisal; field trip and workshop. *Duration:* 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:* 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



## **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:* Polygraph Contacta GmbH  
Leipzig, Germany

## **Modern information technology applications and networks**

*Short description:* Technical aspects, principles and advances in hardware and software applications related to teleinformatics, electronic mail and teleconferencing systems and computer networks; practical training in establishing on- and off-line linkages with UNIDO and commercial or public databases and networks. *Duration:* 10 days. *Invited countries:* Interregional programme for INTIB national focal points. *Qualifications:* University degree in informatics or extensive experience in personal computer applications in information processing/communication. English.

*Host institution:* Institute for Automated Systems  
Moscow, Union of Soviet Socialist Republics

## **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:* 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

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

*Short description:* Upgrading of knowledge and skills in industrial processing of medicinal herbs. *Duration:* 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. English.

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

OCTOBER/OCTOBRE/OCTUBRE

## **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

## NOVEMBER/NOVEMBRE/NOVIEMBRE

### High-yield hardwood and non-wood pulping

*Short description:* Lectures and discussion between participating countries on high-yield pulping of hardwoods and non-wood fibrous raw materials and high-grade non-wood and secondary fibres papermaking. *Duration:* 5 days. *Invited countries:* China, India, Indonesia, Philippines, Thailand. *Qualifications:* Degree in chemical engineering, chemistry or equivalent and experience in pulping and papermaking. English.

*Host institution:* Central Research Organization  
Ministry of Education  
Rangoon, Myanmar

### Integrated circuits design

*Short description:* Training course in integrated circuits design. *Duration:* 4 weeks. *Invited countries:* Arab countries. *Qualifications:* University degree and specialization in integrated circuit design. English.

*Host institution:* International Centre for Theoretical Physics  
Trieste, Italy

### Workshop on novel techniques in non-destructive testing

*Short description:* Basic theory, technical realization and application of three novel methods of remote monitoring of structural integrity and stability of different engineering complexes such as pipelines, high-pressure vessels, airplanes, bridges, towers, buildings and off-shore platforms. The areas of application of these three methods, namely laser measurements (interferometry, holography, speckle), infrared thermography and acoustic emission are vastly increasing and these methods can provide outstanding opportunities for overall surveillance (condition monitoring) which can be further verified by local check-ups using traditional methods (eddy currents, ultrasonic). Hands-on practical training and final discussion of concrete follow up projects. *Duration:* 10-12 days. *Invited countries:* Regional programme for South-East Asia. *Qualifications:* Technical university or equivalent; practical experience or R&D achievements; involvement in front-line technical activities in home country desirable in order to implement the acquired knowledge. English.

*Host institution:* SIRA  
Harwell Research Laboratories  
United Kingdom

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

**Advanced training in frontier areas of organic synthesis**

*Short description:* Advanced topics in chiral synthesis of organic molecules, biomimetic approach and enzyme model systems; novel synthons; reactive photochemical and other intermediates in the organic synthesis; target-oriented total synthesis of biologically active compounds and other topics. The course also includes a laboratory component for selected trainees. *Duration:* 2 weeks. *Invited countries:* Global. *Qualifications:* PhD students in organic synthesis or related field. English.

*Host institution:* International Centre for Science and High Technology  
United Nations Industrial Development Organization  
Jawaharlal Nehru Centre for Advanced Scientific Research  
Bangalore, India  
and  
Indian Institute of Science  
Bangalore, India

*Venue:* Department of Organic Chemistry  
Indian Institute of Science  
Bangalore 560 012, India

**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

**Fault tolerance software**

*Short description:* Upgrading the knowledge of industrial specialists in distributed real-time systems and fault tolerance. *Duration:* 2 weeks. *Invited countries:* Regional programme for Latin America and the Caribbean. *Qualifications:* University degree and extensive experience in industrial software. English.

*Host institution:* Technical University of Vienna  
Vienna, Austria

**Formation à la fonction maintenance**

*Brève description :* Dans le cadre de la Deuxième 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. *Durée :* 4 semaines. *Pays invités :* Programme régional pour les pays africains francophones. *Qualifications :* Ingénieurs et techniciens supérieurs responsables de la fonction maintenance des différents sous secteurs de l'industrie des PMD. Français.

*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 pour l'Afrique. *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. Français.

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

### **Railway track**

*Short description*. 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. English.

*Host institutions*. British Rail Training Centre  
Watford, United Kingdom  
and  
Railways Training Institute, Malawi

*Venues*. United Kingdom  
Malawi

### **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'ONU DI

### Capítulo II. Oportunidades de capacitación ofrecidas por instituciones distintas de la ONU DI

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

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

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

###### Formation en construction

*Brève description* : Matériaux de construction : béton — consistance, fluidité, résistance; mortier — fabrication des éprouvettes, résistance; ciment — finesse de mouture, durée de prise; liants hydrocarburés — teneur en eau d'une émulsion, pénétration et ramollissement bille-anneau; bétons asphaltiques — perméabilité, teneur en liant, composition, poids spécifique maximum apparent, essai; agrégats — compression statique, analyse macroscopique et microscopique. Génie civil : programmes informatiques appliqués aux calculs de stabilité; confort des bâtiments (thermique, acoustique). *Début du cours* : 15 février et 1er octobre. *Durée* : 6-8 semaines. *Qualifications* : Français, anglais. *Date limite d'inscription* : Formation en français : 2 mois avant la date de début; formation en anglais : 3 mois avant la date de début. *Droits d'inscription* : FB 40 000-85 000 par mois.

*Organisateur* : Centre d'études et de recherches de l'Institut supérieur industriel catholique du Hainaut (CERISICASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

###### 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

15/16/17

## Habitat économique et matériaux locaux

*Brève description* : Formation théorique globale sur la problématique de l'habitat économique dans les pays en développement; technologie spécifique des matériaux locaux; différents aspects de la gestion de projet; pratique de production et de construction. *Début du cours* : Mai. *Durée* : 8 semaines. *Qualifications* : Français, anglais. *Date limite d'inscription* : Janvier. *Droits d'inscription* : FF 15 000.

*Organisateur* : CRATerre — EAG  
BP 26 36  
38036 Grenoble Cedex 2, France

*Lieu* : Ecole d'architecture de Grenoble  
10, galerie des Baladins  
38100 Grenoble, France

## Construction materials technology and testing

*Short description*: Part 1: basic technology and standard tests; Part 2: advanced technology and testing. *Commencing date*: Part 1: June; part 2: September. *Duration*: Part 1: 13 weeks; part 2: 13 weeks. *Qualifications*: Some involvement with construction materials and knowledge of elementary mathematics, physics and chemistry (General Certification or Secondary equivalent). English. *Deadline for application*: —. *Fees*: Approximately £5,950.

*Organizer*: Laing Technology Group Ltd.  
P.O. Box 23  
Page Street  
London NW7 2ER, United Kingdom

## Intermediate technology for the production and use of building materials

*Short description*: Manufacture of building elements; construction; maintenance of production equipment. *Commencing date*: To be arranged. *Duration*: 2-6 weeks. *Qualifications*: Previous experience in building construction or building materials fabrication. English. *Deadline for application*: —. *Fees*: £500 per week.

*Organizer*: J. P. M. Parry & Associates Ltd.  
Intermediate Technology Workshops Ltd.  
Overend Road  
Cradley Heath, West Midlands B64 7DD, United Kingdom

## Chemical industries/Industrie chimique/Industrias químicas

### Chimie — biochimie

*Brève description* : Analyses physico-chimiques; chimie industrielle (composition chimique de savons — fabrication traditionnelle; analyse des eaux; examen physico-chimique des denrées alimentaires soumises à l'irradiation gamma; analyse des aliments (méthodes spectrales, électrophorétiques), nettoyage et désinfection dans l'industrie agro-alimentaire). *Début du cours* : Février et octobre. *Durée* : 6-8 semaines. *Qualifications* : Baccalauréat 2. Français, anglais. *Date limite d'inscription* : Formation en français : 2 mois avant le début du cours; formation en anglais : 3 mois avant le début du cours. *Droits d'inscription* : FB 40 (000)-65 (000) par mois.

*Organisateur* : Centre d'études et de recherches de l'Institut  
supérieur industriel catholique du Hainaut (C'ERISK'ASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

## 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:* BF 60,000-80,000 per month.

*Organizer:* Université catholique de Louvain  
Laboratoire de traitement des minerais  
2, place Ste Fabe  
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:* FB 35 000-38 000 par mois.

*Organisateur:* Centre belge d'étude de la corrosion (CEBELCOR)  
2, avenue Paul Héger-Grille  
1050 Bruxelles, 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:* August. *Duration:* 6 weeks. *Qualifications:* Civil engineers, pharmacists, biologists, chemical engineers. English. *Deadline for application:* —. *Fees:* Approximately BF 40,000 per month.

*Organizer:* University of Ghent  
Department of Environmental Sanitation  
Plateaustraat  
9000 Ghent, Belgium

## 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. *Deadline for application:* —. *Fees:* Approximately BF 40,000 per month.

*Organizer:* University of Ghent  
Faculty of Pharmaceutical Science  
Sint Pietersnieuwstraat  
9000 Ghent, Belgium

## Sciences et techniques verrillères

*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  
1b, avenue Général Michel  
6000 Charleroi, Belgique

### **Pulp and paper technology**

*Short description*: Combination of lectures and self-study course on different aspects of pulp and paper technology. *Commencing date*: To be arranged. *Duration*: 1-6 weeks. *Qualifications*: Degree in engineering or equivalent experience. English. *Deadline for application*: —. *Fees*: \$US 425 per day.

*Organizer*: OMNI Continental  
P.O. Box 91098  
West Vancouver  
British Columbia V7V 3N3, Canada

### **Chemical analysis of metals and plastics**

*Short description*: Equipment: quantitative and qualitative procedures; preparation of test pieces and calculation. *Commencing date*: To be arranged. *Duration*: 3 weeks. *Qualifications*: Professional qualifications. English, German. *Deadline for application*: 2 months before commencing date. *Fees*: To be arranged.

*Organizer*: Deutsche Technische Akademie GmbH  
P.O. Box 1670  
Bötticherstrasse 2  
3330 Helmstedt, Germany

### **Energy saving in injection moulding of plastics**

*Short description*: Energy usage in plastics processing; efficient use; machine/mould combination; materials; the process; energy measurements; costs; management. *Commencing date*: To be arranged. *Duration*: —. *Qualifications*: Professional qualifications. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: TNO Plastics and Rubber Research Institute  
P.O. Box 6031  
2600 JA Delft, Netherlands

### **Epoxy resins**

*Short description*: Synthesis of liquid and solid epoxy resins; analysis of epoxy resins; modifiers, diluents, hardeners, curing accelerators and flexibilizers; compositions and applications. *Commencing date*: To be arranged. *Duration*: 3 or 6 months. *Qualifications*: English, German, Russian. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Industrial Chemistry Research Institute  
ul. Rydygiera 8  
01-793 Warsaw, Poland

### **Integrated development programming for the refining, petrochemical and chemical industries**

*Short description*: Course using a specially developed computer system called MIDA (multiobjective interactive decision aid). *Commencing date*: 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  
Al. Mickiewicza 30  
30-059 Krakow, Poland

### Unsaturated polyester resins

*Short description:* Synthesis of general-purpose, flexible, chemically resistant, fire-retardant and varnish-type UP resins; analysis and quality evaluation; curing, hardeners, curing accelerators; compositions, processing, applications. *Commencing date:* To be arranged. *Duration:* 3 or 6 months. *Qualifications:* English, German, Russian. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Chemistry Research Institute  
ul. Rydygiera 8  
01-793 Warsaw, Poland

### Ceramics technology

*Short description:* Principles, processes and characterization of ceramic materials; use and importance of glassy materials in ceramic technology; glass ceramics; glazes and fired bodies. *Commencing date:* To be arranged. *Duration:* 12-36 weeks. *Qualifications:* Experience and supportive qualifications in the chosen disciplines. English. *Deadline for application:* 3 months before commencing date. *Fees:* £300 per week.

*Organizer:* Providence Group Services  
Grainger House, Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### Fertilizer technology

*Short description:* Production; planning and plant management; process control; ammonia synthesis; nitric acid and ammonium nitrate technology; instrumentation technology; pollution control; water preparation; health and safety; maintenance. *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

### Maintenance of chemical plants

*Short description:* Maintenance organization 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:* Graduate engineers or experienced managers in mechanical/engineering function. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* To be arranged.

**Organizer:** Training Manager  
ICI Chemicals and Polymers Ltd.  
Process Plant Services  
P.O. Box 1  
Billingham, Cleveland TS23 1LB, United Kingdom

#### **Water analysis and quality**

*Short description:* Bacteriological, chemical and physical analysis, field testing, laboratory management and design. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience. *English.* *Deadline for application:* —. *Fees:* £5,950.

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

#### **Water treatment**

*Short description:* Water treatment technology for processing, chemical fertilizer industries etc. *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

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

#### **Microelectronics—VLSI circuits and system design**

*Short description:* NMOS and CMOS integrated circuit design; IC system design; CAD tools for IC design (VLSI design tools are available, namely VTI software is being used extensively); testing IC's; design of an IC and fabrication by in-house Si foundry or outside. *Commencing date:* —. *Duration:* 12-18 months. *Qualifications:* English (some knowledge of French recommended). *Deadline for application:* —. *Fees:* BF 200,000 (plus BF 500,000 for IC fabrication if applicable).

**Organizer:** Laboratoire de microélectronique  
Université Catholique de Louvain  
Bâtiment Maxwell  
3, place du Levant  
1348 Louvain-la-Neuve, Belgium

#### **Telecommunications—cellular radio networks**

*Short description:* Planning and features of the automatic mobile telephone network. *Commencing date:* October. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—digital switching**

*Short description:* Modern digital switching systems. *Commencing date:* January. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—digital transmission**

*Short description:* Overview of modern digital transmission systems. *Commencing date:* January. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—external line plant**

*Short description:* All relevant issues, from planning to documentation of external line plant. *Commencing date:* March. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—financial planning and management**

*Short description:* Telecommunications financial planning and management. *Commencing date:* March. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—management of computerization of a telecom organization**

*Short description:* Overview of the computerization process. *Commencing date:* March. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—management of network modernization**

*Short description:* Network digitalization process. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—optical fibre systems**

*Short description:* Optical fibres, cables, systems; trends in technology; detailed explanations of how they all fit together. *Commencing date:* March. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—radio transmission and mobile systems**

*Short description:* Facilities, services and trends in fixed and mobile radio transmission systems and networks. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—telecommunications business management**

*Short description:* Business management problems in transition from government, department to modern market-oriented telecommunications enterprise. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—traffic measurements**

*Short description:* Options and techniques for effective traffic analysis, measurement and dimensioning. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Telecommunications—trunked mobile radio networks**

*Short description:* Planning, implementation, operation and maintenance of automatic trunked mobile telephone networks. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd.  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

### **Basic circuits of electronic equipment**

*Short description:* Circuits of rectifiers, amplifier with transistors, circuits with operational amplifier, constant current and voltage sources, electronic switches in information processing, logic circuits, signal memory and former counter and code transformer.

signal generators, electric power switches. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* German, English. *Deadline for application:* 2 months before commencing date. *Fees:* DM 5,000.

*Organizer:* Deutsche Technische Akademie GmbH  
P.O. Box 1670  
Bötticherstrasse 2  
3330 Helmstedt, Germany

### Components of electronics

*Short description:* Oscilloscopes—passive 2 and 4 poles, semiconductor diodes, bipole transistors, field effect transistors, photo semiconductors, semiconductors with special properties, thyristors. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* German, English. *Deadline for application:* 2 months before commencing date. *Fees:* DM 5,000.

*Organizer:* Deutsche Technische Akademie GmbH  
P.O. Box 1670  
Bötticherstrasse 2  
3330 Helmstedt, Germany

### Electrical measuring techniques

*Short description:* Basics of AC and DC technique, measuring of electric basic magnitudes, electromechanic and electronic measuring equipment, measuring ranges and uncertainty, direct and indirect measuring procedures, legal metrology. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* German, English. *Deadline for application:* 2 months before commencing date. *Fees:* DM 4,600.

*Organizer:* Deutsche Technische Akademie GmbH  
P.O. Box 1670  
Bötticherstrasse 2  
3330 Helmstedt, Germany

### Electrotechnical basics of electronics

*Short description:* Fundamental mathematics, DC, AC, danger of electric plants, electrical measuring techniques. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* German, English. *Deadline for application:* 2 months before commencing date. *Fees:* DM 5,000.

*Organizer:* Deutsche Technische Akademie GmbH  
P.O. Box 1670  
Bötticherstrasse 2  
3330 Helmstedt, Germany

### New telecommunications techniques

*Short description:* Digital microwave links, mobile communications, space communications, optical communications, data transmission and data networks, video communications, integrated services digital networks, digital switching, network engineering and planning, telematics. *Commencing date:* May. *Duration:* 8 weeks. *Qualifications:* Engineers with professional experience. English. *Deadline for application:* April. *Fees:* F 27 (XX)

*Organizer:* CESELEC  
39/43 rue Anatole France  
94300 Vincennes, France

### **Ship's electrician**

*Short description:* For young electricians who already work or are starting their careers in the maritime sector. *Commencing date:* May. *Duration:* 9 months (including basic study of the Italian language). *Qualifications:* Technical diploma. *Deadline for application:* March. *Fees:* To be arranged.

*Organizer:* Istituto Culturale Italiano (ICI)  
P.O. Box 91  
S. Benedetto Tr. (AP), Italy

### **Ship's radiotelegraph operator**

*Short description:* For technicians who wish to work as radiotelegraph operators and radiotelephonists in the maritime sector. *Commencing date:* May. *Duration:* 9 months (including basic study of the Italian language). *Qualifications:* Technical diploma. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* Istituto Culturale Italiano (ICI)  
P.O. Box 91  
S. Benedetto Tr. (AP), Italy

### **Video equipment maintenance techniques**

*Short description:* Technical training utilizing institutional/professional audiovisual equipment. *Commencing date:* March, May, August, October. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* Two months before commencing date. *Fees:* ¥27,500 per day.

*Organizer:* International Training, ICD  
Sony Corporation  
6-7-35 Kitashinagawa, Shinagawa-ku  
Tokyo 141, Japan

### **General telecommunication**

*Short description:* Analogue electronics (selected subjects, workshop); number systems; binary logic circuits; basic computer techniques; microprocessor architecture. Fundamentals of software: algorithms; data structures; programming examples; operating systems. Switching: network structures, plans and implementation; analogue and digital switching. Transmission: methods; basic parameters; media; line communication; multiplexing. Data communication: basics; modems; interfaces; protocols. Modern telecommunication: ISDN. *Commencing date:* February. *Duration:* 15 weeks. *Qualifications:* Knowledge of electronics and telecommunication networks. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Netherlands International Telecommunication Training  
Cooperation (NITTC)  
Koningin Julianaplein 2  
P.O. Box 30000  
2500 GA Den Haag, Netherlands

*Venue:* AT&T Network Systems Nederland  
Documentation and Training Centre  
Larenseweg 50  
P.O. Box 1168  
1200 BD Hilversum, Netherlands

## General transmission

*Short description:* Time division multiplex systems for speech and data; digital line transmission via metallic lines and optical fibres; digital branching systems; protective switching systems. *Commencing date:* January. *Duration:* 17 weeks. *Qualifications:* Knowledge of digital techniques, electronics and modern telecommunication networks. *English.* *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Netherlands International Telecommunication Training  
Cooperation (NITTC)  
Koningin Julianaplein 2  
P.O. Box 30000  
2500 GA Den Haag, Netherlands

*Venue:* AT&T Network Systems Nederland  
Documentation and Training Centre  
Larenseweg 50  
P.O. Box 1168  
1200 BD Hilversum, Netherlands

## Electronic engineering

*Short description:* Individual programmes: laboratory workshops and industrial projects supported by theoretical course modules according to personal background and career perspectives. *Commencing date:* January. *Duration:* 50 weeks. *Qualifications:* Degree in electronic engineering or equivalent. *English.* *Deadline for application:* 4 months before commencing date. *Fees:* f. 18,000.

*Organizer:* Eindhoven University of Technology  
Eindhoven International Institute (EII)  
P.O. Box 513  
5600 MB Eindhoven, Netherlands

## Public switching

*Short description:* Principles and organization of digital switching systems; daily operations on the system database; procedural maintenance of switching network and administrative processor; hardware of a digital switching system; system database; organization and management; advanced maintenance beyond formal procedures; system performance observations. *Commencing date:* September. *Duration:* 16 weeks. *Qualifications:* Knowledge of digital and computer techniques and of modern telecommunication. *English.* *Deadline for application:* June. *Fees:* To be arranged.

*Organizer:* Netherlands International Telecommunication Training  
Cooperation (NITTC)  
Koningin Julianaplein 2  
P.O. Box 30000  
2500 GA Den Haag, Netherlands

*Venue:* AT&T Network Systems Nederland  
Documentation and Training Centre  
Larenseweg 50  
P.O. Box 1168  
1200 BD Hilversum, Netherlands

## Telecommunication engineering

*Short description:* Individual programmes: laboratory workshops and industrial projects supported by theoretical course modules according to personal background and career

perspectives. *Commencing date:* January. *Duration:* 50 weeks. *Qualifications:* Degree in electrical engineering. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 18,000.

*Organizer:* Eindhoven University of Technology,  
Eindhoven International Institute (EII)  
P.O. Box 513  
5600 MB Eindhoven, Netherlands

### **Telecommunication engineering**

*Short description:* Introduction to telecommunication systems; numerical analysis; signal theory; Pascal and C programming; modulation and coding; (non) linear programming; queueing and switching systems; operation of telecommunication systems; report writing. *Industrial project:* Protocols, networks and routing; operating systems; transmission; radio systems; satellite communication; computer software package. *Commencing date:* January. *Duration:* 50 weeks. *Qualifications:* Degree in electrical engineering. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 18,000.

*Organizer:* Eindhoven University of Technology  
Eindhoven International Institute (EII)  
P.O. Box 513  
5600 MB Eindhoven, Netherlands

### **Bodies for electrical engineering**

*Short description:* Physical and mechanical properties of bodies; technical specifications and acceptance requirements; standardization and conformity certification. *Commencing date:* March. *Duration:* 2 months. *Qualifications:* Electrical engineers. English. *Deadline for application:* December 1991. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

### **Electrical insulating varnishes and enamels for electrical engineering**

*Short description:* Enamelled winding wires, impregnated insulating sleeveings, electrical insulating systems; application technique for electrical insulating varnishes and enamels; testing and evaluation of products. *Commencing date:* May. *Duration:* 3 months. *Qualifications:* Electrical engineers. English. *Deadline for application:* January. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

### **Electrical machines and computer-controlled electrical drives**

*Short description:* Testing, dynamics investigations and computer simulations of electrical machines and computer-controlled electrical drives. Training in an electrical machines factory. *Commencing date:* September. *Duration:* 3 weeks. *Qualifications:* Degree in electrical engineering. English. *Deadline for application:* May. *Fees:* To be arranged.



**Organizer:** Politechnika Gdańska  
Wydział Elektryczny  
Zakład Maszyn Elektrycznych  
ul. Majakowskiego 1/12  
80-952 Gdańsk, Poland

### **Environmental and corrosion protection of electrical equipment**

*Short description:* Environment effect on electrical equipment life and performance; materials choice, design evaluation and electrical equipment protection; testing of materials and products under environmental conditions and in accelerated tests. *Commencing date:* May. *Duration:* 3 months. *Qualifications:* Electrical engineers. *English.* *Deadline for application:* January. *Fees:* To be arranged.

**Organizer:** Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

### **High-voltage insulating technique**

*Short description:* Epoxide, silicone and glass-epoxide composites; production engineering, winding or casting techniques and attachment; testing and evaluation methods for composite materials. *Commencing date:* May. *Duration:* 3 months. *Qualifications:* Electrical engineers. *English.* *Deadline for application:* January. *Fees:* To be arranged.

**Organizer:** Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

### **Materials for electrical engineering**

*Short description:* Insulating materials in low- and high-voltage techniques, bodies; soft magnetic materials; sintered contact materials; choice; preparation; application; testing; evaluation; standardization; environmental and corrosion protection. *Commencing date:* March. *Duration:* 3 months. *Qualifications:* Electrical engineers. *English.* *Deadline for application:* December 1991. *Fees:* To be arranged.

**Organizer:** Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

### **Microprocessor-based controllers for aviation applications**

*Short description:* Microprocessor systems; design methods and aided design instruments; typical applications based on Aviation Institute's projects. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* University degree in electronics. *English.* *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

**Organizer:** Aviation Institute  
Al. Krakowska 110/114  
02-226 Warsaw, Poland

## **Numerical methods in the design of electrical machines and devices**

*Short description:* Electrotechnical technology and development. *Commencing date:* July.  
*Duration:* 2 months. *Qualifications:* Degree in engineering. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
Zakład Badań Podstawowych Elektrotechniki  
ul. Pozaryskiego 28  
04-703 Warsaw, Poland

## **Power system protection**

*Short description:* Research, design, application and testing in the Polish power system. Practical training and technical courses. *Commencing date:* To be arranged. *Duration:* Practical training: 1-3 months; technical courses: 2 weeks. *Qualifications:* Degree in engineering. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Institute of Power Technology  
ul. Mory 8  
01-330 Warsaw, Poland

## **Short-circuit and high-voltage tests of electrical apparatuses and switchboards**

*Short description:* Testing technology; series of tests in short-circuit testing station and in high-voltage laboratory. *Commencing date:* June, July. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 5 months before commencing date. *Fees:* To be arranged.

*Organizer:* Apparatus Institute  
Technical University of Gdańsk  
Gdańsk, Poland

## **Soft magnetic materials and sintered contact materials for electrical engineering**

*Short description:* Anisotropic and isotropic electrical sheets; thermo-magnetic treatment of stator and rotor irons for electric motors; preparation methods of sintered contact materials and their connecting performance testing. *Commencing date:* March. *Duration:* 2 months. *Qualifications:* Electrical engineers. English. *Deadline for application:* December 1991. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
Oddział Technologii i Materialoznawstwa Elektrotechnicznego  
ul. M. Skłodowskiej-Curie 55/61  
50-950 Wrocław, Poland

## **Switching performance testing**

*Short description:* Testing methods; test and measuring circuits and instruments; digital techniques in high-power laboratory. *Commencing date:* March, June, September. *Duration:* 8 weeks. *Qualifications:* Electrical engineers. English, French, German, Russian. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Power Technology  
ul. Mory 8  
01 330 Warsaw, Poland

## Testing and attestation of electrical apparatuses

*Short description:* Testing methods, measurements and requirements of IEC standards; practical testing and evaluation of test results. *Commencing date:* March. *Duration:* 2 months. *Qualifications:* English. *Deadline for application:* February. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
ul. Pozaryskiego 28  
04-703 Warsaw, Poland

## Testing of electrical machinery

*Short description:* Full prototype testing of machines up to 400 kW, especially induction motors; noise/vibration testing, thermal testing, torque curve; application of micro-computers in testing. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* English, Russian. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Instytut Elektrotechniki  
Zakład Maszyn Elektrycznych  
ul. Pozaryskiego 28  
04-703 Warsaw, Poland

## Electrical power engineering

*Short description:* Formal and hands-on modules covering all aspects of electrical power engineering. *Commencing date:* January, July. *Duration:* 30 weeks of modular courses. *Qualifications:* Degree in engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, United Kingdom

## Electronics and computers

*Short description:* Basic electrical and electronic theory, with a considerable amount of practical work, leading to a detailed coverage of modern electronic circuits used in control and computing equipment. *Commencing date:* April, September. *Duration:* 16-42 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £220 per week.

*Organizer:* Providence Group Services  
Grainger House, Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

## Gas turbine technology

*Short description:* Formal and hands-on modules covering all aspects of gas turbine maintenance and control. *Commencing date:* January, July. *Duration:* 25 weeks of modular courses. *Qualifications:* Degree in engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, United Kingdom

## Microelectronics and microprocessing systems engineering

*Short description:* Formal and hands-on modules covering all aspects of industrial electronics and microprocessor systems. *Commencing date:* January, July. *Duration:* 21 weeks of modular courses. *Qualifications:* Degree in engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, 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, Tirlémont, 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.* 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

## Technologie agro-alimentaire

*Brève description* : Méthodes de fabrication en brasserie, sucrerie, laiterie, fromagerie, meunerie et amidonnerie; analyses et contrôle des matières premières et des produits; techniques de conservation et de froid; fabrication de conserves et de jus de fruits; technologie du thé, café, coton, riz, huile de palme et d'arachide, sucre de canne. *Début du cours* : Octobre à juin. *Durée* : 1-3 mois. *Qualifications* : Français. *Date limite d'inscription* : 3 mois avant le début du cours. *Droits d'inscription* : FB 40 000 par mois.

*Organisateur* : HUYTROP Asbl  
c/o Institut supérieur industriel de la Communauté française  
3, rue Saint-Victor  
4500 Huy, Belgique

## Quality management for fish-processing plants

*Short description*: Formulation of a quality strategy, integrating quality, economy and suitable technology. *Commencing date*: May. *Duration*: 4 weeks. *Qualifications*: Leading staff of the fishing industry, researchers and experts formulating development strategies for the fishing industry. English. *Deadline for application*: April. *Fees*: Dkr. 34,500 (including board and lodging).

*Organizer*: The North Sea Centre  
P.O. Box 104  
9850 Hirtshals, Denmark

## Quality control in food processing

*Short description*: Quality assessment and standardization; organization of quality inspection; testing methods; computerized data processing. *Commencing date*: To be arranged. *Duration*: 1 month. *Qualifications*: Quality inspectors. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Hungarian Office for Standardization (MSZH)  
P.O. Box 24  
1450 Budapest 9, Hungary

## Refrigeration

*Short description*. Train technicians to operate in a sector for the preservation of food by freezing. *Commencing date*: May. *Duration*: 9 months (including basic study of the Italian language). *Qualifications*: Technical/industrial diploma. *Deadline for application*: March. *Fees*: To be arranged.

*Organizer*: Istituto Culturale Italiano (ICI)  
P.O. Box 91  
S. Benedetto Tr. (AP), Italy

## Dairy husbandry and milk processing

*Short description*: Dairy husbandry; milk procurement; small-scale milk processing; marketing of milk products; applied economics; training and extension methodology; rural development. *Commencing date*: January. *Duration*: 26 weeks. *Qualifications*: Diploma in agricultural veterinary science. English. *Deadline for application*: 4 months before commencing date. *Fees*: To be arranged.

*Organizer*: Dairy Training Centre Friesland  
Sanjesteed 4  
P.O. Box 85  
9062 ZJ Oenkerk, Netherlands

### **Data handling for tropical fisheries management**

*Short description:* Computer use and software: resource mapping, spatial and temporary pattern of fisheries, sampling, estimation of total catches, frame surveys; administration: organization of data collection and transfer, analysis and interpretation of data and catch effort, trends in catch, surplus production models, consequences for management, LF-analysis; presentation of data fisheries management. *Commencing date:* January. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree in biology or equivalent. English. *Deadline for application:* 3 months before commencing date. *Fees:* f. 4,500.

*Organizer:* International Agricultural Centre (IAC)  
Bureau International Training  
Lawickse Allee 11  
P.O. Box 88  
6700 AB Wageningen, Netherlands

### **International animal feed training programme**

*Short description:* Practice-oriented knowledge and skills in the supply and preparation of feed for poultry, pigs and other species of farm animals, with emphasis on the optimum utilization of locally available nutrients; includes nutritional, technical and economic/organizational aspects. *Commencing date:* February. *Duration:* 3 months. *Qualifications:* Diploma in agricultural science with major in animal production; direct and demonstrable links with the compound animal feed production. English. *Deadline for application:* December 1991. *Fees:* f. 2,520.

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

### **Quality assurance and marketing in food-processing enterprises**

*Short description:* To broaden participants' views on problems of food processing; to upgrade knowledge concerning the analysis of these problems and the selection of appropriate technology and to impart implementation techniques, focusing on quality assurance and marketing. *Commencing date:* August. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree in food technology, agricultural engineering, agricultural economics or related agricultural or management sciences. English. *Deadline for application:* May. *Fees:* f. 6,500.

*Organizer:* International Agricultural Centre (IAC)  
Bureau International Training  
Lawickse Allee 11  
P.O. Box 88  
6700 AB Wageningen, Netherlands

### **Farm collection and processing of milk**

*Short description:* Milky-way from farm to dairy, including all processes involved. *Commencing date:* May. *Duration:* 8 weeks. *Qualifications:* Engineers, technicians. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Institute for Food Processing Machinery  
ul. Otwocka 1 B  
03-759 Warsaw, Poland

### **Processing of animal bones into foodstuffs and fodders**

*Short description:* Conversion of slaughter house offals into foodstuffs and fodders by using specialized processing lines. *Commencing date:* January. *Duration:* 4 weeks. *Qualifications:* Engineers, technicians. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** Institute for Food Processing Machinery  
ul. Otwocka 1 B  
03-759 Warsaw, Poland

### **Tecnología de alimentos**

*Breve descripción:* Fundamentos específicos de la tecnología de alimentos y sus procesos industriales; técnicas de control de fabricación y calidad en sectores de industrialización de frutas y hortalizas; cereales y sus derivados; productos cármicos. *Fecha de iniciación:* Septiembre. *Duración:* 10 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* Abril. *Derechos de inscripción:* Ptas 200,000.

**Organizador:** Instituto de Agroquímica y Tecnología de Alimentos  
Jaime Roig, 11  
46010 Valencia, 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

### **Post-harvest technology**

*Short description:* Post-harvest technology of fruit, vegetables and root crops; comprehensive training in these two specialized areas covering the latest and appropriate technologies. *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  
Bedfordshire MK45 4DT, United Kingdom

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

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

*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

**Quality control in the leather and leather-processing industry**

*Short description*: Quality assessment and standardization; organization of quality inspection; testing methods; computerized data processing. *Commencing date*: To be arranged. *Duration*: 1 month. *Qualifications*: Quality inspectors. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Hungarian Office for Standardization (MSZH)  
P.O. Box 24  
1450 Budapest 9, Hungary

**Leather garments design, pattern-making and manufacture**

*Short description*: Creation, design, planning and execution of different men's and women's models. *Commencing date*: January, May, September. *Duration*: 9 weeks. *Qualifications*: English, French or Spanish. *Deadline for application*: 2 months before commencing date. *Fees*: \$US 4,500 (including accommodation).

*Organizer*: P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

**Leather goods design, pattern-making and manufacture**

*Short description*: Fashion design, pattern-making, assembly techniques, management techniques. *Commencing date*: February, June, October. *Duration*: 6 weeks. *Qualifications*: English, French or Spanish. *Deadline for application*: 2 months before commencing date. *Fees*: \$US 3,500 (including accommodation).

*Organizer*: P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

**Shoe design and pattern-making**

*Short description*: Design and pattern making techniques, design and cutting of different types of shoes. *Commencing date*: April, July, October. *Duration*: 1 month



*Qualifications:* English, French or Spanish. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,000 (including accommodation).

*Organizer:* P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

#### **Shoe manufacture**

*Short description:* Pantograph techniques—planning and serial production techniques of different types of shoes. *Commencing date:* February, May, September, November. *Duration:* 6 weeks. *Qualifications:* English, French or Spanish. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 3,500 (including accommodation).

*Organizer:* P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

#### **Tanning industry (finishing)**

*Short description:* Tanning process techniques—from crust to finished. *Commencing date:* March, June, October, December. *Duration:* 3 weeks. *Qualifications:* English, French or Spanish. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,000 (including accommodation).

*Organizer:* P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

#### **Tanning industry (crust)**

*Short description:* Tanning process techniques—from wet-blue to crust. *Commencing date:* February, May, September, November. *Duration:* 3 weeks. *Qualifications:* English, French or Spanish. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,000 (including accommodation).

*Organizer:* P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

#### **Tanning industry (wet-blue)**

*Short description:* Tanning process techniques—from raw skin to wet-blue. *Commencing date:* January, April, July, October. *Duration:* 3 weeks. *Qualifications:* English, French or Spanish. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 2,000 (including accommodation).

*Organizer:* P.I.S.I.E.  
P.O. Box 364  
Via S. Marco 13  
60035 Jesi (AN), Italy

#### **Leather quality control**

*Short description:* Physical and chemical properties of leather; chemical analysis of leather chemicals, tannins and tannery effluents. *Commencing date:* April, September.

*Duration:* 13 weeks. *Qualifications:* Degree in engineering or chemistry. English.  
*Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Centre for Leather and Shoe Research  
Mr. van Coothstraat 55  
P.O. Box 135  
5140 AC Waalwijk, Netherlands

### **Leather technology**

*Short description:* Tannery work; mechanical operations; pollution control; waste treatment; leather chemicals; finishing methods; tannery management. *Commencing date:* April, September. *Duration:* 13 weeks. *Qualifications:* Basic knowledge of leather technology and chemistry. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Centre for Leather and Shoe Research  
Mr. van Coothstraat 55  
P.O. Box 135  
5140 AC Waalwijk, Netherlands

### **Shoe modelling and designing**

*Short description:* Sizing systems; insole diagrams and design methods; pattern cutting; upper design methods; shoe fashions; grading upper and insole patterns; manufacturing of a shoe to the bottoming stage. *Commencing date:* April, September. *Duration:* 13 weeks. *Qualifications:* Basic knowledge of shoe technology. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* TNO Centre for Leather and Shoe Research  
Mr. van Coothstraat 55  
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 or longer. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

*Organizer:* The British School of Leather Technology  
The Leathersellers Centre  
Nene College  
Moulton Park  
Northampton NN2 7AL, 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:* The British School of Leather Technology  
The 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 or longer. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* £280 per week.

*Organizer:* The British School of Leather Technology  
The 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

### 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  
Vaardijkstraat 5  
8200 Bruges, Belgique

### Maintenance mécanique

*Brève description:* Rappels théoriques: différents organes de machines rencontrées en construction mécanique agricole — assemblages de moyeux, accouplements, embrayages, paliers, organes de transmission; moteurs à combustion interne — cycles théoriques et réels des moteurs à essence et des moteurs diesel. Travaux pratiques et stages en entreprises. *Début du cours:* Février, octobre. *Durée:* 1-3 mois. *Qualifications:* Baccalauréat 2. Français, anglais. *Date limite d'inscription:* Formation en français: 2 mois avant le début du cours; formation en anglais: 3 mois avant le début du cours. *Droits d'inscription:* FB 40 000-65 000 par mois.

*Organisateur:* Centre d'études et de recherches de l'Institut supérieur industriel catholique du Hainaut (CERISICASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

### Repair and maintenance of medium and small ships

*Short description.* Theory in ships, materials, engines, pumps, electronics, electricity, equipment, maintenance. Practical training in a medium ship-wharf; building of small vessels, ship-repair workshop, training on board a ship in the port. *Commencing date:* October. *Duration:* 3 months. *Qualifications:* Engineers and technicians or equivalent, with 3 years of relevant practical experience. English. *Deadline for application:* —. *Fees:* BF 35,000 per month.

*Organizer:* Antwerp Port Engineering and Consulting (APEC)  
6, Van Schoonbekeplein  
2000 Antwerp, Belgium

## Entretien et réparation du matériel ferroviaire

*Brève description* : Achat et stockage du matériel; activités dans les ateliers; surveillance des travaux; utilisation d'ordinateurs; formation pratique de personnel; principes économiques fondamentaux de l'entretien et de la réparation du matériel roulant. *Début du cours* : Janvier. *Durée* : 2 mois. *Qualifications* : Diplôme d'ingénieur ou équivalent, expérience pratique de deux ans au moins. Français, anglais. *Date limite d'inscription* : —. *Droits d'inscription* : FB 50 000 par mois.

*Organisateurs* : Société nationale des Chemins de fer belges (SNCB)  
85, rue de France  
1070 Bruxelles, Belgique et  
Régie du chemin de fer Abidjan-Niger en collaboration  
avec l'Union africaine des chemins de fer (UAC) Abidjan,  
Côte d'Ivoire et Bobo-Dioulasso, Burkina Faso

## Farm machinery for field crop production

*Short description*: Preventive maintenance organization; selection and operation of appropriate technologies; optimization of hand-operated and tractor-powered equipment; multi-farm use of agricultural machinery; environmental impact studies; health and safety precautions. *Commencing date*: July. *Duration*: 13 weeks. *Qualifications*: Diploma or bachelor of science; several years of experience. English, French, Spanish. *Deadline for application*: February. *Fees*: DM 10,335 (including study materials, protective clothing, study tours).

*Organizer*: Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

## Gestion des ateliers de mécanique agricole et ateliers liés à l'agriculture

*Brève description* : Planification et gestion des stations de réparation et d'entretien des machines agricoles, direction du personnel, aspects financiers de maintenance et réparation, direction du personnel, application de l'ordinateur. *Début du cours* : Juillet. *Durée* : 12 semaines. *Qualifications* : Directeurs et personnel des centres et d'ateliers de machinisme. Français, anglais. *Date limite d'inscription* : Février. *Droits d'inscription* : DM 12 032 (matériel d'enseignement, vêtement de travail, voyages d'études y compris).

*Organisateur* : Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Allemagne

## Irrigation par submersion

*Brève description* : Travaux sur terrain, activités en irrigation, maintenance et dépannage des groupes motopompes, vulgarisation et formation dans le périmètre irrigué. *Début du cours* : Juillet. *Durée* : 13 semaines. *Qualifications* : Techniciens engagés dans le secteur sol et eau. Français, anglais. *Date limite d'inscription* : Février. *Droits d'inscription* : DM 11 835 (matériel d'enseignement, vêtement de travail, voyages d'études y compris).

*Organisateur* : Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Allemagne

## Management of agricultural and related workshops

*Short description:* Workshop planning; parts management; health, safety and environmental measures; personnel management; efficient performance of machinery, microcomputers in project management, financial management and stock control. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Managers and other workshop professionals. English, French. *Deadline for application:* February. *Fees:* DM 12,032 (including study materials, protective clothing, study tours).

*Organizer:* Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

## Management of irrigation equipment

*Short description:* Irrigation engineering equipment: selection, maintenance and repair; surface sprinkler and trickle irrigation, field drainage, irrigation agronomy; health and safety precautions, environmental impact studies. *Commencing date:* July. *Duration:* 13 weeks. *Qualifications:* Diploma or bachelor of science, or several years of relevant experience. English, French. *Deadline for application:* February. *Fees:* DM 11,835 (including study materials, protective clothing, study tours).

*Organizer:* Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

## Performance testing of agricultural machinery

*Short description:* Evaluation of existing tractor power and tractor-powered machinery, description of tested machinery, reports on mechanical and functional reliability. *Commencing date:* July. *Duration:* 13 weeks. *Qualifications:* Test engineers, research workers, training experts. English. *Deadline for application:* February. *Fees:* DM 12,801 (including study materials, protective clothing, study tours).

*Organizer:* Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

## String gauge technique

*Short description:* Fundamental physics of string gauges; form and constructing procedures, applications, sensibility against environmental influences, preparation of test pieces, adhering of string gauges, technique of adhering on complicated workpieces, measuring chains, determining calibration faults. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Professional qualifications. German, English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* Deutsche Technische Akademie GmbH  
Böttcherstrasse 2  
Postfach 1670  
3330 Helmstedt, Germany

## Tracteurs, groupes diesel et véhicules de transport en agriculture et domaines liés

*Brève description:* Organisation et réalisation d'entretien préventif; diagnostic et test de composants, organisation d'un atelier et de mesures de reconditionnement. *Début du cours:* Avril. *Durée:* 13 semaines. *Qualifications:* Chefs de départements, enseignants, chefs d'ateliers. Français, anglais. *Date limite d'inscription:* Février. *Droits*

*d'inscription* : DM 10 032 (matériel d'enseignement, vêtement de travail, voyages d'études y compris).

*Organisateur* : Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Allemagne

### **Tractors, power units and automotive vehicles in agriculture and related fields**

*Short description*: Preventive maintenance organization, diagnosis and testing of component parts, organization of workshop and overhaul procedures, staff organization and training of personnel, workshop and equipment park logistics. *Commencing date*: April. *Duration*: 13 weeks. *Qualification*: Diploma or bachelor of science, or several years of relevant experience. English, French. *Deadline for application*: February. *Fees*: DM 10 032 (including study materials, protective clothing, study tours).

*Organizer*: Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

### **Application of electric resistance wire strain-gauge in investigations of machines**

*Short description*: Technology of electric resistance wire strain-gauge; design and production of sensors of mechanical quantities; measurement of mechanical quantities and structural strength; multi-point measurements; measurements and analysis of experimental data. *Commencing date*: September. *Duration*: 6 weeks. *Qualifications*: English. *Deadline for application*: 4 months before commencing date. *Fees*: To be arranged.

*Organizer*: PIMB  
ul. Napoleona 2  
05-230 Kobylka k/Warszawy, Poland

### **Calculs de résistance de constructions**

*Breve description* : Application de FEM dans les calculs des constructions mécaniques et aérospatiales; ordinateurs VAC-3600, PAFEC, IBM. *Début du cours* : A arranger. *Durée* : 3-4 semaines. *Qualifications* : Etudes polytechniques mécaniques. Français, anglais, polonais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Institut de l'Aviation  
Al. Krakowska 110/114  
02-256 Varsovie, Pologne

### **Computer-aided mechanical design**

*Short description*: Computer programming and technical calculations; practical approach and theory of temperature and stress-distribution calculation using finite element method; torsional vibrations of propulsion shafts; elastic mounting of engines; plain bearing calculations; computer-aided drafting. *Commencing date*: To be arranged. *Duration*: 4-6 months. *Qualifications*: English, Spanish, Russian. *Deadline for application*: To be arranged. *Fees*: To be arranged.

*Organizer*: Aviation Institute  
Department of Aircraft Engines  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

## Computer-aided testing machines

*Short description:* Methods of acquisitions and processing experimental data; multipoint static and dynamic measurements; analysis of dynamic process in domain of amplitudes; determining fatigue of structures. *Commencing date:* January. *Duration:* 1 month. *Qualifications:* English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* PIMB  
ul. Napoleona 2  
05-230 Kobylka k/Warszawy, Poland

## Emissions of diesel engines

*Short description:* Investigation of emissions depending on the characteristics of the engines; tests (ECE, USA-FREPA etc.); reduction of emissions. *Commencing date:* April. *Duration:* 2 months. *Qualifications:* English, German. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Institute of Aeronautics  
Department of IC Engines  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

## Engine testing

*Short description:* Systems for laboratory and stands testing of diesel and aircraft engines. *Commencing date:* To be arranged. *Duration:* 1-3 months. *Qualifications:* English, Russian. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Aviation Institute  
Department of Aircraft Engines  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

## Fatigue tests of the structure of aeroplanes

*Short description:* Aircraft load analysis; fracture mechanics; fatigue tests programmes; non-destructive tests. *Commencing date:* To be arranged. *Duration:* 1-2 months. *Qualifications:* Higher technical education. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

## Resonance testing of constructions

*Short description:* Programme elaboration, tests, data handling, flutter and dynamic tests. *Commencing date:* To be arranged. *Duration:* 1-2 months. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

## Service loads of mechanical constructions

*Short description:* Airframe flight testing; service loads testing of jet engines on test bench. *Commencing date:* May. *Duration:* 1-2 months. *Qualifications:* English, French. *Deadline for application:* January. *Fees:* To be arranged.

**Organizer:** Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Strain measurement**

*Short description:* Measurement and evaluation of statically and dynamically caused strains. *Commencing date:* May. *Duration:* 1 month. *Qualifications:* English, German, Russian. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

**Organizer:** Institute for Building Mechanization and Rock Mining  
Racjonalizacji 6/8  
02-673 Warsaw, Poland

### **Testing and study of combustion phenomena in piston engines**

*Short description:* Test stand and design of piston engines; measurement of torque, speed, temperatures; investigation of pressure traces during combustion; calculation of heat release. *Commencing date:* To be arranged. *Duration:* 4-6 months. *Qualifications:* English, Russian. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Aviation Institute  
Department of Aircraft Engines  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Testing of axial and radial compressors**

*Short description:* Methods of stand-testing of compressors of turbo-jet engines to determine the characteristic curves of compressors using modern techniques of computer registration and data treatment. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Institute of Aeronautics  
Department of Turbomachinery  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Turbocharged diesel engines with air cooling**

*Short description:* Characteristics; combustion and fuel injection; practical experience in laboratory with turbo-charged engines; development of high-speed diesel engines; research into reduction of emissions. *Commencing date:* July. *Duration:* 2 months. *Qualifications:* English, Russian. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Institute of Aeronautics  
Department of IC Engines  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Turbochargers**

*Short description:* Aerodynamic performance characteristics; computer-aided prediction of performance; test-stand operation; calibration of probes; computer graphic output. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* English, German. *Deadline for application:* —. *Fees:* To be arranged.



**Organizer:** Institute of Aeronautics  
Department of Turbomachinery  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Vibration de constructions mécaniques**

**Brève description :** Calculs de forme et des fréquences des vibrations propres en considération des conditions de bord, désignation des caractéristiques mécaniques choisies; ordinateurs VAC-3600 et PAFEC. *Début du cours :* A arranger. *Durée :* 3-4 semaines. *Qualifications :* Etudes polytechniques mécaniques. Français, anglais, polonais. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

**Organisateur :** Institut de l'Aviation  
Al. Krakowska 110/114  
02-256 Varsovie, Pologne

### **Welding of steel structures**

**Short description:** Welding of steel structures according to international standards ISO 3834 and 6213. *Commencing date:* October. *Duration:* 1 month. *Qualifications:* English, German, Russian. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

**Organizer:** Institute for Building Mechanization and Rock Mining  
Racjonalizacji 6/8  
02-673 Warsaw, Poland

### **Wind-tunnel tests**

**Short description:** Low- or high-speed wind-tunnel tests; balance tests; 2D/3D pressure distribution and flow visualization. *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* General knowledge of aerodynamics/fluid dynamics. English. *Deadline for application:* — *Fees:* To be arranged.

**Organizer:** Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Automotive engineering**

**Short description:** Gearbox transmission, engineering power units (petrol/diesel), body building, repair and maintenance, automotive electrics. *Commencing date:* To be arranged. *Duration:* 12-36 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* £350 per week.

**Organizer:** Providence Group Services  
Grainger House, Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### **Boat building**

**Short description:** All aspects of boat construction from lofting to launching. *Commencing date:* January, April, September. *Duration:* 48 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* £4,800.

*Organizer:* International Boatbuilding Training College  
Harbour Road  
Oulton Broad  
Lowestoft, Suffolk, NA32 3LZ, United Kingdom

### **Engineering**

*Short description:* Training and work experience in: precision machining; press tool design, making and fitting; basic sheet metalwork; mechanical and electrical maintenance and repairs; electrical/manual arc welding, gas welding, mig welding, tig welding. *Commencing date:* To be arranged. *Duration:* Up to 36 weeks. *Qualifications:* Basic mathematics. English. *Deadline for application:* 10 weeks before commencing date. *Fees:* £350 per week.

*Organizer:* Providence Group Services  
Grainger House, Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### **Industrial formation (graduate course)**

*Short description:* A practical engineering course for mechanical, electrical, electronic and other engineering disciplines covering such aspects as design, machine shop, welding, electronics, electrical power, CAD and CAM. *Commencing date:* January, April, September. *Duration:* 6-12 weeks. *Qualifications:* Degree in engineering or science or equivalent. English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,296.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

### **Industrial formation (undergraduate course)**

*Short description:* Practical aspects of design, machine shop, welding, electronics, electrical power, CAD and CAM. *Commencing date:* January, April, September. *Duration:* 12 weeks. *Qualifications:* "A" level or equivalent in science-based subjects. English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,296.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

### **Industrial formation in electronics (graduate course)**

*Short description:* Practical experience in mechanical and electronic engineering, electronics, CAD, CAM, fluid power, machine shop, welding. *Commencing date:* January, September. *Duration:* 6 weeks. *Qualifications:* Degree or equivalent in electronic/electrical engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* £750.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

## **Machining and CNC machining**

*Short description:* Theory and practice of milling, turning, workshop safety, CNC milling and turning and CNC machine programming. *Commencing date:* January, July. *Duration:* 25 weeks. *Qualifications:* Secondary or high-school certificate. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 2HU, 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, shaping machines. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* METCOM Training  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

## **Overseas engineers' industrial formation**

*Short description:* Practical aspects of design, machine shop, welding, electronics, electrical power, CAD and CAM; better understanding of the design and construction of equipment the engineer may be using, purchasing or maintaining. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Engineering degree. English. *Deadline for application:* 1 month before commencing date. *Fees:* £2,520.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

## **Overseas engineers' project design and manufacture**

*Short description:* Design and manufacture of a piece of engineering equipment. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* Engineering degree. English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,260.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

## **Project design and manufacture (graduate course)**

*Short description:* Design and manufacture of a piece of engineering equipment. *Commencing date:* January, April. *Duration:* 12 weeks. *Qualifications:* Degree in engineering or science or equivalent. English. *Deadline for application:* 1 month before commencing date. *Fees:* £984.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

### **Project design and manufacture (undergraduate course)**

*Short description:* Manufacture of a piece of engineering equipment utilizing skills achieved in a basic training course. *Commencing date:* January, April. *Duration:* 7 weeks. *Qualifications:* "A" level or equivalent in science-based subjects plus completion of industrial formation course for undergraduates. English. *Deadline for application:* 1 month before commencing date. *Fees:* £770.

*Organizer:* East Warwickshire College  
Professional Engineering Formation Division  
Lower Hillmorton Road  
Rugby CV21 3QS, United Kingdom

### **Railway trackwork engineering**

*Short description:* Fourth RIA Track Sector Course. *Commencing date:* June or July. *Duration:* 6 weeks. *Qualifications:* Graduate engineers with at least 5 years railway experience. English. *Deadline for application:* March. *Fees:* Approximately £5,000 (residential).

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

### **Rotating equipment maintenance**

*Short description:* Formal and hands-on modules covering operation, maintenance and control of rotating equipment. *Commencing date:* January, July. *Duration:* 24 weeks of modular courses. *Qualifications:* Degree in engineering or higher diploma. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, United Kingdom

### **Turbomachinery computer control**

*Short description:* Formal and hands-on modules covering all aspects of turbomachinery computer control. *Commencing date:* March, September. *Duration:* 12 weeks. *Qualifications:* Degree in engineering or higher diploma. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, United Kingdom

### **Welding**

*Short description:* Practical training in various forms of welding processes 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  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

## **Workshop and welding technology**

*Short description:* Workshop techniques and manufacturing, maintenance and repair of power and process plant. *Commencing date:* January, July. *Duration:* 12 weeks. *Qualifications:* Secondary or high school certificate. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, 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 and non-ferrous castings. *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

### **Fatigue and fracture mechanics for metallurgists**

*Short description:* Laboratory techniques; non-destructive testing; microscopy, analysis, design; optional modules include guided work on a project relevant to the trainees' job. *Commencing date:* July, December. *Duration:* 4 weeks, extendable to 10 weeks with optional modules. *Qualifications:* Graduate metallurgists or material scientists. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £2,980 (excluding optional modules).

*Organizer:* British Centre for Engineering and Scientific Training  
Brooklands Close  
Windmill Road  
Sunbury-on-Thames, Middlesex TW16 7DX, United Kingdom

### **Foundry technology**

*Short description:* Basic principles of metal founding; appreciation of the effect of casting design; material selection; finished products. Foundry principles will be examined 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  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

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

### Emballage

*Brève 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; environmental aspects of packaging. *Commencing date*: To be arranged. *Duration*: To be arranged. *Qualifications*: Professional qualifications. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: TNO Centre for Packaging Research  
P.O. Box 71  
2600 AB Delft, Netherlands

## Textile industries/Industrie textile/Industrias textiles

### 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* : 3 mois. *Qualifications* : Ingénieur chimiste ou textile; licencié en chimie; ingénieur civil. Français. *Date limite d'inscription* : 2 mois avant le début du cours. *Droits d'inscription* : FB 100 (00) par mois.

*Organisateur* : Centre de recherche et de contrôle lainier et chimique (CELAC)  
Zoning de Petit Rechain  
69A, avenue du Parc  
4645 Chaineux, Belgique

### 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 100 (00) par mois.

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

### **Industrie textile**

**Breve description :** Mécanique textile : filature, tissage et bonneterie, textile et informatique, mécanique et thermodynamique appliquées; chimie textile : matières premières et contrôles, les colorants, teinture-impression et apprêts, matières para-textiles (cuir et cuir-papier), matières synthétiques; gestion de l'entreprise textile. **Début du cours :** D'octobre à juin. **Durée :** 1-3 mois. **Qualifications :** Français. **Date limite d'inscription :** 3 mois avant le début du cours. **Droits d'inscription :** FB 40 000 par mois.

**Organisateur :** Institut supérieur industriel  
de la Communauté française  
3, Rue Saint-Victor  
4500 Huy, Belgique

### **Quality control of textiles and garments**

**Short description:** Quality assessment and standardization; organization of quality inspection; testing methods; computerized data processing. **Commencing date:** To be arranged. **Duration:** 1 month. **Qualifications:** Quality inspectors. English. **Deadline for application:** —. **Fees:** To be arranged.

**Organizer:** Hungarian Office for Standardization (MSZH)  
P.O. Box 24  
1450 Budapest 9, Hungary

### **Fashion design (master course)**

**Short description:** Theoretical and practical elements of fashion together with Italian designers. **Commencing date:** January. **Duration:** 11 months. **Qualifications:** English, after 4 months, also Italian. **Deadline for application:** 4 months before commencing date. **Fees:** Lit 20,000,000.

**Organizer:** Lomus Academy  
Strada 2, Edificio C2  
Milanofiori  
20090 Assago (Milano), Italy

### **Spécialisation mécanotextile et textile**

**Breve description :** Fibres textiles, filature du coton, filature de la laine et différentes fibres, mécanique textile, analyse textile et contrôle de la qualité, technologie du tissage, bonneterie, chimie et nobilitation, coupe et confection, informatique, marketing, organisation. **Début du cours :** Janvier. **Durée :** 8 mois (2 mois pour le cours de langue italienne, 6 mois pour le cours de spécialisation). **Qualifications :** Italien. **Date limite d'inscription :** 2 mois avant la date de début du cours. **Droits d'inscription :** Lit 220 000 000.

**Organisateur :** CERIT Spa.  
Rue Villanova di Sotto 9/A  
33170 Pordenone, Italie

## Garment CAD/CAM pattern design

*Short description:* General knowledge of 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:* Pattern engineers and technical staff concerned with product development. English. *Deadline for application:* —. *Fees:* f. 7,500.

*Organizer:* TNO Institute of Production and Logistics Research  
Clothing Research Department  
P.O. Box 541  
7300 AM Apeldoorn, Netherlands

## Garment technology

*Short description:* Quality; control; improvement and costs; assembling techniques; machinery; organization and 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 Institute of Production and Logistics Research  
Clothing Research Department  
P.O. Box 541  
7300 AM Apeldoorn, Netherlands

## Knitting and styling

*Short description:* Theoretical and practical training in product development in 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 Centre for Textile Research  
P.O. Box 6034  
2600 JA Delft, Netherlands

## Logistics in the textile industry

*Short description:* Logistics management and the primary process, logistics management and its place in the organization, production planning, master production schedule, material requirement planning, materials management and logistic systems, just-in-time and optimized production technology, production information systems, computer applications. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Production managers and technical staff. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Ten Cate Consultants  
P.O. Box 58  
7600 GD Almelo, Netherlands

## Manpower development in the textile industry

*Short description:* Organizational structures, workload and workload calculations, preparation of job descriptions, assessment of training requirements, selection of workers,



industrial training, skills analysis and task breakdown, role of the instructor, training instructors, training objectives and training aids, retraining adult workers, preparation of course books and hand-outs. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Production managers, training managers and training staff. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Ten Cate Consultants  
P.O. Box 58  
7600 GD Almelo, Netherlands

### **Sizing technology**

*Short description:* Raw materials, spinnfibres, yarns, yarn winding, warping, starch chemistry, native starch, modified starches, the application of sizing agents, the sizing process, size formulations, sizing of high-density warps, testing of sizing agents and sized yarn in the laboratory, sizing agents based on other natural and synthetic polymers, effects of the sizing process on weaving and finishing, environmental aspects of the application of sizing agents, improving the efficient use of sizing agents, recycling of sizing agents, solvent sizing, new technical developments. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Production managers and technical staff. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Ten Cate Consultants  
P.O. Box 58  
7600 GD Almelo, Netherlands

### **Textile**

*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 special end-uses. *Commencing date:* To be arranged. *Duration:* 5 days to 3 months. *Qualifications:* Professional qualifications. English or German. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Centre for Textile Research  
P.O. Box 6034  
2600 JA Delft, Netherlands

### **Textile technology and management**

*Short description:* Theory and practice of industrial organization and management; costing; maintenance; production control; quality control; statistics; trouble-shooting, operative section; training. Theory and practice of textile manufacturing processes: cotton and synthetics spinning; weaving; knitting; dyeing; finishing and printing. *Commencing date:* January, August. *Duration:* 16 weeks. *Qualifications:* Degree from a textile engineering college or equivalent. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
Ariensplein 3  
P.O. Box 1075  
7500 BB Enschede, Netherlands

### **Textile technology and management**

*Short description:* Theory and practice of industrial organization and management; costing, production and quality control, computer applications, statistics, trouble shooting, preventive maintenance, industrial air-conditioning, saving of energy, environmental

aspects, marketing, project evaluation; theory and practice of textile manufacturing processes: spinning, weaving, and processing; case studies and mill visits. *Commencing date*: To be arranged. *Duration*: 16 weeks. *Qualifications*: Production managers and technical staff. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Ten Cate Consultants  
P.O. Box 58  
7600 GD Almelo, Netherlands

### **Textile technology**

*Short description*: Fundamentals of textile science and textile technology; properties of natural and synthetic fibres; testing and quality assurance; yarn manufacture; knitting; weaving; non-wovens; printing, dyeing and finishing. The courses can be modified to suit any individual needs. *Commencing date*: October. *Duration*: 1-20 weeks. *Qualifications*: Basic qualifications in textile technology. English. *Deadline for application*: 2 months before commencing date. *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 35 000 par mois.

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

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

*Brève description*: Essences tropicales, techniques et matériels d'exploitation et de débit; fabrication des produits de base (sciages, panneaux, menuiserie, meubles). *Début du cours*: Janvier, septembre. *Durée*: 5 mois. *Qualifications*: Français. *Date limite d'inscription*: 2 mois avant le début du cours. *Droits d'inscription*: FF 28 000.

*Organisateur*: INB  
6, avenue de Saint-Mandé  
75012 Paris, France

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

*Brève description*: Connaissance du bois, panneaux, produits dérivés du bois, vente. *Début du cours*: Septembre. *Durée*: 3 mois. *Qualifications*: Français. *Date limite d'inscription*: Juillet. *Droits d'inscription*: FF 18 000.

**Organisateur :** INB  
6, avenue de Saint-Mandé  
75012 Paris, France

### **Timber drying**

*Short description:* Principles of timber drying followed by practical attachment in kiln operation. *Commencing date:* February, September. *Duration:* 2 months. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* £4,500.

*Organizer:* Head, Overseas Operations  
Timber Research and Development Association  
Hughenden Valley  
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

### **Timber engineering design**

*Short description:* Timber as an engineering material, stress grading, protection by design, worked examples. *Commencing date:* October. *Duration:* 2 months. *Qualifications:* Civil/structural engineering degree or equivalent. English. *Deadline for application:* April. *Fees:* £4,500.

*Organizer:* Head, Overseas Operations  
Timber Research and Development Association  
Hughenden Valley  
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

### **Wood preservation and deterioration**

*Short description:* Any specific topic according to client's requirements. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Biology Department  
Imperial College of Science, Technology and Medicine  
Prince Consort Road  
London SW7 2BB, United Kingdom

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

### **Matériaux composites**

*Briève 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 3 000-5 000 par mois.

*Organisateur :* CRIF  
200, rue du Chéra  
4000 Liège, 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 3 000-5 000 par mois.

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

## Modern methods and procedures in length testing

*Short description*: Basic principles; influences on measuring procedures; mechanical, electrical, pneumatic and optical measuring instruments; selection and control of testing equipment. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: Professional qualifications. German, English. *Deadline for application*: 2 months before commencing date. *Fees*: DM 6,000.

*Organizer*: Deutsche Technische Akademie GmbH  
Bötticherstrasse 2  
Postfach 1670  
3330 Helmstedt, Germany

## Offset printing

*Short description*: Film mounting, plate-making; setting of printing machines, colour printing. *Commencing date*: July. *Duration*: 11 months. *Qualifications*: Basic knowledge in printing. English. *Deadline for application*: March. *Fees*: To be arranged.

*Organizer*: Printpromotion GmbH  
P.O. Box 710864  
6000 Frankfurt 71, Germany

## Reproduction photography

*Short description*: Retouching of black and halftone, colour separation, masking techniques, photocomposing, introduction to electronic reproduction, densitometry. *Commencing date*: July. *Duration*: 11 months. *Qualifications*: Basic knowledge in reproduction. English. *Deadline for application*: March. *Fees*: To be arranged.

*Organizer*: Printpromotion GmbH  
P.O. Box 710864  
6000 Frankfurt 71, Germany

## Weighing techniques

*Short description*: Fundamental physics, construction of mechanical and electronic balances, weights and balances in commerce and precise mass definition, evaluation of weighing results. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: Professional qualifications. German, English. *Deadline for application*: 2 months before commencing date. *Fees*: DM 6,200.

*Organizer*: Deutsche Technische Akademie GmbH  
Bötticherstrasse 2  
Postfach 1670  
3330 Helmstedt, Germany

## Motivation for productivity

*Short description:* Philosophy and practice of worker motivation to improve productivity in the Japanese environment; insights and ideas which participants can adapt for use in their own countries. *Commencing date:* June. *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:* Technical training utilizing institutional/professional audiovisual equipment. *Commencing date:* March, May, August, October. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* ¥27,500 per day.

*Organizer:* International Training, ICD  
Sony Corporation  
6-7-35 Kitashinagawa, Shinagawa-ku  
Tokyo 141, Japan

## Airport maintenance

*Short description:* Inventory management, central panel; maintenance philosophy of Schiphol airport; maintenance planning and control; maintenance management theory; quality; airport projects. *Commencing date:* March. *Duration:* 6 weeks. *Qualifications:* Professional experience of 3 years. English. *Deadline for application:* February. *Fees:* f. 14,000.

*Organizer:* Airport Management Services B.V.  
Schiphol-Oost, Gebouw 70  
P.O. Box 7501  
1118 ZG Schiphol, Netherlands

## Graphic design

*Short description:* Typography; composition; chromatics; illustration; photography; silk-screen printing; extension oriented design; workshop on shopfloor management; desktop publishing. *Commencing date:* January, August. *Duration:* 18 weeks. *Qualifications:* Vocational training or professional experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 18,100.

*Organizer:* Graphic Media Development Centre (GMDC)  
Christoffel Plantijnstraat 1  
P.O. Box 20014  
2500 EA The Hague, Netherlands

## Housing, planning and building

*Short description:* Training and research programme in the areas of housing, planning and building, focusing on housing and urban development approaches relevant to low-income population in developing countries. *Commencing date:* January, August. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 14,000.

*Organizer:* Institute for Housing Studies (IHS)  
P.O. Box 1935  
3000 BX Rotterdam, Netherlands

### **Hydraulic engineering—branch a: river engineering and river structures**

*Short description:* Study branches *a*, *b* and *c* have a common package of basic engineering subjects such as hydraulics, groundwater flow, soil mechanics, statistics, engineering hydrology and informatics. Specific subjects for each branch (compulsory and elective) are then added. *Commencing date:* October. *Duration:* 11 months (additional 7 months for Master's programme). *Qualifications:* Degree in civil engineering or related science. English. *Deadline for application:* July. *Fees:* f. 7,500 (including field trips).

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

### **Hydraulic engineering—branch b: coastal, estuarial and harbour engineering**

*Short description:* Study branches *a*, *b* and *c* have a common package of basic engineering subjects such as hydraulics, groundwater flow, soil mechanics, statistics, engineering hydrology and informatics. Specific subjects for each branch (compulsory and elective) are then added. *Commencing date:* October. *Duration:* 11 months (additional 7 months for Master's programme). *Qualifications:* Degree in civil engineering or related science. English. *Deadline for application:* July. *Fees:* f. 7,500 (including field trips).

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

### **Hydraulic engineering—branch c: land and water development**

*Short description:* Study branches *a*, *b* and *c* have a common package of basic engineering subjects such as hydraulics, groundwater flow, soil mechanics, statistics, engineering hydrology and informatics. Specific subjects for each branch (compulsory and elective) are then added. *Commencing date:* October. *Duration:* 11 months (additional 7 months for Master's programme). *Qualifications:* Degree in civil engineering or related science. English. *Deadline for application:* July. *Fees:* f. 7,500 (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:* May. *Duration:* 6 weeks. *Qualifications:* Professionals in land and water development. English. *Deadline for application:* April. *Fees:* f. 7,500.

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

### **Print production**

*Short description:* Text production; desktop publishing; montage; photography and offset-plate making; offset printing and print finishing; graphic design and layout; workshop

on shopfloor management; silkscreen printing. *Commencing date:* January, August. *Duration:* 18 weeks. *Qualifications:* Secondary education and professional experience in the printing industry. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 17.725.

*Organizer:* Graphic Media Development Centre (GMDC)  
Christoffel Plantijnstraat 1  
P.O. Box 20014  
2500 EA The Hague, Netherlands

#### **Measurement and evaluation of noise and vibration affecting human beings**

*Short description:* The course will be led according to the international standards ISO 2204, ISO 2631 and ISO 5349. *Commencing date:* April. *Duration:* 1 month. *Qualifications:* English, German, Russian. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

*Organizer:* Institute for Building Mechanization and Rock Mining  
Racjonalizacji 6/8  
02-673 Warsaw, Poland

#### **Operation of nuclear reactors**

*Short description:* Reactor physics, heat transfer; reactor safety and practical training in exploitation of research reactor. *Commencing date:* September. *Duration:* 5 weeks. *Qualifications:* English, Russian. *Deadline for application:* March. *Fees:* To be arranged.

*Organizer:* Institute of Atomic Energy  
05-400 Swierk-Otwock, Poland

#### **Quality assurance in building design and construction**

*Short description:* Quality assurance of buildings through the system of functional requirements, standards, technical approvals and attestations as well as *in situ* diagnostics. *Commencing date:* October. *Duration:* 1 month. *Qualifications:* Civil engineers or other relevant degree. English. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

*Organizer:* Building Research Institute  
Filtrowa Street 1  
00-950 Warsaw, Poland

#### **Testing of materials by eddy current method**

*Short description:* Physical basics, magnetism, eddy currents basics; probes, equipment, investigated materials and products; principal applications, manuals, regulations, last achievements. *Commencing date:* To be arranged. *Duration:* 3-4 weeks. *Qualifications:* Technical high school graduates, engineers. English, German. *Deadline for application:* ... *Fees:* To be arranged.

*Organizer:* Institute of Precision Mechanics  
ul. Duchnicka 3  
00-967 Warsaw, Poland

#### **Hidrología subterránea**

*Breve descripción:* Ingeniería del comportamiento, estudio, prospección, captación, protección, planificación y gestión de las aguas subterráneas, y su interrelación con otras

fases del ciclo hidrológico y con el medio ambiente; recursos de agua; temas en relación con la ingeniería geológica, civil, industrial, minera, ambiental y agronómica. *Fecha de iniciación:* Enero. *Duración:* 6 meses. *Calificaciones:* Español. *Fecha límite de inscripción:* 4 meses antes del curso. *Derechos de inscripción:* Ptas 450,000.

*Organizador:* Curso Internacional de Hidrología Subterránea  
c/Beethoven 15, 6°  
08021 Barcelona, España

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

*Short description:* For professionals involved or seeking to be involved in developing and servicing housing schemes. Includes preparation and management of projects, water supply, sanitation, other services, buildings. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

### **Irrigation and water resources**

*Short description:* For engineers and other professionals involved or seeking to be involved in irrigation projects. Includes irrigation concepts and design, assessment and development of surface and groundwater. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Appropriate professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

### **Land resource survey and planning**

*Short description:* Principles of resource surveys; ground survey techniques; computing techniques; remote sensing; geographic information systems; map and report production; methods of utilizing results. *Commencing date:* August. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* £6,950.

*Organizer:* Ian MacDonald and Associates Ltd.  
36 Robertson Road  
Brighton, East Sussex BN1 5NL, United Kingdom

### **Process instrumentation and control**

*Short description:* Formal and hands-on modules covering all aspects of process instrumentation and control. *Commencing date:* January, July. *Duration:* 24 weeks of modular courses. *Qualifications:* Degree in engineering or higher diploma. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* John Brown Engineering Training  
Clydebank  
Dunbartonshire G81 1YA, Scotland, United Kingdom

### **Railway civil engineering**

*Short description:* Lecture/project-based course with practical attachments for experienced civil engineers working in maintenance and renewal of permanent way. *Commencing*



*date*. January. *Duration*: 12 weeks. *Qualifications*: Degree or equivalent in civil engineering and minimum of 3 years experience. English. *Deadline for application*: 2 months before commencing date. *Fees*: £8,500.

*Organizer*: Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

*Venue*: Watford, United Kingdom

### **Railway engineering**

*Short description*: Classroom studies, case studies and field visits; for experienced mechanical and electrical engineers involved in maintenance. *Commencing date*: January. *Duration*: 20 weeks (modular). *Qualifications*: Relevant degree or equivalent and minimum of 3 years experience. English. *Deadline for application*: 2 months before commencing date. *Fees*: £14,375.

*Organizer*: Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

*Venue*: Derby, United Kingdom

### **Roads maintenance management**

*Short description*. Efficient and effective maintenance of roads through improved technical knowledge and better management techniques. *Commencing date*: March. *Duration*: 12 weeks. *Qualifications*: Professional experience. 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  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

### **Road renovation and maintenance management systems**

*Short description*: Design: methods, aids and analytical techniques, evaluation, geotechnics; construction: planning, materials, plant, mobilization and use of materials; maintenance: failure investigation, setting of standards, instrumentation. *Commencing date*: June, November. *Duration*: 7 weeks. *Qualifications*: Engineering graduate or engineering work experience. English. *Deadline for application*: 6 weeks before commencing date. *Fees*: £8,000.

*Organizer*: British Centre for Engineering and Scientific Training  
Brookland's Close  
Windmill Road  
Sunbury on Thames, Middlesex TW16 7DX, United Kingdom

### **Science and technology policy**

*Short description*. Salient features of science and technology policy in developing countries particularly as regards its designing and execution; the role of technology in

development, i.e. technical progress, choice of technology and transfer of technology. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* University degree or relevant work experience in developing countries. English. *Deadline for application:* May. *Fees:* Approximately £4,000 (including living costs).

*Organizer:* David Livingstone Institute  
University of Strathclyde  
Livingstone Tower  
Glasgow, Scotland, United Kingdom

#### **Signalling technology (intermediate)**

*Short description:* Lecture-based course with practical sessions for signal engineers wishing to consolidate signalling principles and practice. *Commencing date:* October. *Duration:* 4 weeks. *Qualifications:* Degree or equivalent in electrical or electronic engineering and minimum of 3 years experience. English. *Deadline for application:* September. *Fees:* £4,500.

*Organizer:* Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

*Venue:* Doncaster, York, United Kingdom

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

*Short description:* Lecture-based course with practical sessions for experienced signal engineers leading to examination equivalent to that of Institute of Railway Signal Engineers. *Commencing date:* May. *Duration:* 2 + 2 weeks (with 2 weeks between modules). *Qualifications:* Degree or equivalent in electrical or electronic engineering and minimum of 3 years experience. English. *Deadline for application:* March. *Fees:* £5,000.

*Organizer:* Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

*Venue:* Railway Engineering School  
Derby, United Kingdom

#### **Soil mechanics for civil engineers**

*Short description:* Site investigation, soil testing in the field, laboratory testing, soil analysis, earth pressures, rock mechanics, foundation engineering and optional course modules. *Commencing date:* July, December. *Duration:* 3 weeks, extendable to 18 weeks with optional modules. *Qualifications:* Engineering graduate or engineering work experience. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £1,950 (without optional modules).

*Organizer:* British Centre for Engineering and Scientific Training  
Brooklands Close  
Windmill Road  
Sunbury-on-Thames, Middlesex TW16 7DX, United Kingdom

#### **Urban traffic and transport—policy and planning**

*Short description:* Relevance of existing methods of traffic and transport planning in developing countries; improvements and innovations. *Commencing date:* April.

*Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* March. *Fees:* £3,780.

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

#### **Waste water and irrigation**

*Short description:* Waste water treatment and disposal with particular reference to reuse for irrigation purposes. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

#### **Women, men and development**

*Short description:* For all those concerned with gender equality within social change. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Institute of Development Studies  
University of Sussex  
Brighton BN1 9RE, United Kingdom

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

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

#### Informatique appliquée

*Brève description* : Structure de l'ordinateur; programmation structurée; programmation modulaire; langage Pascal; algorithmique; validité des programmes; application PC. *Début du cours* : Février, octobre. *Durée* : 8 semaines. *Qualifications* : Baccalauréat + 2. Français, anglais. *Date limite d'inscription* : Formation en français : 2 mois avant le début du cours; formation en anglais : 3 mois avant le début du cours. *Droit d'inscription* : De FB 40 000 à 65 000 par mois suivant le module et la langue de formation.

*Organisateur* : Centre d'études et de recherches de l'Institut supérieur industriel catholique du Hainaut (CERISICASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

#### Mechatronics and its applications

*Short description*: Concepts and applications of mechatronics for promoting automation in the factory. *Commencing date*: May. *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

#### Computer use in business operations

*Short description*: The EDP concept; computer hardware, functions, software development and design; systems analysis; fourth generation programming languages; personal computer applications (spreadsheet, word-processing, databases, tools). *Commencing date*: March, September. *Duration*: 13 weeks. *Qualifications*: Bachelor's degree or equivalent in a relevant field of study. English. *Deadline for application*: January, July. *Fees*: f. 16,000.

*Organizer*: International Centre for Quality and Management Sciences (ICQMS)  
's-Gravendijkwal 10  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### Pascal programming with program examples

*Short description*. Basics of computer programming; Pascal ANSI description; some features of Turbo-Pascal; examples of programs for strength problems. *Commencing date* To be arranged. *Duration*. 1 month. *Qualifications*. Higher technical education. English. *Deadline for application*. To be arranged. *Fees*. To be arranged.

**Organizer:** Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Architectural and civil engineering AUTOCAD**

*Short description:* For architects, civil engineers using AUTOCAD (AEC) computer system. *Commencing date:* May, July, September, November. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,200.

**Organizer:** Training Manager  
East Kilbride and District Eng. G.T.A. Ltd.  
3 Law Place  
Nerston Industrial Estate  
East Kilbride G74 4PP, Scotland, United Kingdom

### **AUTOCAD**

*Short description:* Advanced system management using the AUTOCAD system and AUTOLISP programming. *Commencing date:* May, September, November. *Duration:* 4 weeks. *Qualifications:* Basic knowledge of CAD. English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,500.

**Organizer:** Training Manager  
East Kilbride and District Eng. G.T.A. Ltd.  
3 Law Place  
Nerston Industrial Estate  
East Kilbride G74 4PP, Scotland, United Kingdom

### **Business software**

*Short description:* Accounts; stock control; schedules; estimating; word-processing; integrated software. *Commencing date:* April, June, August, October. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £1,500.

**Organizer:** Training Manager  
East Kilbride and District Eng. G.T.A. Ltd.  
3 Law Place  
Nerston Industrial Estate  
East Kilbride G74 4PP, Scotland, United Kingdom

### **CADCAM**

*Short description:* Computer aided design and manufacture by AUTOCAD software interfacing to machine with post processor using Fanuc and Heidenheim systems. *Commencing date:* April, June, August, October. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £2,400.

**Organizer:** Training Manager  
East Kilbride and District Eng. G.T.A. Ltd.  
3 Law Place  
Nerston Industrial Estate  
East Kilbride G74 4PP, Scotland, United Kingdom

## Computer-aided design

*Short description:* CAD course structured to give a good theoretical/practical balance for architects and engineers. *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-integrated manufacturing (CIM)

*Short description:* Traditional methods and practical experience. Computer-based techniques introduce and develop an understanding of CIM which is reinforced by attachments of visits to working CIM environments. *Commencing date:* To be arranged.

*Duration:* 2-4 weeks. *Qualifications:* Degree in engineering or other related subject, with 2 years of industrial experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* £500-700.

*Organizer:* AMTRI  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, 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  
26 Dam Street  
Lichfield, Staffordshire WS13 6AA, United Kingdom

## Computer training

*Short description:* Basic to advanced-level training; all instruction on IBM compatible machines; business applications and word-processing. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* English. *Deadline for application:* ---. *Fees:* To be arranged.

*Organizer:* Teesside Transport Training Association  
Cargo Fleet Lane  
Middlesbrough, Cleveland, United Kingdom

## Energy/Energie/Energia

### 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

### **Thermique**

*Brève description* : Energie solaire : détermination des composantes directe, diffuse et réfléchi du flux solaire; les capteurs solaires; cellules photovoltaïques. Techniques du froid : machines frigorifiques à compression simple et étagée, choix fluide frigorigène, étude des différents composants, régulation. Air conditionné — génie climatique : notion de confort thermique, diagramme de l'air humide, étude d'installation de climatisation, séchage, lyophilisation. Bioénergies : biométhane : concepts et application; bioéthanol : ressources, production, compétition cultures énergétiques, vivrières, utilisation des résidus. *Début du cours* : Février, octobre. *Durée* : 6-8 semaines. *Qualifications* : Français, anglais. *Date limite d'inscription* : Formation en français : 2 mois avant le début du cours; formation en anglais : 3 mois avant le début du cours. *Droits d'inscription* : De FB 40 000 à 85 000.

*Organisateur* : Centre d'études et de recherches de l'Institut supérieur industriel catholique du Hainaut (CERISICASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

### **Production et distribution d'énergie électrique**

*Brève description* : Production d'électricité par énergie thermique ou par les énergies renouvelables; gestion de projet; visites d'installations. *Début du cours* : A arranger. *Durée* : 10 semaines. *Qualifications* : Français, anglais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Association momentanée CIFOP — FABRIMETAL  
1b, avenue Général Michel  
6000 Charleroi, Belgique

### **Industrial energy auditing**

*Short description*: Energy auditing in non-metallic industries; methods, instrumentation (portable energy-auditing kit), data processing, measures for energy conservation and technological optimization. *Commencing date*: March. *Duration*: 3 weeks. *Qualifications*: Degree in engineering. English. *Deadline for application*: January. *Fees*: \$US 1,400 (including board and lodging).

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

### **Energy management**

*Short description*: Concept and techniques of energy management at the plant level to enable participants to devise and implement appropriate measures for improved energy utilization and productivity in an enterprise. *Commencing date*: November. *Duration*:

3 weeks. *Qualifications:* English. *Deadline for application:* 3 months before commencing date. *Fees:* SUS 100.

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

### **Energy management for small- and medium-scale industries**

*Short description:* Managerial and technical aspects of energy management in small- and medium-scale industries, organized in cooperation with the Technology and Development Group of the Twente University. *Commencing date:* October. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree in engineering or economics. English. *Deadline for application:* August. *Fees:* f. 10,000.

*Organizer:* Netherlands International Institute for Management (RVB)  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Rural energy and environment**

*Short description:* Biomass energy technologies; photovoltaic solar energy applications; techniques of various possible sources for rural energy supply; rural multi-objective analysis and planning; problems of implementation and resource management. *Commencing date:* May. *Duration:* 1-8 weeks. *Qualifications:* Degree in relevant field of study. English. *Deadline for application:* March. *Fees:* f. 1,750-10,000.

*Organizer:* University of Twente  
Technology and Development Group  
Drienerlolaan 5  
P.O. Box 217  
7500 AE Enschede, Netherlands

### **Réseaux électriques Industriels et ruraux**

*Brève description :* Réseaux de distribution; choix techniques et économiques dans le domaine de la haute et basse tension; planification à court et à long terme; structures; contraintes; protections. *Début du cours :* Mars. *Durée :* 3 mois. *Qualifications :* Français, anglais. *Date limite d'inscription :* 3 mois avant le début du cours. *Droits d'inscription :* A arranger.

*Organisateur :* Politechnika Gdariska  
Instytut Elektroenergetyki i Automatyki  
ul. Majakowskiego 11/12  
80-233 Gdarisk, Pologne

### **Advanced control and instrumentation engineering**

*Short description:* Electronics; pressure, flow and temperature measurement; pneumatics; telemetering; power and logic systems; gas and water analysis; turbine supervision; auto control; data acquisition. Formal training, visits to manufacturers and short attachments to power stations. *Commencing date:* October. *Duration:* 24 weeks. *Qualifications:* Degree in engineering, with 3-5 years of experience. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom



### **Distribution engineering (132kV-11kV)**

*Short description:* Plant and equipment, planning and design, protection, metering and telecoms, UGC, OHL, safety and system operations, job administration and organization. *Commencing date:* January. *Duration:* 13 weeks. *Qualifications:* Degree or equivalent in electronic or electrical engineering, with at least 3 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* Approximately £400 per week.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Energy management**

*Short description:* The course introduces and explains the host organization's approach to energy reduction: it covers energy audits, practical application and modelling/optimization techniques. *Commencing date:* September. *Duration:* 3 weeks. *Qualifications:* Graduate engineers or managers responsible for energy reduction. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Training Manager  
ICI Chemicals and Polymers Ltd.  
Process Plant Services  
P.O. Box 1  
Billingham, Cleveland TS23 1LB, United Kingdom

### **Environmental management in the power sector**

*Short description:* The changing environmental climate, regulatory framework, formulating a policy, implications for new plant, assessment and control, acid deposition, greenhouse effect, educating the public. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* University degree in science or engineering, with 10 years of experience in the power sector. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Industrial and commercial installations engineering (240V-11kV)**

*Short description:* Electronics, control systems wiring regulations and practice, protection, lighting systems, switching, safety, equipment maintenance, telecoms, stores control, financial control and budgeting, job administration, supervisory aspects including communications and leadership. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Degree or equivalent in electronic/electrical engineering with at least 3 years of experience. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Plant life extension and modernization in the power sector**

*Short description:* Maintenance philosophy, plant performance and assessment, analyses of changes and inspection: condition monitoring, specific tests (heat consumption/efficiency), non-destructive tests. Formal training and attachments to plant-testing and

NDT units. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Degree in engineering and 10 years of relevant experience. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Power station chemistry**

*Short description:* Water and steam analysis and quality control, fuel oil sampling and analysis, gas analysis, environmental analysis and quality control, water treatment plant and make-up systems. Attachment to modern power station, study visits. *Commencing date:* September. *Duration:* 6 weeks. *Qualifications:* Degree in chemistry with a minimum of 5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Power station maintenance**

*Short description:* Organization and staffing, PF-fired boiler plant, steam turbine plant, coal, ash and dust handling plants, C and I, fire and electrical plant, protection, NDT, welding, maintenance planning, contract management. Formal training and attachment to a power station. *Commencing date:* June. *Duration:* 10 weeks. *Qualifications:* Maintenance staff with a minimum of 10 years of experience. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Power station management**

*Short description:* Organization and staffing, business planning, financial aspects, industrial relations, contract management, QA and reliability, design developments, PS management, safety. Formal training and study tours. *Commencing date:* October. *Duration:* 6 weeks. *Qualifications:* Degree in engineering with 15 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Power station operations**

*Short description:* Organization and staffing, PF-fired boiler plant, steam turbine plant, coal/ash/dust plant, safety systems, C and I, chemical, electrical, system OPS, PS planning, operations, protection. Formal training, study visits, on-the-job training. *Commencing date:* January, September. *Duration:* 10 weeks (on-the-job training will involve shift work). *Qualifications:* Degree in engineering with 10 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Power system operations (275-400 kV)**

*Short description:* System management and control, frequency control, plant scheduling and dispatch, network security, safety procedures, communication, OPS planning, outage planning, load flow/fault level studies, system economics. *Commencing date:* March. *Duration:* 6 weeks. *Qualifications:* Degree in engineering with 10 years of experience. English. *Deadline for application:* January. *Fees:* Approximately £800 per week.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Scientific services in the power sector**

*Short description:* Boiler combustion efficiency; flame stability; furnace fouling; metallurgy; corrosion of fireside, tubes, superheater, reheater; turbogenerator-heat transfer; vibration; stress creep. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Ph.D, degree in science or engineering with 10 years of experience. English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Simulator instructors for the power sector**

*Short description:* Formal training in instructional techniques, 3-week attachment to a simulator training unit and 5 weeks on-the-job training with a shift team in a power station. *Commencing date:* February. *Duration:* 10 weeks. *Qualifications:* Engineers employed or to be employed as simulator instructors. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Transmission operation and maintenance (275-400 kV)**

*Short description:* Design features, operation maintenance and testing of overhead lines, power cables, substations, transformers, switchgear, protection and telecommunications equipment. *Commencing date:* February. *Duration:* 6 weeks. *Qualifications:* Degree in engineering with 10 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* Approximately £400 per week.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

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

### **Resource conservation and environmental protection**

*Short description:* Insight into activities and measures undertaken in Japan to conserve her resources and to safeguard her environment; ideas which could be adapted to minimize dangers to the environment in participants' home country. *Commencing date:* January.

*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**

*Short description:* Selection of technologies; design, construction, operation and maintenance of anaerobic installations. *Commencing date:* June. *Duration:* 6 weeks. *Qualifications:* Degree in civil, chemical or agricultural engineering. English. *Deadline for application:* May. *Fees:* f. 4,000.

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 3015  
2601 DA Delft, Netherlands

### **Applied ecology**

*Short description:* Environmental resource management; ecosystem analysis; applicability of ecological principles in environmental management. *Commencing date:* June. *Duration:* 8 weeks. *Qualifications:* Degree in biology, chemistry, chemical engineering or related science. English. *Deadline for application:* May. *Fees:* f. 4,000.

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 3015  
2601 DA Delft, Netherlands

### **Environmental science and technology**

*Short description:* Training in methods for understanding and counteracting harmful effects on the environment (air, soil and water) of various kinds of pollution; industrialization, irrigation, fertilizers and pesticides, deforestation. *Commencing date:* October. *Duration:* 11 months (7 additional months for master's programme). *Qualifications:* Degree in biology, chemistry, chemical engineering or related science. English. *Deadline for application:* July. *Fees:* f. 7,500 (including field trips).

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 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:* Degree in civil, sanitary, mechanical or chemical engineering. English. *Deadline for application:* May. *Fees:* f. 4,000.

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 3015  
2601 DA Delft, Netherlands

## **Management of the environment**

*Short description:* Environmental problems of industrial companies in urban and rural areas; environmental elements of national policy formulation; environmental management in government. *Commencing date:* September. *Duration:* 13 weeks. *Qualifications:* Degree in economics, technical or social sciences. English. *Deadline for application:* July. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, 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 (7 additional months for master's programme). *Qualifications:* Degree in civil, sanitary, mechanical or chemical engineering. English. *Deadline for application:* July. *Fees:* f. 7,500 (including field trips).

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 3015  
2601 DA Delft, Netherlands

## **Sustainability in water supply and sanitation programmes in rural and peri-urban areas**

*Short description:* For senior national and expatriate staff in the water supply and sanitation sectors, to refresh and upgrade their knowledge about the sustainability aspects of managing integrated water supply and sanitation programmes. *Commencing date:* January, November. *Duration:* 3 weeks. *Qualifications:* Completed higher education in a relevant discipline. English. *Deadline for application:* 1 month before commencing date. *Fees:* f. 6,000.

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

## **Water quality management**

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

*Organizer:* International Institute for Hydraulic and  
Environmental Engineering (IHE)  
Postbus 3015  
2601 DA Delft, Netherlands

## **Community water supply and sanitation**

*Short description:* Social sciences; technology for rural and peri-urban water supply and sanitation; management. Most suitable for non-technologists and engineers involved in low-cost water supply and sanitation. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

## **Environmental management for development planning**

*Short description:* Environmental components of development planning process; agro-ecological zoning—a spatial framework for environmental applications; principles of environmental assessment. *Commencing date:* August. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* £6,500.

*Organizer:* Ian MacDonald and Associates Limited  
36 Robertson Road  
Brighton, East Sussex BN1 5NL, United Kingdom

## **Environmental problems**

*Short description:* Overview of all kinds of environmental problems in cities and regions of developing countries, of existing policies and mechanisms for tackling environmental problems in the context of economic development strategies; alert participants to past failures and indicate most promising remedies. *Commencing date:* July. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* June. *Fees:* £3,780.

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

## **Project preparation for environmental engineering**

*Short description:* Project planning: social, health, technical, economic, financial and institutional feasibility. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

## **Solid waste and environmental management**

*Short description:* The management of solid waste collection, treatment and disposal. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

## **Water and environmental management**

*Short description:* Water supply, waste management; options: environmental impact, wastewater, ground/surface water. *Commencing date:* October. *Duration:* 1 year. *Qualifications:* Degree in science or geology with relevant experience. English. *Deadline for application:* —. *Fees:* £8,200.

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

## **Water and waste engineering**

*Short description:* Water resources and supply, sanitation; options: water distribution, wastewater, irrigation. *Commencing date:* October. *Duration:* 1 year. *Qualifications:* Degree in engineering with relevant experience. English. *Deadline for application:* —. *Fees:* £8,200.

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

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

### **Industrial design**

*Short description:* Experiences of design together with Italian designers. *Commencing date:* January. *Duration:* 11 months. *Qualifications:* English (after the first 4 months, also Italian). *Deadline for application:* 3 months before commencing date. *Fees:* Lit 20,000,000.

*Organizer:* Domus Academy  
Strada 2, Edificio C2  
Milanofiori  
20090 Assago (Milano), Italy

### **Design engineering**

*Short description:* Design and draughting techniques, manufacturing methods, planning project control; design office management within the fields of mechanical, electrical/electronic engineering. *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**

### **Production-management information systems**

*Short description:* Analysis, design and implementation of production-management information systems. *Commencing date:* August. *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

### **Bibliographic information on development**

*Short description:* For professional library personnel from developing countries involved in the management and development of library services. *Commencing date:* August. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £1,665.

*Organizer:* Institute of Development Studies  
University of Sussex  
Brighton BN1 9RE, United Kingdom

### **Printing management and information technology**

*Short description:* Use of computers, telecommunications and reprographics to produce print-on-paper. *Commencing date:* July. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,200.

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

### **Statistics for development policy**

*Short description:* For producers and users of statistical data. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* £7,460.

*Organizer:* Institute of Development Studies  
University of Sussex  
Brighton BN1 9RE, United Kingdom

### **Economic concepts for statisticians**

*Short description:* Basics of an integrated statistical system; data dissemination, industrial classification (ISIC), surveys of household industries, survey and census design, microcomputer applications. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 6,070.

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

### **Economic statisticians**

*Short description:* Tools needed to design and implement economic surveys; frame development, questionnaire and table design, editing, coding and imputation. *Commencing*



*date: January. Duration: 2 1/2 months. Qualifications: English. Deadline for application: 2 months before commencing date. Fees: \$US 4,230.*

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

### **Information technology**

*Short description: Application of information technology to libraries and information centres. Commencing date: June. Duration: 8 weeks. Qualifications: English. Deadline for application: May. Fees: \$US 1,700.*

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

### **Library automation**

*Short description: A study of the current status of automation and network activities among libraries; problems involved in library automation. Commencing date: June. Duration: 8 weeks. Qualifications: English. Deadline for application: May. Fees: \$US 1,700.*

**Organizer:** University of Wisconsin-Milwaukee  
School of Library and Information Science  
Enderis Hall  
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: June. Duration: 8 weeks. Qualifications: English. Deadline for application: May. Fees: \$US 1,700.*

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

### **Online information retrieval**

*Short description. Organizational, operational and developmental aspects of online database services, including an overview of the online community. Commencing date: June. Duration: 8 weeks. Qualifications: English. Deadline for application: May. Fees: \$US 1,700.*

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

## **Theory and applications of management in economic statistical activities**

*Short description:* Skills to implement an efficient and effective system of economic statistics; concept of a computer processing and information system (CPIS). *Commencing date:* March. *Duration:* 2 months. *Qualifications:* English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 3,490.

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

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

### **Regional development**

*Short description:* The role of industry/tourism and agribusiness development in regional development; conducted under the auspices of the Shannon Development Company. *Commencing date:* October. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* August. *Fees:* £Ir 5,500.

*Organizer:* International Development Ireland Ltd.  
P.O. Box 15  
Industry Support Centre  
Shannon Free Zone  
Shannon, Co. Clare, Ireland

*Venue:* Shannon, Co. Clare, Ireland

### **Industrial planning and development**

*Short description:* Macroeconomic and sectoral planning and development; field trip; discussion of the participants' reports. *Commencing date:* April. *Duration:* 4 weeks. *Qualifications:* Senior officials responsible for industrial planning and development; university degree with 3 years of working experience. English. *Deadline for application:* February. *Fees:* —.

*Organizer:* International Development Center of Japan (IDCJ)  
Kyofuku Bldg., 9-11, Tomioka 2-chome, Koto-ku  
Tokyo 135, 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

### **Micro-economic policy analysis and information systems**

*Short description:* Micro-economic theoretical analysis, micro-economic policy analysis, economic organizations and the role of the state, accounting at firm sector and national level, transition topics (privatization, emerging capital markets). *Commencing date:* February. *Duration:* 6 weeks. *Qualifications:* Degree in economics. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 9,000.

*Organizer:* Erasmus University, Rotterdam (EUR)  
Growth Dynamics University Institute  
Faculty of Economic Sciences  
Burgermeester Oudlaan 50, UB 47  
P.O. Box 1738  
3000 DR Rotterdam, Netherlands

### **National planning, accounting and statistics**

*Short description:* Applied use of macro models, sector planning, input/output, social accounting, project analysis, public finance; computer training; workshop and paper on policy modelling. *Commencing date:* September. *Duration:* 13 weeks. *Qualifications:* Degree in economics, statistics, management, engineering or related field. English. *Deadline for application:* May. *Fees:* f. 15,000.

*Organizer:* Erasmus University, Rotterdam (EUR)  
Growth Dynamics University Institute  
Faculty of Economic Sciences  
Burgermeester Oudlaan 50, UB 47  
P.O. Box 1738  
3000 DR Rotterdam, Netherlands

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

*Short description:* Integrated rural development, water supply, sanitation, roads, transport, power, building. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

### **Industrial development planning—strategic and local policy**

*Short description:* Equip local authorities of least developed countries and appropriate national ministries and agencies to formulate and implement more effective policies. *Commencing date:* January. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* £3,780.

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

### **Industrial development policy**

*Short description:* Detailed examination of all restrictions in developing countries on (a) the expansion and diversification of manufacturing output and (b) the expansion of manufactured exports; issues of employment, training, gender and the environment.

*Commencing date:* January. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £3,780.

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

### **Planning with women for development**

*Short description:* Assist officials involved in the planning of low-income communities, to increase their capacity to relate public intention to performance, in the design, implementation and management of policies, programmes and projects: gender-aware approach in urban planning. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* Approximately £3,780.

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

### **Rural research and rural policy**

*Short description:* For planners and researchers in rural development. *Commencing date:* January. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* £7,460.

*Organizer:* Institute of Development Studies  
University of Sussex  
Brighton BN1 9RE, United Kingdom

### **Urban traffic and transport policy and planning**

*Short description:* Relevance of existing methods of traffic and transport planning in developing countries; identify those aspects of professional practice which require endorsement, modification or innovation. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* Approximately £3,780.

*Organizer:* Development Planning Unit  
University College London  
9 Endsleigh Gardens  
London WC1H 0ED, 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:* 3 months. *Qualifications:* University degree. English, French. *Deadline for application:* —. *Fees:* BF 50,000-70,000 per month.

**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 le 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

### **Industrial project cycle**

**Short description:** Computer applications; national, regional and sectoral planning; project development cycle; market; technical and financial analysis; socio-economic appraisal; industrial project planning; implementation management; computer-assisted feasibility studies; assignment on computer application to own project; reporting at (pre)feasibility level. *Commencing date:* January. *Duration:* 13 weeks. *Qualifications:* Degree in business administration, economics or related science. English. *Deadline for application:* 4 months before commencing date. *Fees:* f. 15,500.

**Organizer:** Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Financial management**

**Short description.** Greater understanding of all roles and functions of finance ministries, banks and public enterprises in the development of the economy. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Professional experience. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £9,125.

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

**Venue:** Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex, United Kingdom

### **Financial management in government**

**Short description:** For senior administrative and professional officers who have responsibility for policy formulation. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £5,000.

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

### **Housing project design and evaluation**

*Short description:* Provide the concepts and techniques necessary for the design, implementation, management and evaluation of housing projects and programmes. *Commencing date:* April. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* Approximately £3,780.

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

### **Loan administration**

*Short description:* For officials involved in loan sanctioning, supervision and recovery. *Commencing date:* April. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,500.

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

### **Managing complex projects**

*Short description:* For senior managers to enhance their expertise in managing complex projects. *Commencing date:* May. *Duration:* 8 weeks. *Qualifications:* Degree in engineering. English. *Deadline for application:* April. *Fees:* £10,347 (fully residential, including project attachment).

**Organizer:** Price Waterhouse Urwick  
Milton Gate  
1 Moor Lane  
London EC2Y 9PB, United Kingdom

### **Project management**

*Short description:* Project identification, appraisal and funding; planning, management and control of project life cycle. *Commencing date:* March. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,900.

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

## Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación

### Maintenance Industrielle

*Breve 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* : FB 80 000-110 000 par mois.

*Organisateur* : DGS International SA  
Jubileumlaan 75  
9000 Gand, Belgique

### Maintenance Industrielle

*Breve description* : Compétences nécessaires en mécanique, électricité, pneumatique et hydraulique, pour développer la polyvalence des mécaniciens ou électriciens de maintenance. Formation en centre et stages pratiques en entreprise. *Début du cours* : Novembre. *Durée* : 1 an. *Qualifications* : Qualifications professionnelles. Français, anglais. *Date limite d'inscription* : Septembre. *Droits d'inscription* : FF 59 000.

*Organisateur* : CODIFOR  
13, rue Blaise Pascal  
54320 Nancy Maxéville, France

### 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*: \$US 3,500 per week (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 biomedical equipment

*Short description*. Maintenance of X ray, electromedical and electromechanical 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

## Management of maintenance in industrial plants

*Short description:* For personnel with technical or managerial responsibilities for the operation and control of maintenance activities in industrial plants. Basic study of Italian language included in programme. *Commencing date:* May. *Duration:* 7 months. *Qualifications:* Degree or diploma in any technical field. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* Istituto Culturale Italiano (ICI)  
P.O. Box 91  
S. Benedetto Tr. (Ap.), Italy

## Maintenance

*Short description:* Machine maintenance, bearings, lubricating oils and greases, cleaning and finishing metals, machining processes, welding and soldering, all kinds of engines; mathematics and statistics, organization. *Commencing date:* January, August. *Duration:* 16 weeks. *Qualifications:* Degree from a technical college or equivalent. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
Ariensplein 3  
P.O. Box 1075  
7500 BB Enschede, Netherlands

## Corrosion monitoring and inspection in industry

*Short description:* Industrial corrosion problems, ramifications, economic penalties; making a case to management; methods and techniques available; integrated system; management of system; data reporting; incorporation of program in overall plant management system; inspection methods; intrinsic safety; failure analysis; case studies; data base; standard. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Technical qualification. 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

## Industrial corrosion and control

*Short description:* Corrosion basics; industrial economic penalties; forms of corrosion; metallurgy; control methods (design, material selection, environmental control, inhibitors, cathodic and anodic protection, coatings); failure analysis; standards and recommended practices; databases including computer; case studies. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Technical qualification. 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

## Maintenance and repair of laboratory equipment

*Short description:* Maintenance and repair of: general laboratory equipment, electrical systems, electronic instrumentation, chemical instrumentation. Optional support



modules include: instrument development projects, electronics, instrument systems, computing, special subjects. *Commencing date:* February, September. *Duration:* 5 months. *Qualifications:* 5 years of relevant experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* CTSE  
Department of Science  
Bristol Polytechnic  
Frenchay  
Bristol BS16 1QY, United Kingdom

#### **Maintenance and repair of light and heavy automotive vehicles**

*Short description:* Theoretical instruction and practical work in the repair and maintenance of a wide range of automotive vehicles. *Commencing date:* To be arranged. *Duration:* 2 weeks-1 year. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Teesside Transport Training Association  
Cargo Fleet Lane  
Middlesbrough, Cleveland, 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:* To be arranged.

*Organizer:* METCOM Training  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

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

#### **Human resources development (HRD) for 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:* 2-3 weeks. *Qualifications:* Top managers or managers responsible for HRD. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 5,000 (including accommodation, board, local travel and all materials).

*Organizer:* Human Resources Development International  
Hofzeile 3/14  
1190 Vienna, Austria

#### **Conseiller opérationnel en gestion**

*Brève description:* Economie, comptabilité générale, diagnostic de l'entreprise, comptabilité analytique d'exploitation, gestion financière, gestion informatisée, organisation commerciale, droit des entreprises. *Début du cours:* A arranger. *Durée:* 3 mois.

*Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Institut des affaires publiques et le Centre  
interuniversitaire de formation permanente  
1b, avenue Général Michel  
6000 Charleroi, Belgique

### **Diagnostiques d'entreprises ou de départements**

*Brève description* : Diagnostiques 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* : A arranger. *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**

*Brève 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. *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 le 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* : A arranger. *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. Exposés et études de cas adaptés au milieu économique et social familier 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 le 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 économique**

**Breve description :** Gestion d'entreprise (organisation du travail et de la production, gestion de stock, marketing); gestion sociale de l'entreprise; élaboration et gestion des dossiers; comptabilité, fiscalité; gestion informatisée; visites de banques et organisation de séminaires. Gestion de l'entreprise agricole : économie rurale, production, structure, crédit agricole, commercialisation, coopératives, coopération internationale, développement rural intégré; visites d'exploitation agricole. **Début du cours :** Février, octobre. **Durée :** 6-8 semaines. **Qualifications :** Baccalauréat + 2. Français, anglais. **Date limite d'inscription :** Formation en français : 2 mois avant le début du cours; formation en anglais : 3 mois avant le début du cours. **Droits d'inscription :** De FB 40 000 à 65 000 par mois.

**Organisateur :** Centre d'études et de recherches de l'Institut supérieur industriel catholique du Hainaut (CERISICASBL)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

### **Organisation et gestion des entreprises**

**Breve 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 :** A arranger. **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

### **Seminarios y visitas para dirigentes de centros de perfeccionamiento en gestión de América Latina**

**Breve descripción:** Seminarios y visitas en Bélgica y otros países europeos con el objeto de intercambiar experiencias con colegas europeos en el campo de la gestión. **Fecha de iniciación:** Septiembre. **Duración:** 3 meses. **Calificaciones:** Profesores o responsables de centros de perfeccionamiento en gestión. Francés. **Fecha límite de inscripción:** Marzo. **Derechos de inscripción:** La mayor parte es cubierta por una beca del gobierno belga. Participantes deben financiar el arriendo de un departamento en Bruselas.

**Organizador:** Fonds Léon A. Bekaert a.s.b.l.  
26, rue de la Loi  
Boîte 12  
1040 Bruxelles, Belgique

### **General management in Czechoslovakia, Hungary, Poland and the Soviet Union**

**Short description:** Introduction to modern management tools, with focus on marketing, financing and personal development as well as management of change in an evolutionary world. **Commencing date:** To be arranged. **Duration:** 20 days. **Qualifications:**

German, Russian. *Deadline for application:* —. *Fees:* DM 450 per day (including accommodation).

*Organizer:* Deutsche Management Akademie Niedersachsen GmbH  
Welfenallee 32  
3100 Celle, Germany

### Technology and development

*Short description:* Management training for engineers from developing countries, preparing them for return to their home countries after having completed their university degrees in Germany. *Commencing date:* January. *Duration:* 12 months. *Qualifications:* Degree from a German university. *Deadline for application:* September. *Fees:* —.

*Organizer:* Technical University Berlin  
Center for Technological Cooperation  
Strasse des 17. Juni 135  
1000 Berlin 10, Germany

### Building market-led organizations

*Short description:* Entrepreneurship, culture change, building self-achieving groups, taking responsibility for results, creating customer focus, building quality, preparing strategies for change, implementing change strategies, leadership. *Commencing date:* May. *Duration:* 4 weeks. *Qualifications:* Senior managers and organization consultants. English. *Deadline for application:* February. *Fees:* To be arranged.

*Organizer:* Irish Management Institute (IMI)  
Sandyford Road  
Dublin 16, Ireland

### Chief executive programme

*Short description:* Strategy development; organizational behaviour; strategic management in the following functional areas: marketing; finance and accounting; operations; personnel and a range of personal skills, including the use of computers. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* Chief executives/general managers of private, cooperative or parastatal organizations. English. *Deadline for application:* February. *Fees:* £1r 6,750 (including meals and accommodation).

*Organizer:* Irish Management Institute (IMI)  
Sandyford Road  
Dublin 16, Ireland

### Competitive banking management

*Short description:* Strategic and professional approach to banking today. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* Managers from commercial, central or development banks. English. *Deadline for application:* July. *Fees:* £1r 5,600.

*Organizer:* DEVCO  
Elm House  
Clanwilliam Court  
Lower Mount Street  
Dublin 2, Ireland

### Management development

*Short description:* Business strategy; marketing; finance and accounting; operations; managing people at work; personnel and personal skills. *Commencing date:* September.

*Duration:* 8 weeks. *Qualifications:* Senior and middle-level managers of private, cooperative or parastatal organizations. English. *Deadline for application:* July. *Fees:* £Ir 8,250.

*Organizer:* Irish Management Institute (IMI)  
Sandyford Road  
Dublin 16, Ireland

### **Management training**

*Short description:* Effective management of a functional or technical unit; new insights, ideas and practical knowledge. *Commencing date:* August. *Duration:* 7 weeks. *Qualifications:* English. *Deadline for application:* June. *Fees:* £Ir 7,850.

*Organizer:* DEVCO  
Elm House  
Clanwilliam Court  
Lower Mount Street  
Dublin 2, Ireland

### **Effective problem solving for production managers**

*Short description:* Identification and definition of critical work-related problems, problem resolution, and development and implementation of effective problem-solving measures to improve the performance of production systems and procedures. *Commencing date:* June. *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:* June. *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

### **Technology management**

*Short description:* Selection, assimilation, diffusion and use of technology in business and industrial enterprises. *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

### **Advanced consultancy skills**

*Short description:* Analysis of problem areas; tools for consultancy work; behavioural skills for consultancy; organization of consultancy work. *Commencing date:* May. *Duration:* 9 weeks. *Qualifications:* Degree in business administration, economics or related science. English. *Deadline for application:* March. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **General management for state enterprises**

*Short description:* Defining and analysing managerial problems of state involvement in economic activities; economic and political elements of national decision-making; management of government; introduction to business policy. *Commencing date:* May. *Duration:* 13 weeks. *Qualifications:* Degree in business administration, economics or related science. English. *Deadline for application:* March. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
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 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 30042  
3001 AL Rotterdam, Netherlands

### **Management development**

*Short description:* Organization and management techniques; logistics; statistics; cost accounting; financing; marketing; economics; computer application; sociology and psychology; managerial aspects of enterprise. *Commencing date:* January, August. *Duration:* 16 weeks. *Qualifications:* Degree from a technical or business college or equivalent. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

**Organizer:** International Institute for Technology and Management (IITM)  
Ariensplein 3  
P.O. Box 1075  
7500 BB Enschede, Netherlands

#### **Management for general managers**

**Short description:** Decision-making techniques; environmental scanning; introduction to business policy and strategy management; marketing; finance; manpower policies; organization development; managerial control. **Commencing date:** January. **Duration:** 13 weeks. **Qualifications:** Degree in business administration, economics or related science. **English.** **Deadline for application:** 4 months before commencing date. **Fees:** f. 15,500.

**Organizer:** Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

#### **Managerial control and management information systems**

**Short description:** Managerial control systems; financial control systems design; cost accounting; management information systems; design and implementation; computer hardware and software; decision support tools; behavioural aspects; practical assignments and reporting. **Commencing date:** May. **Duration:** 13 weeks. **Qualifications:** Degree in accounting, economics, business administration or related science. **English.** **Deadline for application:** March. **Fees:** f. 15,500.

**Organizer:** Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

#### **Organizational development and institutional strengthening**

**Short description:** Organizational and institutional analysis, planning for organizational strengthening, implementing and monitoring organizational strengthening and adaptation. **Commencing date:** March, September. **Duration:** 3 weeks. **Qualifications:** —. **Deadline for application:** 1 month before commencing date. **Fees:** f. 7,750.

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

#### **Project management and programme administration (local counterparts)**

**Short description:** To teach managers and future managers to recognize and define problems, and to find solutions that ensure effective action. **Commencing date:** January, April, August. **Duration:** 6-10 weeks. **Qualifications:** Completed higher education in a relevant discipline. **English or French.** **Deadline for application:** 1 month before commencing date. **Fees:** f. 24,800.

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

### **Sector technology and management**

**Short description:** Production and operations management (joint programme) including innovation, production process and equipment; automation quality control; sector technology and a practical assignment: (a) food processing (agri business system, food processing, raw materials, choice of technology, fieldwork assignment); (b) metal-products manufacturing (metal technology and processing, automation, robotics, choice of technology, fieldwork assignment). **Commencing date:** January. **Duration:** 13 weeks. **Qualifications:** Degree in engineering, business administration or related science. **English.** **Deadline for application:** 4 months before commencing date. **Fees:** f. 15,500.

**Organizer:** Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Advanced logistics management**

**Short description:** Skills and knowledge required to control effectively logistics activities and to ensure that each activity is properly coordinated and integrated so as to optimize organizational efficiency. **Commencing date:** April. **Duration:** 12 weeks. **Qualifications:** Senior managers. **English.** **Deadline for application:** 4 weeks before commencing date. **Fees:** Approximately £8,425.

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

**Venue:** Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

### **Advance management in government**

**Short description:** For administrative officers and specialist officers carrying policy-making responsibilities. Emphasis on administrative direction of departments/ministries. **Commencing date:** July. **Duration:** 4 weeks. **Qualifications:** English. **Deadline for application:** 8 weeks before commencing date. **Fees:** Approximately £2,200.

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



### **Computers in railway management**

*Short description:* A practical course for middle and senior management with little or no previous computer experience. *Commencing date:* March, November. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £4,000.

*Organizer:* Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

*Venue:* Crewe, United Kingdom

### **Computerized management techniques**

*Short description:* Theory and practice in computer application to management needs such as planning, marketing, cash control, product organization. *Commencing date:* To be arranged. *Duration:* 24 weeks with experience in basic use of computers; 32 weeks with no experience. *Qualifications:* Mathematical ability together with basic knowledge where possible of the use of spreadsheets. English. *Deadline for application:* 12 weeks before commencing date. *Fees:* £370 per week.

*Organizer:* Providence Group Services  
Grainger House  
Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### **Human resource management**

*Short description:* Manpower policies and strategies; employment conditions; industrial/employee relations; recruitment and selection; performance appraisal; records and systems; introduction of new technology; training and development. *Commencing date:* August. *Duration:* 12 weeks. *Qualifications:* Personnel managers/advisers and line managers with responsibility for the development of human resources. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Service Ltd.  
International Office  
73/75 Mortimer Street  
London W1N 8HX, United Kingdom

### **Infrastructure and facilities management**

*Short description:* To provide skills to managers involved with the maintenance function in facilities, organizations and buildings. *Commencing date:* July. *Duration:* 12 weeks. *Qualifications:* Related working experience. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £7,475.

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

*Venue:* Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

## Maintenance management

*Short description:* Skills for managers to reinforce the concept of planned maintenance of plant and equipment. *Commencing date:* April, September. *Duration:* 12 weeks. *Qualifications:* Relevant working experience. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £7,475.

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

*Venue:* Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

## Management analysis and consultancy skills

*Short description:* Analytical methods; consultancy skills; job-evaluation study. *Commencing date:* June. *Duration:* 14 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £6,200.

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

## Management and administration

*Short description:* Management and general office administration; personnel administration; health and safety in industry; quality control and inspection; fire precautions; toxic hazards; communications; computers; facsimile; methods of instruction and teaching practice; financial appraisal. *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

## Management and national development

*Short description:* For top civil servants and directors of public corporations; examine new attitudes, techniques and technologies for policy making. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,400 (residential).

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

## **Management development**

*Short description:* Communications: problem solving: leadership: motivation: computer skills; health and safety. *Commencing date:* January, April, July. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £300 per week

*Organizer:* Teeside Transport Training Association  
Cargo Fleet Lane  
Middlesbrough, Cleveland, United Kingdom

## **Management development for women**

*Short description:* Management training for women in the public sector. *Commencing date:* May. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,400.

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

## **Management for engineers and scientists**

*Short description:* Management skills and approaches, with emphasis on managing people. *Commencing date:* July, October. *Duration:* 3 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Training Service Ltd.  
International Office  
73/75 Mortimer Street  
London W1N 8HX, United Kingdom

## **Management information systems**

*Short description:* For executive and administrative managers who have responsibility for determining, evolving and implementing management information systems. *Commencing date:* February, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £7,150.

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

## **Management of production**

*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:* 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  
73/75 Mortimer Street  
London W1N 8HX, United Kingdom

### **Management of public records**

**Short description:** For officials involved in maintaining all types of public records or archives: health records, education, personnel, land ownership etc. **Commencing date:** January. **Duration:** 12 weeks. **Qualifications:** English. **Deadline for application:** 8 weeks before commencing date. **Fees:** Approximately £5,300.

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

### **Management of public sector enterprises**

**Short description:** Understanding and appreciation of good general management practice for senior managers working in public enterprises in overseas countries. **Commencing date:** October. **Duration:** 12 weeks. **Qualifications:** English. **Deadline for application:** 8 weeks before commencing date. **Fees:** Approximately £5,000.

**Organizer:** Royal Institute of Public Administration  
International Services  
Regent's College  
Inner Circle  
Regent's Park  
London NW1 4NS, 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:** Managers responsible for the development and implementation of strategies aimed at applying NT and MIS. English. **Deadline for application:** 4 weeks before commencing date. **Fees:** To be arranged.

**Organizer:** Industrial Training Service Ltd.  
International Office  
73/75 Mortimer Street  
London W1N 8HX, United Kingdom

### **Management training and development**

**Short description:** Styles of supervision; giving and receiving instruction; developing motivation; grievances and discipline; management of quality. **Commencing date:** To be arranged. **Duration:** 12-36 weeks. **Qualifications:** English. **Deadline for application:** 8 weeks before commencing date. **Fees:** £400 per week.

**Organizer:** Providence Group Services  
Grainger House  
Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### **Manpower budgeting and staff inspection**

*Short description:* To build up knowledge and skills from a foundation of management theory leading to exercising practical skills of staffing and staff inspection. *Commencing date:* October. *Duration:* 10 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,200.

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

### **Personnel management**

*Short description:* Basic training in the principles and practice of personnel management. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £4,320.

*Organizer:* Don Macdonald  
Thames Valley College  
Business Training Services  
Wellington Street  
Slough, Berkshire SL1 1YG, United Kingdom

### **Personnel management**

*Short description:* For senior officers responsible for personnel management in government departments or public authorities. *Commencing date:* January, May, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,800.

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

### **Procurement and materials management**

*Short description:* For directors and senior managers in the private and public sectors who have or will have involvement in strategic planning in procurement and materials management, and responsibility for the professional development and supervision of middle managers. *Commencing date:* July. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £4,300.

*Organizer:* Institute of Purchasing and Supply  
Easton House  
Easton on the Hill  
Stamford, Lincolnshire PE9 3NZ, United Kingdom

*Venue:* Bournemouth, United Kingdom

### **Procurement for development projects**

*Short description:* Skills for officers responsible for the management of procurement within major projects. *Commencing date:* April. *Duration:* 4 weeks. *Qualifications:* Relevant

working experience. English. *Deadline for application:* 4 weeks before commencing date. *Fees:* Approximately £4,200.

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

*Venue:* Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

### **Public sector management**

*Short description:* Policy formulation, with emphasis on practical approach to solving administrative problems. *Commencing date:* February. *Duration:* 12 weeks. *Qualifications:* Senior public service administrators. English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £5,300.

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

### **Purchasing and materials management**

*Short description:* For middle management and senior personnel with responsibilities for purchasing goods and services, and for management of stores. *Commencing date:* March, June, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £5,850.

*Organizer:* Institute of Purchasing and Supply  
Easton House  
Easton on the Hill  
Stamford, Lincolnshire PE9 3NZ, United Kingdom

*Venue:* Bournemouth, United Kingdom

### **Railway costing and financial management**

*Short description:* Systems and techniques in business-lead railways for middle and senior managers. *Commencing date:* June. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £6,300 (all inclusive).

*Organizer:* Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

### **Railway operating and commercial management**

*Short description:* Lecture- and practical-attachment-based course for middle management in operating and commercial departments. *Commencing date:* May. *Duration:* 13 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £10,700 (all inclusive).

**Organizer:** Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom  
**Venue:** Crewe and Westbury, United Kingdom

#### **Senior management**

**Short description:** The practice of management: practical case-study-based programme, designed to extend upon the knowledge held by the participants; for managers moving to a senior appointment. **Commencing date:** To be arranged. **Duration:** 3 weeks. **Qualifications:** Managerial experience. English. **Deadline for application:** To be arranged. **Fees:** Approximately £4,000 (fully residential).

**Organizer:** BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

#### **Site management (certificate and diploma)**

**Short description:** Two courses at intermediate and senior level giving practical training in construction management. **Commencing date:** July (certificate); September (diploma). **Duration:** 12 weeks (certificate); 10 weeks (diploma). **Qualifications:** Relevant working experience. English. **Deadline for application:** 4 weeks before commencing date. **Fees:** Approximately £7,475.

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

**Venue:** Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

#### **Strategic management in railways**

**Short description:** Seminar-based course for very senior managers. **Commencing date:** October. **Duration:** 6 weeks. **Qualifications:** English. **Deadline for application:** 6 weeks before commencing date. **Fees:** £8,850 (all inclusive).

**Organizer:** Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

**Venue:** Bath, United Kingdom

#### **Supervisory management in stores and purchasing**

**Short description:** For personnel who have or will have supervisory responsibilities in the fields of purchasing goods and services and of management of stock. **Commencing date:** September. **Duration:** 12 weeks. **Qualifications:** English. **Deadline for application:** 1 month before commencing date. **Fees:** £5,850.

**Organizer:** Institute of Purchasing and Supply  
Easton House  
Easton on the Hill  
Stamford, Lincolnshire PE9 3NZ, United Kingdom

**Venue:** Bournemouth, United Kingdom

### **Supply and materials management**

*Short description:* Expand the skills of senior and middle managers in developing supply systems and procedures. *Commencing date:* March, July, September. *Duration:* 12 weeks. *Qualifications:* Relevant working experience. 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  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

### **Women managers in technology for development**

*Short description:* For women with management skills involved in community activities for the improvement of infrastructure. *Commencing date:* October. *Duration:* 12 weeks. *Qualifications:* Relevant working experience. English. *Deadline for application:* —. *Fees:* £5,950.

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

### **Work-study practitioners**

*Short description:* Work measurement, method study and systems improvement, organizational effectiveness. *Commencing date:* Throughout the year. *Duration:* 30 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

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

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

#### **Zones franches et développement**

*Brève description :* Exposé introductif et visite du port d'Anvers, étude et prospection; prise en charge par la capitainerie du port afin d'être confronté dans la pratique avec les systèmes appliqués; séances d'information complémentaires à la Direction des douanes et accises à Bruxelles. *Début du cours :* Toute l'année sauf juillet et août. *Durée :* 1-2 semaines (éventuellement 1-2 mois). *Qualifications :* Niveau universitaire. Français, anglais. *Date limite d'inscription :* —. *Droits d'inscription :* FB 30 000 à 40 000 par mois.

*Organisateur :* Havenbedrijf van de Stad Antwerpen  
Stadhuis  
2000 Anvers, Belgique



### **Export processing zones/Industrial free zones**

*Short description:* First-hand insight into the development and operation of an export processing zone; the needs of a free zone and the role it can play as a catalyst in national and regional development; assess the potential of such zones for participants' own countries. *Visit:* to large Irish and overseas companies, small start-up companies, community enterprises and centres of training and education. *Commencing date:* May. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* April. *Fees:* £Ir 7,200.

*Organizer:* International Development Ireland Ltd.  
P.O. Box 15  
Industry Support Centre  
Shannon Free Zone  
Shannon, Co. Clare, Ireland

### **Export promotion**

*Short description:* International marketing and export-promotion techniques with particular reference to Europe, for officials and entrepreneurs from developing countries. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* English, French or Spanish according to the selected region. *Deadline for application:* —. *Fees:* —.

*Organizer:* Italian Institute for Foreign Trade (ICE)  
Uff. FORM/EST  
Via Liszt, 21  
00144 Rome, Italy

### **EXPRO course**

*Short description:* International marketing; export marketing; quality management; export promotion; product adaptation; costing and pricing; budgeting; packaging; distribution; organization of an export department. *Commencing date:* November. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree in economics, marketing, science, or any other relevant degree. *English.* *Deadline for application:* June. *Fees:* —.

*Organizer:* Centre for the Promotion of Imports from Developing Countries CBI  
International Projects and Training Section  
Beursgebouw, 5th floor, Beursplein 37  
P.O. Box 30009  
3001 DA Rotterdam, Netherlands

### **International business**

*Short description:* To enable young students to gain an insight in the business environment of Europe and the European Community. *Commencing date:* September. *Duration:* 36 weeks. *Qualifications:* Junior students from American or European universities. *English.* *Deadline for application:* April. *Fees:* f. 30,400.

*Organizer:* Nijenrode, The Netherlands School of Business  
International Affairs  
Straatweg 25  
3621 BG Breukelen, Netherlands

### **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 documents. *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 21458  
3001 AL Rotterdam, Netherlands

### Marketing development

*Short description:* Marketing: basic principles of marketing, industrial marketing, export and international marketing, marketing research and planning; organization and management; financial control; cost accounting; social skills; negotiating techniques. *Commencing date:* January, August. *Duration:* 16 weeks. *Qualifications:* Diploma from a business college or equivalent. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* International Institute for Technology and Management (IITM)  
Ariensplein 3  
P.O. Box 1075  
7500 BB Enschede, Netherlands

### Marketing management and physical distribution

*Short description:* Marketing concepts; marketing management: product analysis and development; marketing research; finance for marketing; physical distribution; practical assignment and reporting. *Commencing date:* May. *Duration:* 13 weeks. *Qualifications:* Degree in business administration, economics or related science. English. *Deadline for application:* March. *Fees:* f. 15,500.

*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### Matchmaker course

*Short description:* The European Community; export marketing; quality management; partner selection; packaging; distribution; data collection; effective trade preparation; trade promotion and publicity. *Commencing date:* March. *Duration:* 3 weeks. *Qualifications:* University degree in economics, marketing, science, or any other relevant degree; engaged in trade-promotional activities. English. *Deadline for application:* 3 months before commencing date. *Fees:* —.

*Organizer:* Centre for the Promotion of Imports from Developing Countries (CBI)  
International Projects and Training Section  
Beursgebouw, 5th floor, Beursplein 37  
P.O. Box 30009  
3001 DA Rotterdam, Netherlands

### Marketing and marketing management

*Short description:* Marketing and corporate objectives; the importance of the customer; market research; marketing plan; total marketing mix; distribution and the role of the

wholesaler; sales management and incentives; public relations; export marketing. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Responsibilities within the marketing function. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Strategic Marketing Services  
P.O. Box 37  
Lichfield, Staffordshire WS13 8LW, United Kingdom

### **Marketing and marketing management**

*Short description:* From marketing mix to technical sales operation; marketing in the overall corporate strategy; marketing plans, market research, product development, advertising, forecasting, budgets and financial control; managing the sales operation to achieve projected plans; setting up new businesses; study tours; computer use. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Relevant working experience. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

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

### **Marketing management**

*Short description:* Advanced business education experience and skills to meet challenges of the 90s; global perspective series, international business simulation, classroom-boardroom cooperatives and business curriculum. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* 5 years of business experience. English. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 9,865 (including meals and board).

*Organizer:* Operations Manager  
International Marketing Institute  
Admissions Committee  
314 Hammond Street, Suite 52  
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 through all production processes to distribution. *Commencing date:* August, October. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £2,665

*Organizer:* International Training Marketing Manager  
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; 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 £4,545.

*Organizer:* International Training Marketing Manager  
British Safety Council  
National Safety Centre  
Chancery Road  
London W6 9RS, United Kingdom

### **Safety and disaster management**

*Short description:* Introduction to practical and theoretical methods the host organization uses to ensure safe working practices; includes planning for major emergencies. *Commencing date:* May. *Duration:* 3 weeks. *Qualifications:* Graduate engineers or experienced safety managers. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Training Manager  
ICI Chemicals and Polymers Ltd.  
Process Plant Services  
P.O. Box 1  
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 Brihançonne  
1040 Bruxelles, Belgique

### **Quality systems: Installation, auditing and improvement**

*Short description:* Quality control systems; quality function; sampling and inspection; auditing and evaluation; motivation and improvement programmes; problem-solving techniques; quality requirements for export. *Commencing date:* March, September. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree or equivalent in a relevant field of study. English. *Deadline for application:* January, July. *Fees:* £ 15,500.

*Organizer:* International Centre for Quality and Management  
Sciences (ICQMS)  
's-Gravendijkwal 10  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Statistical quality control: a computer-oriented approach**

*Short description:* Aspects of computer use; flow diagrams for statistical analysis; probability; sampling; tests of significance; control charts; analysis of variance; correlation and regression; excursions. *Commencing date:* March, September. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree or equivalent in a relevant field of study. English. *Deadline for application:* January, July. *Fees:* f. 15,500.

*Organizer:* International Centre for Quality and Management  
Sciences (ICQMS)  
's-Gravendijkwal 10  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Total quality control**

*Short description:* Modern concepts of total quality control; customer service; inspection and acceptance sampling; process control; organization; planning; motivation; improvement; training period in relevant enterprises. *Commencing date:* March, September. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree in economics, engineering, science or statistics. English. *Deadline for application:* January, July. *Fees:* f. 15,500.

*Organizer:* International Centre for Quality and Management  
Sciences (ICQMS)  
's-Gravendijkwal 10  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

#### **Non-destructive testing**

*Short description:* Technical and organizational methods of evaluation of the state, quality and reliability of industrial objects (pressure vessels, pipelines, installations, whole plants). *Commencing date:* June. *Duration:* 2 months. *Qualifications:* Engineers. English. *Deadline for application:* February. *Fees:* To be arranged.

*Organizer:* Institute of Atomic Energy  
Department E-V  
05-400 Swierk  
Warsaw, Poland

#### **Materials testing for quality control**

*Short description:* Strength of materials; properties; application of standards; non-destructive testing; quality assurance; laboratory testing techniques. *Commencing date:* May, November. *Duration:* 3-12 weeks (with optional modules). *Qualifications:* Work experience or engineering graduate. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £1,850.

*Organizer:* British Centre for Engineering and Scientific Training  
Brooklands Close  
Windmill Road  
Sunbury-on-Thames, Middlesex TW16 7DX, United Kingdom

## Non-destructive testing

*Short description:* Practice and theory of visual inspection; penetrant; magnetic particle; Eddy current; ultrasonic and radiographic methods of non destructive testing; evaluation of welded structures, castings and forgings. *Commencing date:* January, April, September. *Duration:* 10 weeks. *Qualifications:* Relevant industrial experience. English. *Deadline for application:* —. *Fees:* £3,000.

*Organizer:* W. McEwan OBE  
Paisley College Quality Centre  
Paisley College  
High Street  
Paisley PA1 2BE, Renfrewshire, Scotland, United Kingdom

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

### Formation de formateurs à la création et au développement des PME des organismes d'appui à la PME

*Breve description :* Mise au point avec les demandeurs de programmes "sur mesure": analyse d'expériences replacées dans leur contexte; évaluation des expériences présentées; mise au point d'un projet, résultat concret de la participation au programme. *Début du cours :* A arranger. *Durée :* 15-30 jours. *Qualifications :* Cadres en charge de dossiers de financement, d'installation de PME, de mise au point de politiques commerciales, de structure d'appui à la PME. Français. *Date limite d'inscription :* Mars. *Droits d'inscription :* A arranger.

*Organisateur :* Fonds Léon A. Bekaert a.s.b.l.  
26, rue de la Loi  
Boîte 12  
1040 Bruxelles, Belgique

## 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 production of ceramics

*Short description:* Simple ceramic technologies to produce tableware, art ceramics, pottery. *Commencing date:* September. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* May. *Fees:* \$US 2,700 (including board and lodging).

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

### **Development of small-scale rural industries**

*Short description:* Production technologies; appropriate and/or advanced technologies depending on the client's particular needs; quality control; drawing and design; cost accounting and product pricing; marketing; management. *Commencing date:* April. *Duration:* 13 weeks. *Qualifications:* Bachelor of science, workshop manager, or several years of relevant experience. *English. Deadline for application:* February. *Fees:* DM 11,835 (ir. 'uding study materials, protective clothing, study tours).

*Organizer:* Deutsche Lehranstalt für Agrartechnik  
Bartningstr. 49  
6100 Darmstadt, Germany

### **Création et développement de PME et d'activités artisanales**

*Brève description :* Cycle de formation dont l'objectif s'articule autour de 2 axes : gestion de la vie de l'entreprise; identification et maîtrise de la méthodologie de la création d'entreprise. *Début du cours :* Avril. *Durée :* 2 mois. *Qualifications :* Cadres de centre de création et de développement d'entreprises; permanents des offices de promotion des PME; personnes en charge des projets de développement de PME. Français, anglais. *Date limite d'inscription :* Mars. *Droits d'inscription :* FF 38 000.

*Organisateur :* CODIFOR  
13 rue Blaise Pascal  
54320 Nancy Maxéville, France

### **Credit appraisal for small and medium industries**

*Short description:* Skills in credit appraisal for small and medium industries. *Commencing date:* August. *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:* September. *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:* Technology options in production processes; energy utilization and need assessment; energy control and conservation techniques; energy planning and supply options; energy auditing; economic aspects of energy; management dimensions; policy aspects of energy in small and medium-sized industries. *Commencing date:* October. *Duration:* 5 weeks. *Qualifications:* Bachelor's degree or equivalent in a relevant subject. *English. Deadline for application:* July. *Fees:* f. 10,000.

**Organizer:** University of Twente  
Technology and Development Group  
Drienerlolaan 5  
P.O. Box 217  
7500 AE Enschede, Netherlands

**Venue:** RVB, Maastricht (first 2 weeks); University of Twente (last 3 weeks).

### **Financial management**

**Short description:** Cost and financial accounting; reporting; accounting systems; financial ratios; working capital management; investment appraisal and capital budgeting; financial markets in developing countries; financial planning; practical assignments and reporting. **Commencing date:** September. **Duration:** 13 weeks. **Qualifications:** Degree in accounting, economics, business administration or related science. **English.** **Deadline for application:** June. **Fees:** f. 15,500.

**Organizer:** Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Financing small enterprises**

**Short description:** The importance of a client-oriented approach and the requirements of small entrepreneurs; the role of the credit extension officer within the organization; management aspects of credit extension. **Commencing date:** January, October. **Duration:** 5 weeks. **Qualifications:** Completed higher education in a relevant discipline. **English.** **Deadline for application:** 1 month before commencing date. **Fees:** f. 12,500.

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

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

**Short description:** Basic concepts of international marketing; environment analysis and strategic decision; market research; product, pricing and distribution decisions; communication; organization. **Commencing date:** March, September. **Duration:** 13 weeks. **Qualifications:** Bachelor's degree or equivalent in a relevant field of study. **English.** **Deadline for application:** January, July. **Fees:** f. 15,500.

**Organizer:** International Centre for Quality and Management  
Sciences (ICQMS)  
's-Gravendijkwal 10  
P.O. Box 2082  
3000 CB Rotterdam, Netherlands

### **Small entrepreneurship promotion**

**Short description:** Small and medium sized industry management and consultancy; entrepreneurship development; small industry support systems; management of a business centre and of a consulting firm or unit; problem analysis and action planning with respect to the home situation. **Commencing date:** September. **Duration:** 13 weeks. **Qualifications:** Degree in business administration, economics, or related science. **English.** **Deadline for application:** July. **Fees:** f. 15,500.



*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Training of women entrepreneurs**

*Short description:* Managerial skills for women entrepreneurs; training the trainers of women entrepreneurs; development of new enterprises; management for women. *Commencing date:* August. *Duration:* 13 weeks. *Qualifications:* Degree in social sciences, economics, law or other related science. *English.* *Deadline for application:* June. *Fees:* f. 15,500).

*Organizer:* Netherlands International Institute for Management (RVB)  
Executive Programmes  
Endepolsdomein 150  
P.O. Box 1203  
6201 BE Maastricht, Netherlands

### **Developing income-generating enterprise**

*Short description:* To improve the ability of staff of local and international voluntary organizations to design and implement effective and eventually self-sustaining programmes of assistance for enterprise, within the context of overall community development. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* January. *Fees:* £4,300 (including accommodation).

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

### **Finance for enterprise**

*Short description:* Skills for staff of finance institutions and assistance agencies involved in the design and implementation of credit and loan schemes for small and micro-enterprises. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* English. *Deadline for application:* July. *Fees:* £3,500 (including accommodation).

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

### **Food processing as a small business**

*Short description:* Skills in the business and technology components of running small-scale food enterprises. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Professional experience. *English.* *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

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

### **New and small enterprise promotion**

*Short description:* Skills for staff of agencies, government departments and extension services which offer advice, financial support and technical assistance to local entrepreneurs and small businesses. *Commencing date:* July. *Duration:* 8 weeks.

*Qualifications:* Professional experience. English. *Deadline for application:* June. *Fees:* £5,950.

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

### **People-centred business: cooperative form of organization for income generation in the industrial sector**

*Short description:* Cooperative organization, management and leadership; field visits to worker cooperatives, development and funding agencies. *Commencing date:* August. *Duration:* 1 month. *Qualifications:* Professional experience. English. *Deadline for application:* July. *Fees:* £2,990.

*Organizer:* The Plunkett Foundation  
23 Hanborough Business Park  
Long Hanborough  
Oxford OX7 2LH, United Kingdom

### **Promotion and development of women's enterprise in developing countries**

*Short description:* Personal skills; role of women; changing work roles; needs of business women; basic business skills; supporting female entrepreneurs; credit and savings; rural enterprise; cooperatives; appropriate technology. *Commencing date:* August. *Duration:* 10 weeks. *Qualifications:* Middle and senior management, concerned with women's enterprise and business. English. *Deadline for application:* 2 months before commencing date. *Fees:* £6,500.

*Organizer:* International Programmes Unit  
Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

### **Small business advisers and counsellors in developing countries**

*Short description:* To give small business advisers and counsellors in developing countries first-hand experience of the small business support network in the north-east of England. Participants are attached to small business support agencies and produce action plan for implementation in their home country. *Commencing date:* To be arranged. *Duration:* Up to 4 weeks. *Qualifications:* At least one year of involvement in some aspect of small business development and intention to continue being involved. English. *Deadline for application:* —. *Fees:* £700 per week.

*Organizer:* International Programmes Unit  
Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

### **Small and medium enterprises in newly industrialized and developing countries**

*Short description:* Skills required to design and implement integrated programmes for the promotion and development of small businesses; emphasis placed on encouraging participants to produce action plans for implementation in their home countries. *Commencing date:* August. *Duration:* 10 weeks. *Qualifications:* Experience in supporting and promoting the development of small businesses. English. *Deadline for application:* 2 months before commencing date. *Fees:* £6,500

**Organizer:** International Programmes Unit  
Small Business Centre  
Durham University Business School  
Durham DH1 3LB, United Kingdom

### **Training for enterprise**

**Short description:** For trainers, advisers, instructors and educators engaged in training entrepreneurs or those involved in small-scale enterprise development. The objective is to enhance the participants ability to design and conduct an effective training programme. **Commencing date:** August. **Duration:** 4 weeks. **Qualifications:** Participants must be directly involved, or intend to be involved, in running training programmes for entrepreneurs or small businesses. **English.** **Deadline for application:** July. **Fees:** £3,500 (including accommodation and meals).

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

## **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 le début du cours. **Droits d'inscription :** A arranger.

**Organisateur :** Intemation : Executives Benelux SA "INTEX"  
5, rue de la Science  
1040 Bruxelles, Belgique

### **Formation des formateurs**

**Brève description :** Organisation rationnelle des apprentissages en référence à une pédagogie par objectif; psychologie; pédagogie et méthodologie; formation pratique. **Début du cours :** Février, octobre. **Durée :** 6-8 semaines. **Qualifications :** Baccalauréat + 2. **Français, anglais.** **Date limite d'inscription :** Formation en français : 2 mois avant le début du cours; formation en anglais : 3 mois avant le début du cours. **Droits d'inscription :** De FB 40 000 à 65 000 par mois.

**Organisateur :** Centre d'études et de recherches de l'Institut supérieur  
industriel catholique du Hainaut (C'ERISIC/ASBI.)  
22, avenue de l'Hôpital  
7000 Mons, Belgique

### **Audiovisual training materials**

**Short description.** The role of audiovisual materials in teaching and advising; production of projected and non-projected training materials; use of PC for developing teaching

materials. *Commencing date:* August. *Duration:* 8 weeks. *Qualifications:* Bachelor of science or several years of relevant experience. *English.* *Deadline for application:* February. *Fees:* DM 8,995.

*Organizer:* Deutsche Lehranstalt für Agrartechnik (DEULA)  
Bartningstr. 49  
6100 Darmstadt, Germany

### **Human resource development and planning**

*Short description:* Training needs assessment; placement statistics; signalling indicators; demographic projections; manpower forecasts; returns analysis; sample surveys of formal and informal employment in rural and urban areas; computer training. *Commencing date:* September. *Duration:* 13 weeks. *Qualifications:* Degree in economics, statistics, management, engineering or other related field. *English.* *Deadline for application:* June. *Fees:* f. 15,000.

*Organizer:* Erasmus University, Rotterdam (EUR)  
Growth Dynamic: University Institute  
Faculty of Economic Sciences  
Burgemeester Oudlaan 50, UB 47  
P.O. Box 1738  
3000 DR Rotterdam, Netherlands

### **Instructors for operator training of earthmoving and building construction machinery**

*Short description:* The course will be led according to the international standard ISO 7130. *Commencing date:* September. *Duration:* 1 month. *Qualifications:* English, German, Russian. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

*Organizer:* Institute for Building Mechanization and Rock Mining  
Racjonalizacji 6/8  
02-673 Warsaw, Poland

### **Management of training**

*Short description:* For senior officers who are managing training or who are about to take up training appointments in public authorities, government training centres or institutes of public administration. *Commencing date:* February, June, September. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* 8 weeks before commencing date. *Fees:* Approximately £4,800.

*Organizer:* Royal Institute of Public Administration  
International Services  
Regent's College  
Inner Circle  
Regent's Park  
London NW1 4NS, 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:* March, June, November. *Duration:* 7 weeks. *Qualifications:* Certificate in training and development or equivalent. *English.* *Deadline for application:* —. *Fees:* Approximately £2,520.

**Organizer:** Don Macdonald  
Thames Valley College  
Business Training Services  
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  
73/75 Mortimer Street  
London W1N 8HX, 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—its design and management**

*Short description:* Managing the training function; linking training to organizational goals and manpower plans. *Commencing date:* July. *Duration:* 12 weeks. *Qualifications:* Managers and officials responsible for human resource development. English. *Deadline for application:* 1 month before commencing date. *Fees:* Approximately £8,425.

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

**Venue:** Crown Agents  
Management Training Centre  
3-10 Marine Parade  
Worthing, Sussex BN11 3PW, United Kingdom

### **Training management**

*Short description:* Advanced level programme on the practice and management of training; the course is run in accordance with the syllabus and regulations of the Institute of Training and Development. *Commencing date:* Throughout the year. *Duration:* 25 days. *Qualifications:* International baccalaureate or equivalent. English. *Deadline for application:* —. *Fees:* To be arranged.

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

### **Training of trainers in purchasing and supply**

*Short description:* To update and extend expertise in purchasing and supply, and develop participants' lecturing and training skills, so that they can effectively train others.  
*Commencing date:* April. *Duration:* 8 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* £4,550.

*Organizer:* Institute of Purchasing and Supply  
Easton House  
Easton on the Hill  
Stamford, Lincolnshire PE9 3NZ, United Kingdom

### **Training support services**

*Short description:* Courses in instructional techniques and technical writing: attachments to training support services units to gain practical experience of technical writing, editing and audiovisual production. *Commencing date:* October. *Duration:* 6 weeks. *Qualifications:* Relevant working experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, 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:* —. *Fees:* Approximately £2,880.

*Organizer:* Don Macdonald  
Thames Valley College  
Business Training Services  
Wellington Street  
Slough, Berkshire SL1 1YG, United Kingdom

## 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

##### Fibre/microconcrete roofing technology

*Short description:* Thorough grounding in FCR/MCR, including theory, site visits and practical sessions in production of FCR/MCR tiles; QA techniques, roofing techniques, management of small workshops, equipment manufacture, technology transfer methodology, training and follow-up. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree in engineering or architecture. English, Nepali. *Deadline for application:* 4 months before commencing date. *Fees:* \$US 2,000 (including accommodation).

*Organizer:* Materials Technology Department  
Development and Consulting Services  
Butwal, Nepal

*Contact address:*

Materials Technology Department  
Development and Consulting Services  
c/o UMN  
P.O. Box 126  
Kathmandu, Nepal

##### Construction

*Short description:* Courses on: light-frame construction; reinforced concrete and masonry construction; plumbing; sheet metal layout and fabrication; pipe fitting/fabrication; electric arc welding; pipe welding; construction estimating. *Commencing date:* January, February, March. *Duration:* 1-2 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* P 360-1,070

*Organizer:* Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

##### Erection works (steel construction)

*Short description:* Fabrication process, erection methods and techniques; welding quality control, structural steel detailing, open end frame and tubular scaffolding, the use of theodolite and auto level, construction cranes and elevators, estimating of steel structure and construction safety. *Commencing date:* To be arranged. *Duration:* 17 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 600

**Organizer:** Construction Manpower Development Foundation (CMDf)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

#### **Fabrication works (steel construction)**

*Short description:* Knowledge and information applied in steel fabrication, focus on quality control and lowering production costs while increasing output. *Commencing date:* To be arranged. *Duration:* 16 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 800.

**Organizer:** Construction Manpower Development Foundation (CMDf)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

#### **Form works (vertical construction)**

*Short description:* Execution schemes for form works; shop drawings; fabrication and assembly; estimating form works; safety. *Commencing date:* To be arranged. *Duration:* 13 days. *Qualifications:* Bachelor's degree, preferably in engineering with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 600.

**Organizer:** Construction Manpower Development Foundation (CMDf)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

#### **Foundation works (vertical construction)**

*Short description:* Soil mechanics fundamentals; foundation exploration; experimental and theoretical treatment of soil and ground as an engineering material. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 800.

**Organizer:** Construction Manpower Development Foundation (CMDf)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

#### **Rebar works (vertical construction)**

*Short description:* Construction safety; planning, scheduling and estimating reinforcing works; shop drawings and detailing; reinforcing bar fabrication; installation and assembly; and quality control on reinforcement work. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualification:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 600.

**Organizer:** Construction Manpower Development Foundation (CMDf)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines



## 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:* Marzo. *Derechos de inscripción:* Para ser acordado.

*Organizador:* CTTIC  
C.C. 157  
1650 San Martín  
Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
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:* Marzo. *Derechos de inscripción:* Para ser acordado.

*Organizador:* CTTIC  
C.C. 157  
1650 San Martín  
Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
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  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Avda. Leandro N. Alem 1067  
1001 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  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Avda. Leandro N. Alem 1067  
1001 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:* CITIC  
C.C. 157  
1650 San Martín  
Provincia de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Avda. Leandro N. Alem 1067  
1001 Buenos Aires, Argentina

### **Corrosion**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree (engineering or science) or technicians. English, French. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Computer-aided design for plastics**

*Short description:* Computer operating systems, product design concepts, drafting on PC version, graphics, finite element analysis, 3D modelling, 2D modelling, flow and cooling analysis for plastics. *Commencing date:* To be arranged. *Duration:* 20 weeks. *Qualifications:* Degree in engineering or computer science. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; \$US 100 per week for boarding and lodging.

*Organizer:* Central Institute of Plastics Engineering and Technology  
Industrial Estate  
Guindy, Madras 600 032, India

### **Plastics mould design**

*Short description:* Introduction to design principles, engineering drafting, design concepts and design of hand moulds, design of auto- and semi auto injection, compression,

transfer and blow moulds, design of extrusion dies, plastics materials and processing, quality control and mould-making technology. *Commencing date:* To be arranged. *Duration:* 1 year (could be offered in modules of 13 weeks in each discipline). *Qualifications:* Degree in science. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; \$US 100 per week for boarding and lodging.

*Organizer:* Central Institute of Plastics Engineering and Technology  
Industrial Estate  
Guindy, Madras 600 032, India

### **Plastics processing technology**

*Short description:* Study of plastics materials, basic polymer chemistry, plastics processing, basic industrial engineering, practical injection, compression, transfer, blow moulding, extrusion process practicals, quality control and testing. *Commencing date:* To be arranged. *Duration:* 1 year (could be offered in modules of 13 weeks in each discipline). *Qualifications:* Degree in science. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; \$US 100 per week for boarding and lodging.

*Organizer:* Central Institute of Plastics Engineering and Technology  
Industrial Estate  
Guindy, Madras 600 032, India

### **Plastics testing and conversion technology**

*Short description:* Study of plastics materials, basic polymer chemistry, plastics processing, basic industrial engineering, testing of mechanical, electrical, optical, thermal and rheology properties, testing practicals, specimen preparation and quality control. *Commencing date:* To be arranged. *Duration:* 1 year (could be offered in modules of 13 weeks in each discipline). *Qualifications:* Degree in science. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 250 per week; \$US 100 per week for boarding and lodging.

*Organizer:* Central Institute of Plastics Engineering and Technology  
Industrial Estate  
Guindy, Madras 600 032, India

### **In-plant training for engineers in chemical, electrical, mechanical and instrument disciplines**

*Short description:* Improve managerial skills of executives for a more efficient management of capital and human resources. Class-room training includes lectures on and discussions of particular processes. On-the-job training in one of the large nitrogenous or phosphatic fertilizer plants of NFC. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 600 per month, including board and lodging.

*Organizer:* National Fertilizer Corporation of Pakistan (Private) Limited  
1st Floor, Alfalah Building  
Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

### **In-plant training for operators/technicians in chemical, electrical, mechanical and instrument disciplines**

*Short description:* Basic training for entry-level operators and technicians in the chemical and fertilizer industries. Skills for ensuring safe and efficient operation of the plant

and optimum return on investment through enhanced productivity. *Commencing date:* September. *Duration:* 1 year. *Qualifications:* High-school graduation or diploma in engineering. English. *Deadline for application:* July. *Fees:* \$US 5,000, including board and lodging.

*Organizer:* National Fertilizer Corporation of Pakistan (Private) Limited  
1st Floor, Alfalah Building  
Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

### Laboratory techniques

*Short description:* Analytical testing; physical testing; quality control of fertilizers; corrosion measurement; beneficiation of phosphate rock; phosphoric acid production; fertilizer granulation. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* \$US 600 per month.

*Organizer:* National Fertilizer Corporation of Pakistan (Private) Limited  
1st Floor, Alfalah Building  
Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

*Venue:* Fertilizer Research and Development Institute  
Faisalabad, Pakistan

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

*Short description:* Theoretical lectures, laboratory and pilot plant practicals on production of pharmaceutical and cosmetic raw materials and finished products using medicinal and aromatic plants; quality control; round-table discussions; factory visits. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Chemists, pharmacists or chemical engineers with 2 years of related experience. English. *Deadline for application:* June. *Fees:* \$US 2,000 (including board and lodging).

*Organizer:* Anadolu University  
Medicinal Plants Research Centre  
26470 Eskisehir, Turkey

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

#### Electrical/diesel locomotive maintenance

*Short description:* Theory: tractive effort in relation to trailing load/speed, choice of alternative transmissions and their merits, maintenance organization, engine speed control, locomotive testing, trouble shooting, safety devices. Practical-diesel: manufacturing, instage and final inspection of electrical equipment, fabrication of special test stands from equipment data, maintenance and repair; practical-electrical: manufacture and maintenance of rotating equipment (traction motors, blowers, arno converters), maintenance and repair of power circuit equipment, recabling of locomotives, repair and testing arrangements of semi-conductor devices, fabrication of special test stands. *Commencing date:* To be arranged. *Duration:* 17 weeks. *Qualifications:* Supervisory personnel of electrical departments. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Electrical Engineering  
P.O. Box 33  
Nasik Road 422 101, India

### **Maintenance of traction power supply**

*Short description:* Introduction to electrification, 25 kV AC traction system, power supply system and substation; feeding post, sectioning and paralleling posts, subsectioning posts; maintenance, schedules for substations, OHE principles and designs, OHE supporting structure; maintenance and repair at power supply substation; mobile monitoring of OHE, OHE break-down maintenance. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Supervisory personnel of electrical departments. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Electrical Engineering  
P.O. Box 33  
Nasik Road 422 101, India

### **Repair, overhaul and maintenance of traction machines**

*Short description:* Inspection of traction motors, stripping of traction machines, armature assembly and testing, coil manufacture and assembly, manufacture and repair of commutator segments and traction motor, assembly and testing, stator manufacture and repair, maintenance schedules for traction machines, special tooling, jigs and fixtures for maintenance. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Supervisory personnel of electrical departments. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Electrical Engineering  
P.O. Box 33  
Nasik Road 422 101, India

## Telecommunications

*Short description:* Passive devices, electronics fundamentals, applied digital electronics, propagation and antenna; electronic measurements, line plant practice, public communication systems, power plant practice, telegraphy, telephony, carrier and multiplexing; train traffic control, HF/VHF/MW communication, telephony and control laboratory, electronic laboratory, outdoor telecommunications laboratory. *Commencing date:* To be arranged. *Duration:* 18 weeks. *Qualifications:* Engineers with 5-8 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Signal Engineering and  
Telecommunication  
P.O. Lallaguda  
Secunderabad 500 017, India

## Electrical maintenance

*Short description:* Design, installation and operation of lighting, power control, grounding, protection, emergency and communication systems. *Commencing date:* To be arranged. *Duration:* 40 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 800.

*Organizer:* Construction Manpower Development Foundation (CMDF)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

## Electronics and telecommunication

*Short description:* Courses on: television receivers, monitor servicing, electronic assembly techniques, industrial electronics, digital electronics. *Commencing date:* January, February, June. *Duration:* 1-1 1/2 months. *Qualifications:* Background in basic electronics. English. *Deadline for application:* To be arranged. *Fees:* P 375-1,600.

*Organizer:* Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Tugig, Metro Manila, Philippines

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

### Industrial fermentation and alcohol technology

*Short description:* Fermentation and distillation processes; in plant training in distilleries and other fermentation industries. *Commencing date:* July. *Duration:* 1 year, followed

by 4 months of practical training. *Qualifications:* Bachelor of Science or equivalent, with 1 year experience in the fermentation industry. English. *Deadline for application:* May. *Fees:* To be arranged.

*Organizer:* National Sugar Institute  
Government of India

*Contact address:*  
Government of India  
Ministry of Food and Civil Supplies  
Department of Food  
Kanpur 208 017, India

### **Pre-harvest cane maturity survey**

*Short description:* Cane sampling, testing and analysis. *Commencing date:* October. *Duration:* 1 1/2 months. *Qualifications:* Background in science, with 2 years of relevant experience. English. *Deadline for application:* —. *Fees:* Rs 1,369.

*Organizer:* National Sugar Institute  
Government of India

*Contact address:*  
Government of India  
Ministry of Food and Civil Supplies  
Department of Food  
Kanpur 208 017, India

### **Sugar boiling**

*Short description:* Pan boiling and related operations and techniques of analysis of sugar-house products. *Commencing date:* July. *Duration:* 4 months. *Qualifications:* Background in science, with relevant experience. English. *Deadline for application:* May. *Fees:* Rs 1,447.

*Organizer:* National Sugar Institute  
Government of India

*Contact address:*  
Government of India  
Ministry of Food and Civil Supplies  
Department of Food  
Kanpur 208 017, India

### **Sugar engineering**

*Short description:* Engineering involved in the sugar industry. *Commencing date:* July. *Duration:* 2 off-seasons of 4 months each. *Qualifications:* Diploma in mechanical or electrical engineering, with 1 year of relevant experience. English. *Deadline for application:* May. *Fees:* To be arranged.

*Organizer:* National Sugar Institute  
Government of India

*Contact address:*  
Government of India  
Ministry of Food and Civil Supplies  
Department of Food  
Kanpur 208 017, 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 adress:*  
International Scientific Collaboration  
Council of Scientific and Industrial Research  
Anusandhan Bhavan  
Rafi Marg  
New Delhi 110 001, India

## Cane-sugar manufacture

*Short description:* Cane handling, preparation and milling; juice: heating, clarification, filtration and evaporation; sugar: pan boiling, crystallization and centrifugation; handling of final products; utilization of by-products; steam and power generation; energy savings; pollution control and introduction to management. *Commencing date:* May for French-speaking, September for English-speaking participants. *Duration:* 3 months. *Qualifications:* French, English. *Deadline for application:* French: March. English: July. *Fees:* \$US 2,500.

*Organizer:* Regional Sugarcane Training Centre for Africa  
Réduit, Mauritius

## Chemical control of sugar factories and analysis of sugar products

*Short description:* Sampling procedures at different stages during sugar manufacture; analysis of samples at ICUMSA standard; analysis of boiler waters and their treatment; pollution control and introduction to management. *Commencing date:* May for French-speaking, September for English-speaking participants. *Duration:* 3 months. *Qualifications:* French, English. *Deadline for application:* French: March. English: July. *Fees:* \$US 2,500.

*Organizer:* Regional Sugarcane Training Centre for Africa  
Réduit, Mauritius

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

### 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:* 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

### **Design and fabrication of leather goods**

**Short description:** Drawing, pattern cutting, various methods of fabrication of different types of leather goods, classification of leather goods, marketing, costing, techniques of using various tools and machinery. **Commencing date:** August. **Duration:** 12 months. **Qualifications:** Secondary school. English. **Deadline for application:** June. **Fees:** Rs 7,500 per month.

**Organizer:** Central Leather Research Institute  
Adyar  
Madras 20, 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

### **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

#### **Footwear and leather goods**

**Short description:** Courses on: components cutting; components preparation and assembling; sewing operations; designing and pattern making; sample making; bottom making; upper closing; bottom making; industrial sewing machine maintenance; leather quality evaluation; quality control system. **Commencing date:** January, February, July, August. **Duration:** 1-2 1/2 months. **Qualifications:** High school graduation. **English.** **Deadline for application:** To be arranged. **Fees:** P 350-500.

**Organizer:** Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

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

#### **Construcciones soldadas**

**Breve descripción:** Dirigir, controlar y programar obras de construcciones soldadas, supervisar y orientar soldadores en la producción. **Fecha de iniciación:** Febrero. **Duración:** 11 meses. **Calificaciones:** Ingenieros o bachilleres. **Español.** **Fecha límite de inscripción:** 3 meses antes del curso. **Derechos de inscripción:** —.

**Organizador:** División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 6  
Bogotá, Colombia

**Lugar:** Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

#### **Instructores de soldaduras eléctricas y especiales**

**Breve descripción:** Obtener la certificación y calificación como instructor o técnico de soldadura. **Fecha de iniciación:** Marzo, septiembre. **Duración:** 4-8 semanas. **Calificaciones:** Instructores y técnicos de soldadura. **Español.** **Fecha límite de inscripción:** 2 meses antes del curso. **Derechos de inscripción:** —.

**Organizador:** División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 6  
Bogotá, Colombia

**Lugar:** Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

## **Mecánica de 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 económicos, convencionales, neumáticos, hidráulicos, eléctricos y de lubricación. *Fecha de iniciación:* Febrero. *Duración:* 11 meses. *Calificaciones:* Ingenieros, bachilleres. Español. *Fecha límite de inscripción:* 3 meses antes del curso. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central Piso 6  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

## **Advanced CAD/CAM systems for shipbuilding**

*Short description:* CAD/CAE/CAM and computer-integrated manufacturing systems available world-wide and how to select the most suitable system for a given shipyard. *Commencing date:* April, September. *Duration:* 3 months. *Qualifications:* Bachelor's degree in naval architecture or equivalent, with practical experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 15,000 (including accommodation and meals).

*Organizer:* Alexandria Shipyard  
Information Systems and Computer Centre  
Gate No. 36, Kabbery  
Alexandria, Egypt

## **Maintenance of mechanical equipment**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science. English. *Deadline for application:* —. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

## **Welding technology**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English, French. *Deadline for application:* —. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

## **Machining and die making**

*Short description:* Cutting tools, principles of metal cutting, operation and maintenance of machine tools, practical training in operations on light and heavy duty workshop machinery (turning, milling, gear cutting), die making and reconditioning. *Commencing*

*date:* To be arranged. *Duration:* 3 or 5 months. *Qualifications:* Diploma in mechanical engineering, or related technical school certificate, with 3 years of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Spare parts design**

*Short description:* Familiarization with design activities for machined, cast and forged spare parts with proper material and process selection; theoretical and practical training in cold working, forging and design of injection moulding dies. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Bachelor's degree in mechanical engineering or equivalent, with 1 year of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Spare parts stock control and ordering system**

*Short description:* Systematic ordering of spare parts on an annual basis; production schedule and flow processes, quality control, delivery of products to the central store. *Commencing date:* To be arranged. *Duration:* 1 month. *Qualifications:* Diploma in stock and material management or equivalent, with 3 years of experience. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Tool design**

*Short description:* Design of moulds, dies, jigs and fixtures. *Commencing date:* To be arranged. *Duration:* 3 months, 6 months or 1 year. *Qualifications:* Bachelor's degree in mechanical engineering or equivalent, with 3 years of experience. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Engineering Design and Tool Centre  
P.O. Box 41638  
Addis Ababa, Ethiopia

### **Automotive engineering—research and development**

*Short description:* In plant training programme on research and development. *Commencing date:* To be arranged. *Duration:* 12 months. *Qualifications:* Degree in engineering or a related discipline. English. *Deadline for application:* 6-12 months before commencing date. *Fees:* \$US 500 plus actual project cost.

*Organizer:* The Automotive Research Association of India  
P.O. Box 832  
Pune 411 004, India

### **Diesel locomotives**

*Short description:* Transmission systems, excitation systems, engine speed control, fuel injection and combustion, pressure charging of diesel locomotive engines, mechanical

subassemblies, brake system, air compressor and exhaustor, electric systems and control, analysis of diesel traction, lube/fuel oil system, rating and testing of diesel locomotives, failure investigation, MIS for locomotives, accident analysis. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Engineers with 5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Mechanical and Electrical  
Engineering  
Jamalpur, India

### **Tool room supervisor's refresher course**

*Short description:* A combination of technical subjects and supervisory skills such as leadership, motivation, decision-making, conflict resolution and communication. *Commencing date:* May. *Duration:* 100 hours. *Qualifications:* Supervisory staff in tool room. English. *Deadline for application:* January. *Fees:* \$US 600.

*Organizer:* NTF Training Centre  
P.O. Box 5857  
No. 23/24, II Phase, Peenya Industrial Area  
Bangalore 560 058, India

### **Design of spare parts for machinery repair and maintenance**

*Short description:* Diagnose broken down equipment and identify the faulty or missing parts; design/adapt and supervise the production of spare/replacement parts for machinery repair and maintenance. *Commencing date:* April, September. *Duration:* 12 weeks. *Qualifications:* University degree in mechanical engineering or equivalent, with 1-2 years of experience. English, French. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* ARCEDEM/CRACFT  
Km 9, Ibadan-Iwo Road  
PMB 19, U.I. Post Office  
Ibadan, Nigeria

### **Tool design and manufacturing**

*Short description:* Optimum design, selection, manufacture and use of tools so as to minimize production and labour cost, improved quality of product by better surface finishing and desired accuracy, ensure work safety. *Commencing date:* January, June. *Duration:* 12 weeks. *Qualifications:* University degree in mechanical engineering or equivalent, with 1-2 years of experience. English, French. *Deadline for application:* 2 months before commencing date. *Fees:* —

*Organizer:* ARCEDEM/CRACFT  
Km 9, Ibadan-Iwo Road  
PMB 19, U.I. Post Office  
Ibadan, Nigeria

### **Heavy equipment maintenance (supervisory development course)**

*Short description:* Hydraulic systems and power train, diesel engine overhauling, trouble shooting and testing, electrical system maintenance, testing and adjustment, fuel systems repair and calibration and equipment management. *Commencing date:* To be arranged. *Duration:* 15 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 1,000.

*Organizer:* Construction Manpower Development Foundation (CMDF)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

### **Land transport equipment**

*Short description:* Courses on: gas engine mechanic; diesel engine mechanic; automotive electricity; motorcycle repair/maintenance; vehicle maintenance; diesel fuel injection. *Commencing date:* January, February, April. *Duration:* 1 week-2 months. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* P 649-1,070.

*Organizer:* Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

### **Specialized training in metals**

*Short description:* Courses on: computer-aided machining; milling operations; mechanical drafting; turning operations; precision grinding; metrology. *Commencing date:* January. *Duration:* 2 weeks-11 months. *Qualifications:* High school graduation. English. *Deadline for application:* To be arranged. *Fees:* P 1,350-4,000.

*Organizer:* Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

### **Welding inspection (steel construction works)**

*Short description:* Welding methods, metallurgy, design, materials, procedures, inspection/testing and quality control; hands-on experience on SMAW, GMAW, GTAW and metal cutting operations. *Commencing date:* To be arranged. *Duration:* 25 days. *Qualifications:* Bachelor's degree, preferably in engineering, with 2 years of experience in construction. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 1,250.

*Organizer:* Construction Manpower Development Foundation (CMDF)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

### **Industrial engineering specialization**

*Short description:* Training for high-level professionals in new manufacturing technologies and management. *Commencing date:* October. *Duration:* 8 months. *Qualifications:* Portuguese. *Deadline for application:* August. *Fees:* Esc 175,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Industrial use of high-density energy beams**

*Short description:* Training for high-level professionals in new technologies of processing materials and their industrial applications (laser, electrons beams and water). *Commencing date:* March. *Duration:* 2 1/2 months. *Qualifications:* Portuguese. *Deadline for application:* January. *Fees:* Esc 90,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Welding engineering**

*Short description:* Welding manufacturing processes, quality control and inspection, innovations in welding, new production technologies in welding. *Commencing date:* October. *Duration:* 7 months. *Qualifications:* Portuguese. *Deadline for application:* August. *Fees:* Esc 175,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Construction mécanique**

*Brève description :* Former des spécialistes en : mécanique d'entretien; mécanique moteurs; tuyauterie industrielle; fraisage; électro-mécanique; chaudronnerie industrielle; tournage. *Début du cours :* Octobre. *Durée :* 36 semaines. *Qualifications :* Français. *Date limite d'inscription :* Septembre. *Droits d'inscription :* FCFA 1 700 000-2 200 000.

*Organisateur :* CAFIP  
Dakar-Marine  
B.P. 63  
Dakar, Sénégal

## **Mécanique industrielle**

*Brève description :* Formation maîtrise en : chaudronnerie industrielle; mécanique moteurs; mécanique d'entretien industriel; hydraulique et pneumatique engins; électricité d'entretien industriel. *Début du cours :* Octobre. *Durée :* 36 semaines. *Qualifications :* Français. *Date limite d'inscription :* Septembre. *Droits d'inscription :* FCFA 1 800 000-2 100 000.

*Organisateur :* CAFIP  
Dakar-Marine  
B.P. 63  
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:* Welding of 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:* 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 thicknesses; 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 plate: 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. *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

#### **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

### Siderurgia

*Breve descripción:* Ciclo teórico de revisión de ciencia básica y de tecnología de los procesos de reducción, acería y laminación; con trabajos aplicativos. *Fecha de iniciación:* Abril. *Duración:* 9 meses. *Calificaciones:* Graduados en ingeniería. Español. *Fecha límite de inscripción:* 5 meses antes del curso. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Dirección de Perfeccionamiento de Personal  
Instituto Argentino de Siderurgia  
Pje. Carlos María Della Paolera 226  
1104 Buenos Aires, Argentina

### Application of computers in metallurgical industry

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### Foundry production

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English, French. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### Heat treatment

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### Industrial furnaces

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

**Organizer:** Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Iron and steel industries**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

**Organizer:** Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Metal forming and rolling**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

**Organizer:** Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Ore preparation in the iron and steel industry**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

**Organizer:** Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Traitement thermomécanique**

*Brève description :* Concepts généraux, aspects théoriques principaux, applications dans le domaine de l'industrie, formation sur le terrain. *Début du cours :* A arranger. *Durée :* 2-4 semaines. *Qualifications :* Diplôme universitaire en ingénierie ou en sciences, techniciens. Français. *Date limite d'inscription :* Décembre 1991. *Droits d'inscription :* \$US 500 par semaine.

**Organisateur :** Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Le Caire, Egypte

### **Forging technology**

*Short description.* Introduction to forging technology, die material selection and treatment of forging dies, treatment of forged parts; installations and control devices for forging equipment. *Commencing date:* To be arranged. *Duration.* 2-3 months. *Qualifications:*

Bachelor's degree in mechanical engineering or equivalent, with 2 years of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Foundry technology**

*Short description:* Casting processes, sand preparation, technology of pattern making, moulding, core making, melting, gating and risering of castings, cleaning fettling, heat treatment and inspection of casting products. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Bachelor's degree in mechanical engineering or equivalent, with 2 years of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Heat treatment of metals**

*Short description:* Thermal, thermo-chemical and chemical heat treatment of ferrous alloys; practical exercises on heat treatment cycles of metals. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Bachelor's degree in mechanical engineering with 1 year of experience, or diploma in metal technology with 2 years of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Metallurgy**

*Short description:* Physical metallurgy, metallographic analysis, chemical analysis, charge preparation of metallic castings. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Degree in metallurgy or equivalent with 2 years of experience. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

### **Plating of metals**

*Short description:* Methods and principles of plating of metals; chrome plating, nickel plating, phosphating and other surface-protective finishing processes. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Technical school graduates. English. *Deadline for application:* 4 months before commencing date. *Fees:* To be arranged.

*Organizer:* Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

## **Integrated iron and steel works**

*Short description:* Metallurgical quality control, blast-furnace operations. *Commencing date:* September. *Duration:* 3 months. *Qualifications:* Degree in engineering. English. *Deadline for application:* May. *Fees:* To be arranged.

*Organizer:* Eregli Iron and Steel Works Company (Erdemir)  
Kdz. Eregli, Turkey

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

### **Garments industry**

*Short description:* Courses on: production management; quality control; effective supervision for greater productivity; pattern making and grading; styling and design development; trainers' training; cutting; pressing and packing. *Commencing date:* September, October, November. *Duration:* 1-2 1/2 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* P 750-2,250.

*Organizer:* Office of Industry Manpower and Incentives (OIMI)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

### **Cotton textiles**

*Short description:* Broadening and upgrading professional knowledge and skills; problems in the textile industry and their solutions; technological developments. *Commencing date:* September. *Duration:* 26 days. *Qualifications:* Textile, chemical and mechanical engineers, with 3 years of related experience. English. *Deadline for application:* May. *Fees:* \$US 50 per day (including board and lodging).

*Organizer:* Sümerbank Holding A.Ş.  
Araştırma 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**

### **Procesos industriales del mueble y la madera**

*Breve descripción:* Ebanistería, tapicería, pintura y acabados de la madera; perfeccionamiento técnico y pedagógico. *Fecha de iniciación:* Julio. *Duración:* 4 meses. *Calificaciones:* Técnicos o instructores. Español. *Fecha límite de inscripción:* 3 meses antes del curso. *Derechos de inscripción:* —.

*Organizador:* Cooperación Técnica  
Calle 57 No. 8-69, Torre Control, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Canadiense de la Madera  
Medellín Regional de Antioquia, Colombia

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

**Engineering materials and their uses**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

**Measuring equipment and automatic control**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

**Mining engineering and technology**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:* Bachelor's degree in engineering or science, technicians. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

**Commercial management in railroads**

*Short description:* Duties and responsibilities of railway staff, rules of conduct, passenger and freight traffic, station working, platform arrangements, station account claims, accidents, records and returns, statistics, pass amenities, establishment and general rules. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Senior staff with 5-8 years of relevant experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Zonal Training School  
Western Railway  
Udaipur 313 001, India

## Corporate business management in railroads

*Short description:* Basics of management, fiscal, economic and business policies and strategies, organization process and structure, personnel management, industrial relations, operations management, finance and marketing, management information system. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Executive personnel. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Railway Staff College  
Vadodara, India

## Flow measurement and control

*Short description:* Measurement techniques of air flow and water flow, calibration/testing of flow products, valves and actuators. *Commencing date:* September. *Duration:* 4 weeks. *Qualifications:* Engineering graduates with 2-3 years experience in fluid flow. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 1,500 per week.

*Organizer:* Fluid Control Research Institute  
Palghat 678 623, India

## Foundation course for railway managers/engineers

*Short description:* Railway history and organization, finance and railway accounts, civil engineering, traffic transportation, electrical engineering, personnel management, law, mechanical engineering, railway operations, signalling and telecommunications engineering, material management, statistics. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualification:* Managers/engineers freshly inducted in railroads. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Railway Staff College  
Vadodara, India

## Geotechnical investigation and foundation design for railways

*Short description:* Mineralogy, consolidation, shear strength, geotechnical investigation, bearing capacity of soil, stress distribution, slope stability analysis, shallow, well and pile foundations, geotechnical software. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Engineers with 5-6 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
**Venue:** Indian Railways Institute of Civil Engineering  
Pune 411 001, India

### **Induction course for railway managers/engineers**

**Short description:** Electrical engineering, financial management, human resource management, mechanical engineering, civil engineering, operation and commercial management, signalling and telecommunications engineering, material management, quantitative techniques, law, computer applications. **Commencing date:** To be arranged. **Duration:** 12 weeks. **Qualifications:** Managers/engineers with 2-3 years of experience in railroads. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
**Venue:** Railway Staff College  
Vadodara, India

### **Industrial engineering**

**Short description:** Shop layout and material handling, work study, material management, operation planning, scheduling and control, quality control, value engineering, operation management, industrial engineering, investment, maintenance, job evaluation, grievance handling, computer applications. **Commencing date:** To be arranged. **Duration:** 4 weeks. **Qualifications:** Engineers/managers with 14-18 years of experience. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
**Venue:** Railway Staff College  
Vadodara, India

### **Inspector of works**

**Short description:** General rules, building materials, carpentry, use of levelling instruments, distribution of labour, preparation of pay sheets, leave and pass rules, discipline and appeal rules; issue of stores, upkeep of stores and ledgers, monthly stores, returns.



preparation of work orders and contractors' bills; measurements, requirement of labour and materials, preparation of completion reports, maintaining account of expenditures. *Commencing date:* To be arranged. *Duration:* 26 weeks. *Qualifications:* Senior staff with 5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Zonal Training School  
Western Railway  
Udaipur 313 001, India

### **Modern railway track technology**

*Short description:* Bridge codes and drawings, steel as structural material, concrete and welding technology, advanced structural analysis, design in steel/RCC/PSC/composite construction, geology, foundation and bridge substructures, fabrication, erection and testing of bridges, masonry arches, hydrology, seismic analysis and protection of bridges, computer application in bridge technology. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Engineers/managers of civil discipline with 1-5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Civil Engineering  
Pune 411 001, India

### **Permanent way inspectors**

*Short description:* Duties of permanent way inspectors, mates, keymen, gangmen; maintenance of permanent way and renewals, curved track and realignment of curves; inspection and maintenance of bridges, tunnels, turn-tables and weigh-bridges; rivers and floods, pre-monsoon measures, accidents and breaches, patrolling of tracks, working of trollies, ballast trains; engineering work in electrified areas. *Commencing date:* To be arranged. *Duration:* 26 weeks. *Qualifications:* Senior staff of permanent way, with 5 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Zonal Training School  
Western Railway  
Udaipur 313 001, India

### **Professional course (phase-I) for mechanical engineers**

**Short description:** Advanced coverage of: overview of railways and role of the mechanical branch; energy conservation; workshop manufacturing suspense account; future trends in diesel locomotive development; depot layout including management and equipment; hydraulic locomotives; brake systems; fuel economy; trouble shooting; non-schedule repair analysis; load testing; lube oil and rubber testing; wagon and wagon bogie design; coach and bogie design; air brake systems; design of special-purpose stock; rail/wheel interaction; shop layout; rationalization and workshop modernization; introduction to NC/CNC machines; metrology; wheel shop management; computerized management information systems. **Commencing date:** To be arranged. **Duration:** 10 weeks. **Qualifications:** Mechanical engineers. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Mechanical and Electrical  
Engineering  
Jamalpur, India

### **Professional course (phase-II) for mechanical engineers**

**Short description:** Advanced coverage of: railway transport economics; training management; corporate planning; inventory management and store procedures; operation information systems; planning for additional and replacement of rolling stock; quality assurance and management; industrial and labour relations; industrial health; material analysis and non-destructive testing; diesel locomotives—engine and electrical components; operational control of locomotives; train lighting and airconditioning; couplers; train partings; production control organization and incentive schemes; latest developments in welding, foundry and cutting-tool technology. **Commencing date:** To be arranged. **Duration:** 12 weeks. **Qualifications:** Mechanical engineers. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Mechanical and Electrical  
Engineering  
Jamalpur, India

### **Railroad business—orientation programme**

**Short description:** Accounts, civil engineering, commercial practices, electrical establishment, law, mechanical engineering, signalling and telecommunication, stores

management, general management. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Supervisory staff. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Railway Staff College  
Vadodara, India

#### **Railroad business—initial course**

*Short description:* Mechanical engineering: motive power, non-destructive testing, derailments, impact of change in technology in management of repairs; electrical engineering: need for electrification, traction rules, OHE breakdown, AC/DC locomotives, EMUs, maintenance schedules, train lighting and airconditioning; management: finance, commercial practices, civil engineering, material management, signalling and telecommunication, computers and MIS, human resources development. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Executive staff. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Mechanical and Electrical  
Engineering  
Jamalpur, India

#### **Railroad business—for entry to administrative level**

*Short description:* Accounts and finance, investment, planning, marketing, public relations, computers, electrical engineering, mechanical engineering, project management, stocks management, general management. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Engineers/managers with 5-8 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Railway Staff College  
Vadodara, India

### **Railroad business—for entry to administrative level**

*Short description:* Corporate planning, quality assurance, disaster management, maintenance of rolling stock, computerization and MIS, material management, rubber technology, workshop accounts, 28 LAV brake systems, diesel locomotive design, roller bearings, shed layout and management, twin-pipe air brake system, train lighting, airconditioning, CNC machines and programming. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Engineers/managers of mechanical discipline with 9-13 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Indian Railways Institute of Mechanical and Electrical  
Engineering  
Jamalpur, India

### **Railroad business—for entry to senior administrative level**

*Short description:* Finance management and corporate finance management, public relations, computerization, industrial relations, law, operating strategies, inventory management, corporate planning. *Commencing date:* To be arranged. *Duration:* 8 weeks. *Qualifications:* Engineers/managers with 14-18 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Railway Staff College  
Vadodara, India

### **Railway operations**

*Short description:* Railway organization, railway historical development, permanent way, railway signalling, electrical/mechanical engineering, financial management, materials management, role of computers, communication skills, freight and pass operations, commercial practices, working of marshalling yards, railway safety organization, disaster management, corporate planning, transport pricing and costing. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* Engineers/managers of traffic discipline with 9-13 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Railway Staff College  
Vadodra, India

### Signal engineering

**Short description:** Theory: basic concepts in signalling, principles of interlocking, orthodox mechanical signalling, double-wire signalling, relays, track circuits, equipment and control circuits, signalling in electrified area, axle counters, route relay and panel interlocking, block signalling, signalling general and safety; practicals: mechanical signalling equipment, power signalling equipment, block signalling. **Commencing date:** To be arranged. **Duration:** 18 weeks. **Qualifications:** Engineers with 5-8 years of experience. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India

**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Signal Engineering and  
Telecommunication  
P.O. Lallaguda  
Secunderabad 500 017, India

### Signal Inspectors

**Short description:** Theory: basic concepts of signalling, principles of interlocking, orthodox signalling, double-wire signalling, signalling relays, track circuits, electrical signalling equipment, signalling in AC electrified area, axle counter, power supply arrangements, relay interlocking, block signalling, signalling general and safety, train traffic control, preparation of lock/dog charts, accounts; practicals: mechanical/electrical signalling laboratory, outdoor telecommunication, control laboratory, digital laboratory. **Commencing date:** To be arranged. **Duration:** 24 weeks. **Qualifications:** Graduate engineers. English. **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India

**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Indian Railways Institute of Signal Engineering and  
Telecommunication  
P.O. Lallaguda  
Secunderabad 500 017, India

### Signal Inspectors

**Short description.** Basic concepts of signalling, principles of interlocking, orthodox signalling, double-wire signalling, signalling relays, track circuits, equipment and control, electrical signalling, signalling in electrified area, power supply arrangements, relay interlocking, block signalling, general safety, preparation of lock/dog charts, stores

*Commencing date:* To be arranged. *Duration:* 18 weeks. *Qualifications:* Senior signalling staff with 5-8 years of experience. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Indian Railways Institute of Signal Engineering and  
Telecommunication  
P.O. Lallaguda  
Secunderabad 500 017, India

### **Telecommunication inspectors**

*Short description:* *Theory:* basic concepts of signalling, passive devices, applied electronics, digital electronics and microprocessors, electronic measurements, line plant/power practices, public address system, telephony, telegraphy, carrier communications, train traffic control, propagation and antennas HF/VHF and microwave, stores, data communications; *practicals:* MW/HF/VHF outdoor telecommunication laboratory, microprocessor laboratory, electronic telephony laboratory. *Commencing date:* To be arranged. *Duration:* 24 weeks. *Qualifications:* Graduate engineers. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Indian Railways Institute of Signal Engineering and  
Telecommunication  
P.O. Lallaguda  
Secunderabad 500 017, India

### **Train operations and management**

*Short description:* Transportation management, freight and passenger train control, marshalling yards, wagon utilization, traffic projections, punctuality, time-tabling, signalling, permanent way, station working; passenger and freight traffic, revenue, pass amenities, ticketless travelling, reservations, marketing and sales, booking of materials and claims, finance and general management. *Commencing date:* To be arranged. *Duration:* 13 weeks. *Qualifications:* Executive personnel of traffic discipline. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

Venue: Zonal Training School  
Western Railway  
Udaipur 313 001, India

### **Advanced materials**

*Short description:* Characteristics of new materials; composites and ceramics; suitable techniques for linkage. *Commencing date:* March. *Duration:* 2 1/2 months. *Qualifications:* Portuguese. *Deadline for application:* January. *Fees:* Esc 90,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

### **Industrial engineering**

*Short description:* Theoretical and practical training in business and operational management; industrial organization; automation; human and industrial relations. *Commencing date:* November. *Duration:* 1 year. *Qualifications:* Bachelor's degree. English and Portuguese. *Deadline for application:* March. *Fees:* Esc 2,500,000.

*Organizer:* LNETI-CFT  
Az. Lançeiros à Est. Paço do Lumiar  
1699 Lisbon, Codex, Portugal

### **Radiography (levels I and II)**

*Short description:* Radiography for industrial workers according to national and international related standards. *Commencing date:* Level I: March; level II: November. *Duration:* Level I: 2 weeks; level II: 3 weeks. *Qualifications:* Technical personnel, engineers. Turkish. *Deadline for application:* 1 month before commencing date. *Fees:* —.

*Organizer:* Istanbul Technical University  
Nuclear Energy Institute  
Ayazaga Tempus, Maslak  
Istanbul, Turkey

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

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

#### Acquisition of computer systems in developing countries

*Short description:* Studies and procedures necessary to undertake to judge the acquisition of computer systems. *Commencing date:* January, July. *Duration:* 2 months. *Qualifications:* Computer engineers, naval architects, marine engineers. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 10,000 (including accommodation and meals).

*Organizer:* Alexandria Shipyard  
Information Systems and Computer Centre  
Gate No. 36, Kabbery  
Alexandria, Egypt

#### Computer applications

*Short description:* Broad range of courses, including: basic and COBOL with EDP fundamentals; use of PCs; introduction to CAD; system analysis and design; word processing. *Commencing date:* To be arranged. *Duration:* 2-6 weeks. *Qualifications:* Bachelor's degree. English. *Deadline for application:* 3-6 months before commencing date. *Fees:* To be arranged.

*Organizer:* Computer Development Division  
Department of Electronics  
Government of India  
A-Block, CGO Complex, Lodhi Road  
New Delhi 110 003, India  
*Contact address:*  
Regional Computer Centre  
SCO 114-116, Sector 17-B  
Chandigarh 160 017, India

#### Computer applications in civil engineering

*Short description:* Concepts of and introduction to computers, computers in civil engineering, use of commercially available packages, demonstration of applications. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Engineers with 5-8 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India



**Venue:** Indian Railways Institute of Civil Engineering  
Pune 411 001, India

### **Computer applications in railways**

**Short description:** Micro computer software (WS, dBase II plus, Lotus 1-2-3); local area network; computerized passenger reservation systems, production planning and scheduling, personnel information systems, container monitoring systems, freight operation information systems, good shed management systems, claims information-processing systems, global enquiry system, self-printing ticketing machines, traffic accounts, stores management systems, track management systems, terrain modelling, quality control, design track maintenance and machine monitoring system. **Commencing date:** To be arranged. **Duration:** 8 weeks. **Qualifications:** Graduates with computer background. **English.** **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Centre for Railway Information Systems (CRIS)  
Chankyapuri  
New Delhi, India

### **Computer programming**

**Short description:** Concepts of computers, computerized management systems, use of computers for managerial efficiency and effectiveness. **Commencing date:** To be arranged. **Duration:** 4 weeks. **Qualifications:** Engineers/managers with 5-8 years of experience. **English.** **Deadline for application:** 2 months before commencing date. **Fees:** To be arranged.

**Organizer:** RITES  
New Delhi, India  
**Contact address:**  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

**Venue:** Railway Staff College  
Vadodara, India

### **Business equipment and computers**

**Short description:** Courses on: computer system application; advance programming; computer maintenance; digital equipment servicing; photocopier maintenance; word processing; assembly language programming. **Commencing date:** January. **Duration:** 1 week-1 1/2 months. **Qualifications:** Professional qualifications. **English.** **Deadline for application:** To be arranged. **Fees:** To be arranged.

**Organizer:** Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

## **Bureautique — outils informatiques du cadre**

*Brève description* : Initiation à la micro-informatique, utilisation d'un tableur (LOTUS 1-2-3), d'une base de données (dBase IV ou PARADOXE), d'un traitement de texte (WORDPERFECT). *Début du cours* : Mars. *Durée* : 8 semaines. *Qualifications* : Français. *Date limite d'inscription* : 2 mois avant le début du cours. *Droits d'inscription* : \$US 2 800.

*Organisateur* : CEPETEDE  
B.P. 989  
Kinshasa, Zaïre

## **Energy/Energie/Energía**

### **Energy saving and conservation in industry**

*Short description*: Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date*: To be arranged. *Duration*: 2-4 weeks. *Qualifications*: Bachelor's degree in engineering or science. English. *Deadline for application*: December 1991. *Fees*: \$US 500 per week.

*Organizer*: Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

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

### **Engineering design**

*Short description*: Design of equipment and machinery for the agricultural, construction and manufacturing sectors. *Commencing date*: To be arranged. *Duration*: 2 weeks-6 months. *Qualifications*: Bachelor's degree in mechanical engineering or equivalent, with 3 years of experience. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Engineering Design and Tool Centre  
P.O. Box 41638  
Addis Ababa, Ethiopia

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

### **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 4,200.

**Organizer:** Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City 1101, Philippines

#### **Technical information for industry**

*Short description:* Theoretical and practical training in information science and information technologies. *Commencing date:* November. *Duration:* 6 months. *Qualifications:* Bachelor's degree. English, Portuguese. *Deadline for application:* March. *Fees:* Esc 2,500,000.

**Organizer:** LNETI-CFI  
Az. Lameiros à Est. Paço do Lumiar  
1699 Lisbon, Codex, Portugal

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

#### **Manpower research**

*Short description:* Techniques of employment and manpower planning, its linkages with economic and educational planning. *Commencing date:* January. *Duration:* 8 weeks. *Qualifications:* Graduate level. English. *Deadline for application:* 1 week before commencing date. *Fees:* Rs 12,000.

**Organizer:** Institute of Applied Manpower Research  
Indraprastha Estate, Mahatma Gandhi Marg  
New Delhi 110 002, India

#### **Regional industrial development**

*Short description:* Designing, programming and monitoring the regional economic development of a specified geographical area. *Commencing date:* July. *Duration:* 20 weeks. *Qualifications:* Bachelor's degree or equivalent. English. *Deadline for application:* May. *Fees:* \$US 6,500.

**Organizer:** Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UP Campus  
Diliman, Quezon City 1101, Philippines

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

#### **Feasibility studies and industrial economics**

*Short description:* Basic concepts, main theoretical aspects, application in industry, field training. *Commencing date:* To be arranged. *Duration:* 2-4 weeks. *Qualifications:*

Bachelor's degree in engineering or science. English. *Deadline for application:* December 1991. *Fees:* \$US 500 per week.

*Organizer:* Tabbin Institute for Metallurgical Studies (TIMS)  
P.O. Box 109  
Helwan  
11421 Cairo, Egypt

### **Project feasibility studies (COMFAR reporting technology)**

*Short description:* Economic appraisals, management appraisals, technical appraisals, using computers. *Commencing date:* August. *Duration:* 4 weeks. *Qualifications:* First degree in economics or social sciences or equivalent, project officers. English. *Deadline for application:* June. *Fees:* \$US 3,500 (including board and lodging).

*Organizer:* The Secretary  
National Investment Bank  
P.O. Box 3726  
Accra, Ghana

### **Financial management**

*Short description:* Financial environment and strategy, budgeting system and expenditure control, financial performance analysis, cash flow and funds, flow techniques, investment decisions, working capital management, railway statistics, stores suspense and stores budgeting, traffic book and earnings, traffic costing, role of computers in financial management. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Managers of finance discipline with 9-13 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Railway Staff College  
Vadodara, India

### **Project management**

*Short description:* Project selection, planning, organization, monitoring and management; project leadership; PERT/CPM; project management information system. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Engineers/managers with 5-8 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Railway Staff College  
Vadodara, India

## Project management

*Short description:* Practical application of modern tools and techniques of planning, scheduling, monitoring and control of projects. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Senior and middle management staff. *English.* *Deadline for application:* —. *Fees:* Rs 1,200 per week.

*Organizer:* Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110 011, India

## Etude de projets industriels

*Brève description :* Identification, conception, préparation et évaluation des projets industriels. *Début du cours :* A arranger. *Durée :* 1-2 mois. *Qualifications :* Français. *Date limite d'inscription :* —. *Droits d'inscription :* A arranger.

*Organisateur :* Ministère de la Promotion économique (DIPIP)  
B.P. 480  
Niamey, Niger

## Banca de desarrollo y financiamiento del desarrollo

*Breve descripción:* Fortalecer la capacidad técnica y gerencial de las instituciones financieras con el conocimiento de estrategias de desarrollo aplicadas en América Latina; modernizar la banca de desarrollo para que alcance altos niveles de eficiencia que mejore su función promotora del desarrollo e instrumento financiero del mismo. *Fecha de iniciación:* Septiembre. *Duración:* 5 semanas. *Calificaciones:* Profesionales, ejecutivos en actual ejercicio con experiencia en instituciones financieras. *Español.* *Fecha límite de inscripción:* 2 semanas. *Derechos de inscripción:* \$US 1,000.

*Organizador:* Asociación Latinoamericana de Instituciones Financieras de Desarrollo (ALIDE)  
Av. Paseo de la República 3211  
Lima 100, Perú

## Project study preparation

*Short description:* Techniques for the identification of venture opportunities and the preparation of a project feasibility study. *Commencing date:* July. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent. *English.* *Deadline for application:* April. *Fees:* \$US 4,600.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
E. Virata Hall, E. Jacinto Street  
UJP Campus  
Diliman, Quezon City, 1101 Philippines

## Analyse, évaluation et suivi de projets

*Brève description :* Comptabilité nationale, analyse financière et économique de projets, approches sectorielles, établissement des dossiers de factibilité, outils de programmation, suivi et contrôle, informatique et projets. *Début du cours :* Août. *Durée :* 17 semaines. *Qualifications :* Maîtrise des "Techniques quantitatives de gestion". *Français.* *Date limite d'inscription :* 2 mois avant le début du cours. *Droits d'inscription :* \$US 4 500.

**Organisateur :** CEPETEDE  
B.P. 989  
Kinshasa, Zaïre

### **Project preparation and appraisal including UNIDO COMFAR software**

**Short description:** Preparation and appraisal of industrial projects; application of computers; case studies. **Commencing date:** To be arranged. **Duration:** 3 weeks. **Qualifications:** Graduate economists or engineers involved in project preparation and appraisal. English. **Deadline for application:** 1 month before commencing date. **Fees:** \$US 1,000.

**Organizer:** Department of Investment Planning and Research  
National Commission for Development Planning  
P.O. Box 50268  
Lusaka, Zambia

### **Maintenance and repair/Entretien et réparation/ Mantenimiento y reparación**

#### **Repair and maintenance of medical equipment**

**Short description:** Medical electronics and applications on electro-medical, clinical laboratory, X-ray, operating theatre and dental equipment. **Commencing date:** September. **Duration:** 10 months. **Qualifications:** Technical high school, with 3 years of practical experience. English. **Deadline for application:** May. **Fees:** \$US 4,600.

**Organizer:** Regional Training Centre  
Higher Technical Institute  
P.O. Box 2423  
Nicosia, Cyprus

#### **Industrial maintenance**

**Short description:** Basic principles of planned maintenance, covering all aspects of industrial maintenance activities, with emphasis on the metal-working industry (foundry machines and equipment, cutting and forging equipment, heat-treatment furnaces, electrical and electronic devices). **Commencing date:** To be arranged. **Duration:** 4 months. **Qualifications:** Degree in mechanical engineering with 2 years, or diploma in mechanical engineering with 4 years of relevant experience. English. **Deadline for application:** 4 months before commencing date. **Fees:** To be arranged.

**Organizer:** Akaki Spare Parts and Hand Tools Factory  
P.O. Box 7334  
Addis Ababa, Ethiopia

#### **Managed maintenance**

**Short description:** Planned maintenance systems in industries, related information flow and follow-up systems, inventory control of spare parts, fabrication and reconditioning of spare parts. **Commencing date:** To be arranged. **Duration:** 3 months. **Qualifications:** Bachelor's degree in mechanical engineering or equivalent, with 2 years of relevant experience. English. **Deadline for application:** . . . **Fees:** To be arranged.

**Organizer:** National Metal Works Corporation  
P.O. Box 2447  
Addis Ababa, Ethiopia

### **Maintenance planning and scheduling**

*Short description:* Planning requirements for manpower, material and equipment: work scheduling. *Commencing date:* June. *Duration:* 3 weeks. *Qualifications:* Bachelor's degree in mechanical, electrical or civil engineering. English. *Deadline for application:* To be arranged. *Fees:* \$US 1,500.

**Organizer:** The Arab Potash Co. Ltd.  
P.O. Box 1470  
Amman, Jordan

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

### **Mejora de la calidad**

*Breve descripción:* Proceso estructurado para la realización de mejoras, utilizando las herramientas de solución de problemas, siendo un medio para alcanzar el objetivo primordial "mejoras". *Fecha de iniciación:* Marzo. *Duración:* 3 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 1 mes antes del curso. *Derechos de inscripción:* Para ser acordado.

**Organizador:** Escuela Superior de Cuadros del Ministerio de la  
Industria Básica  
Carretera de Vento, km 10 ½  
Municipio Boyeros  
Ciudad Habana, Cuba

### **Management**

*Short description:* Sound framework of concepts, analytical methods and techniques which, coupled with company visits and on-the-job training, will equip participants to execute effectively the usual duties of "assistant general manager" or "functional manager". *Commencing date:* September. *Duration:* 11 months. *Qualifications:* First university degree in any field, or equivalent. English. *Deadline for application:* May. *Fees:* £C 1,000.

**Organizer:** The Mediterranean Institute of Management  
P.O. Box 536  
Nicosia, Cyprus

### **Advanced management and workstudy**

*Short description:* Workstudy and allied managerial techniques; problem analysing and problem solving skills. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Rs 1,200 per week.

**Organizer:** Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110 011, India

## Management and workstudy

*Short description:* Workstudy and allied management techniques, with a view to enhancing participants' contribution as a team member. *Commencing date:* To be arranged. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Rs 1,200 per week

*Organizer:* Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110 011, India

## Management programme for middle-level officers

*Short description:* Knowledge, tools and techniques of manpower planning and management development for middle-level officers. *Commencing date:* August. *Duration:* 1 month. *Qualifications:* Graduates. English. *Deadline for application:* —. *Fees:* \$US 500 per week.

*Organizer:* Institute of Applied Manpower Research  
Indraprastha Estate, Mahatma Gandhi Marg  
New Delhi 110 002, India

## Materials management

*Short description:* Integrated materials management, policy aspects of procurement, scientific inventory management, warehousing cost reduction, financial aspects, purchasing strategies, buying in government departments and in the public sector. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Engineers/managers with 9-13 years of relevant experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Railway Staff College  
Vadodara, India

## R and D management

*Short description:* Modern concepts of R and D management; modern management and interpersonal skills for effective management of large multi-disciplinary projects. *Commencing date:* April, September. *Duration:* 4 weeks. *Qualifications:* Middle level scientists. English. *Deadline for application:* —. *Fees:* Rs 1,200 per week.

*Organizer:* Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110011, India



## Senior management development programme

*Short description:* Finance management, investment planning, marketing, public relations, computerization, industrial relations, law, modern operating strategies, stores management, corporate planning, manpower planning, delegation, quality management, communication skills, time management, role of managers, MBO, creative thinking, decision-making. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Engineers/managers with 19-23 years of relevant experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India  
*Venue:* Railway Staff College  
Vadodara, India

## Work study

*Short description:* Recording and charting techniques of workstudy. *Commencing date:* November. *Duration:* 5 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Rs 1,200 per week.

*Organizer:* Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110 011, India

## Production management

*Short description:* Policy to improve supervision, productivity and production planning. *Commencing date:* June. *Duration:* 2-3 weeks. *Qualifications:* Bachelor's degree in chemical engineering. English. *Deadline for application:* —. *Fees:* \$US 1,500.

*Organizer:* The Arab Potash Company Ltd.  
P.O. Box 1470  
Amman, Jordan

## Productivity improvement through work study

*Short description:* Implementation of productivity improvement programmes using workstudy techniques; analytical skills for the solution of production problems. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* \$US 2,000.

*Organizer:* National Productivity Centre  
P.O. Box 64  
46904 Petaling Jaya, Malaysia

## Négociation de contrats et passation de marchés

*Breve description :* Initiation aux démarches, techniques et aspects juridiques de négociation de contrats et passation de marchés. *Début du cours :* A arranger. *Durée :*

1-2 mois. *Qualifications* : Français. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Ministère de la Promotion économique (DIPIP)  
B.P. 480  
Niamey, Niger

### **Industrial productivity**

*Short description*: Introduction to workstudy and its applications; process analysis, maintenance, industrial safety and case studies aimed at increasing productivity. *Commencing date*: To be arranged. *Duration*: 4 weeks. *Qualifications*: University graduates or equivalent, with 3 years industrial or training experience. English. *Deadline for application*: February. *Fees*: \$US 2,200 (including accommodation and meals).

*Organizer*: Industrial Training Fund  
P.O. Box 2199  
Jos, Plateau State, Nigeria

### **Management training programme**

*Short description*: Business skills necessary for the management of enterprises. *Commencing date*: To be arranged. *Duration*: 3 terms of 10 weeks each. *Qualifications*: University degree. English. *Deadline for application*: —. *Fees*: \$US 3,500.

*Organizer*: Middle East Technical University  
Department of Management  
Ankara, Turkey

### **Gestion d'entreprise**

*Breve description* : Méthodes de management, gestion de la production, comptabilité analytique d'exploitation, gestion prévisionnelle, dossiers de financement, gestion des ressources humaines, stratégie marketing, contrôle de gestion, audit, diagnostic d'entreprise, jeu de simulation de gestion. *Début du cours* : Août. *Durée* : 18 semaines. *Qualifications* : Maîtrise des "Techniques quantitatives de gestion". Français. *Date limite d'inscription* : 2 mois avant le début du cours. *Droits d'inscription* : \$US 4 750.

*Organisateur* : CEPETEDE  
B.P. 989  
Kinshasa, Zaïre

### **Techniques quantitatives de gestion**

*Breve description* : Après les préables aux disciplines de gestion (mathématiques financières, initiation micro-informatique, statistiques) et l'étude de la fonction commerciale, acquisition des outils comptables et d'analyse financière de l'entreprise; introduction aux dossiers de financement; synthèse du cycle dans un jeu de simulation. *Début du cours* : Janvier. *Durée* : 19 semaines. *Qualifications* : Baccalauréat et 2 ans d'expérience professionnelle. Français. *Date limite d'inscription* : 2 mois avant le début du cours. *Droits d'inscription* : \$US 5 000.

*Organisateur* : CEPETEDE  
B.P. 989  
Kinshasa, Zaïre

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

**Production quality control**

*Short description:* Production handling and control, efficient quality and performance. *Commencing date:* April. *Duration:* 2-3 weeks. *Qualifications:* Bachelor's degree in chemical engineering. English. *Deadline for application:* To be arranged. *Fees:* \$US 1,500.

*Organizer:* The Arab Potash Co. Ltd.  
P.O. Box 1470  
Amman, Jordan

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

**Promoción 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:* Agosto. *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 Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barranquilla  
Regional Atlántico, Colombia

**Micro enterprise development in rural areas**

*Short description:* Knowledge, skills and attitudes for launching micro enterprise development programmes. *Commencing date:* November. *Duration:* 6 weeks. *Qualifications:* Extension officers of non-governmental or private voluntary organizations. English. *Deadline for application:* September. *Fees:* \$US 3,500 (including accommodation and meals).

*Organizer:* Entrepreneurship Development Institute of India  
Bhat, P.O. Chandkheda 382 424  
Dist. Gandhinagar, Gujarat, India

**Designing and implementing entrepreneurship programmes for women**

*Short description:* Identification, selection and development of entrepreneurial competencies; design of entrepreneurial programmes for women. *Commencing date:* April. *Duration:* 8 weeks. *Qualifications:* Bachelor's degree or equivalent, extension and development officers, consultants. English. *Deadline for application:* February. *Fees:* \$US 4,715.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

### **Development and management of cooperatives**

*Short description:* Skills and techniques for analysing the external and internal constraints of cooperatives and thus improving their operation. *Commencing date:* February. *Duration:* 13 weeks. *Qualifications:* Bachelor's degree or equivalent, extension and development officers, consultants involved in cooperatives. English. *Deadline for application:* December 1991. *Fees:* \$US 5,175.

*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:* 6 weeks. *Qualifications:* Bachelor's degree or equivalent; development officers, consultants. English. *Deadline for application:* July. *Fees:* \$US 4,200.

*Organizer:* Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

### **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 4,600.

*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 4,050.

*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 7,475.

**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 4,600.

**Organizer:** Institute for Small-Scale Industries  
University of the Philippines  
UP Campus  
Diliman, Quezon City 1101, Philippines

### **Small industry trainers**

*Short description:* For industrial extension officer and provincial industrial officer of developing countries in Asia. *Commencing date:* April. *Duration:* 6 weeks. *Qualifications:* Bachelor's degree in engineering, economics, business administration or other relevant area. *English.* *Deadline for application:* January. *Fees:* —.

**Organizer:** The SITE Project  
Department of Industrial Promotion  
Ministry of Industry  
Rama 6 Road  
Bangkok 10400, Thailand

## **Trainer development/Formation de formateurs/ Perfeccionamiento de profesionales de capacitación**

### **Entrepreneur trainers'/motivators' programme for developing countries**

*Short description:* Knowledge, skills and attitudes for entrepreneur trainers/motivators (ETMs) enabling them to carry out effectively activities related to entrepreneurship development. *Commencing date:* January. *Duration:* 6 weeks. *Qualifications:* English. *Deadline for application:* 6 weeks before commencing date. *Fees:* \$US 3,500 (including accommodation and meals).

**Organizer:** Entrepreneurship Development Institute of India  
Bhat, Chandkheda 382 424  
Dist. Gandhinagar, Gujarat, India

### **Training of trainers**

*Short description:* Dynamics of training process, managing of training, assessment of training needs, communication and audio-visual aids in training, training methods, curriculum, preparation of training material, trainer's role and skills, evaluation; hands-on experience in preparation of curriculum and training material. *Commencing date:* To be arranged. *Duration:* 6 weeks. *Qualifications:* Engineers/managers with 5-8 years of experience. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

**Organizer:** RITES  
New Delhi, India

*Contact address:*

Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Railway Staff College  
Vadodra, India

**Management of vocational training institutes**

*Short description:* Management of a training centre; courses and seminars; recent methods and management techniques for the improvement of the institution; coordination of the centre's activities with other local and foreign institutions. *Commencing date:* June. *Duration:* 3-4 weeks. *Qualifications:* Bachelor's degree in chemical or mechanical engineering. English. *Deadline for application:* To be arranged. *Fees:* \$US 1,500.

*Organizer:* The Arab Potash Co. Ltd.  
P.O. Box 1470  
Amman, Jordan

**Advanced course for training personnel**

*Short description:* Training in perspective; systematic training and its benefits; policy, plans and programmes; interview techniques; identification of training needs; introduction to consultancy; report writing; training implementation and validation. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* University degree or equivalent with 5 years of relevant experience. English. *Deadline for application:* February. *Fees:* \$US 2,200 (including accommodation and meals).

*Organizer:* Industrial Training Fund  
P.O. Box 2199  
Jos, Plateau State, 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 4,200.

*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 5,600.

*Organizer:* Institute for Small Scale Industries  
University of the Philippines  
E. Virata Hall E. Jacinto Street  
UP Campus  
Diliman, Quezon City 1101, Philippines

## **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**

##### **Aqueous systems: thermodynamic modelling for hydrometallurgy**

*Short description:* Leaching; tailings disposal; aqueous geochemical systems. *Commencing date:* April. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* March. *Fees:* \$A 1,050.

*Organizer:* Australian Mineral Foundation  
63 Conyngham Street  
Glenside, South Australia 5065, Australia

##### **Chemistry and properties of metallurgical slags**

*Short description:* Physical and chemical properties of slags; mixing, structure, basicity, sulphidic and oxygen-rich slags; phase diagrams and modelling. *Commencing date:* March. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* February. *Fees:* \$A 1,300.

*Organizer:* Australian Mineral Foundation  
63 Conyngham Street  
Glenside, South Australia 5065, Australia

##### **Chemistry and technology of cements**

*Short description:* Basic cement chemistry; raw material composition; kiln and cooler types; grinding; case studies. *Commencing date:* October. *Duration:* 6 days. *Qualifications:* English. *Deadline for application:* September. *Fees:* \$A 1,300.

*Organizer:* Australian Mineral Foundation  
63 Conyngham Street  
Glenside, South Australia 5065, Australia

##### **Management of biotechnology research and development**

*Short description:* A course in two consecutive modules designed for senior research managers from developing countries. The first module covers management topics such as research leadership, team building, strategic thinking, marketing and financing R and D, science policy. The second module focuses on technical and related aspects of biotechnology and includes plant, animal and microbial topics as well as issues such as release of genetically engineered organisms. Both modules include visits to research institutions; modules may be taken independently. *Commencing date:* July. *Duration:*

2 weeks for each module. *Qualifications*: Science degree, research experience. English. *Deadline for application*: April. *Fees*: \$A 3,500 per module, \$A 6,500 for both (including accommodation and meals).

*Organizer*: CSIRO International Training Officer  
P.O. Box 225  
Dickson ACT 2602, Australia

*Venue*: Queensland University  
St. Lucia, Brisbane, Australia

### Mining industry

*Short description*: Short courses on: exploration management; management for geoscientists, engineers; economic guidelines for mineral exploration; drilling and blasting for open-pit mines; engineering logging of drill core; truck and loader mining systems; mine ventilation. *Commencing date*: May-November. *Duration*: 3-14 days. *Qualifications*: English. *Deadline for application*: 1 month before commencing date. *Fees*: To be arranged.

*Organizer*: Australian Mineral Foundation  
63 Conyngham Street  
Glenside, South Australia 5065, Australia

### Temperature measurement

*Short description*: Physics of temperature measurement, modelling of temperature distributions, thermocouples and their calibration, instrumentation and control, unconventional pyrometry, laboratory management, laboratory accreditation. *Commencing date*: November. *Duration*: 2 weeks. *Qualifications*: Degree in engineering or science. English. *Deadline for application*: August. *Fees*: \$A 2,800 (including accommodation and meals).

*Organizer*: CSIRO International Training Officer  
P.O. Box 225  
Dickson ACT 2602, Australia

*Venue*: CSIRO Division of Applied Physics  
Lindfield, Sydney, Australia

### Formation des contremaîtres et des ingénieurs à l'élaboration des modes opératoires

*Breve description*: Connaissances théoriques et techniques nécessaires à l'élaboration des modes opératoires, ces derniers étant non seulement la clef de l'utilisation correcte de l'équipement et de sa longévité mais également l'outil de base de la formation des contremaîtres et ingénieurs. *Début du cours*: Toute l'année sauf de juillet au 15 septembre. *Durée*: —. *Qualifications*: Ingénieur ou contremaître possédant une expérience de plusieurs années dans sa spécialisation de son secteur d'activité ou sa profession. Français, anglais. *Date limite d'inscription*: 3 mois avant le 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

*Breve description*: Statistiques de ventes et de production; prévision de production; planning et contrôle de la production; contrôle des stocks; stockage et manutention;



productivité, contrôle budgétaire; prix de revient industriel; études de marchés. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Helping SA  
38, avenue Montjoie  
1180 Bruxelles, Belgique

### Mécanique générale

*Breve description* : Large éventail de sujets dans le domaine de la mécanique générale. *Début du cours* : A arranger. *Durée* : —. *Qualifications* : Qualifications professionnelles. Français, anglais, néerlandais. *Date limite d'inscription* : —. *Droits d'inscription* : A arranger.

*Organisateur* : Spoorwegmaterieel en Metaalconstructies  
Kaartdijkstraat 5  
8200 Bruges, Belgique

### Programmes de formation à la carte

*Breve description* : Gestion et animation de stages d'initiation et de perfectionnement (management, gestion et réhabilitation d'entreprises, analyses de projets, planification industrielle, analyse économique et financière, audit, production agricole et agro-industrielle, y compris traitement); formation de formateurs. *Début du cours* : A arranger. *Durée* : A arranger. *Qualifications* : Français, anglais. *Date limite d'inscription* : A arranger. *Droits d'inscription* : A arranger.

*Organisateur* : IBF  
63, rue Montoyer  
1040 Bruxelles, Belgique

### Sélection et formation de concepteurs de manuels

*Breve description* : Familiariser les techniciens se destinant à cette tâche à une bonne conception et à une excellente préparation des manuels. *Début du cours* : Toute l'année sauf de juillet au 15 septembre. *Durée* : —. *Qualifications* : Ingénieur ou technicien possédant une expérience professionnelle de plusieurs années. Français, anglais. *Date limite d'inscription* : 3 mois avant le début du cours. *Droits d'inscription* : A arranger.

*Organisateur* : International Executives Benelux SA (INTEX)  
5, rue de la Science  
1040 Bruxelles, Belgique

### Transport et distribution

*Breve 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 SA  
38, avenue Montjoie  
1180 Bruxelles, Belgique

## **Applied physics**

*Short description:* Short courses on: liquid penetrants; magnetic particle; weld inspection and quality control; radiography ultrasonics. *Commencing date:* Throughout the year. *Duration:* 5-10 days. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* NDE Institute of Canada  
135 Fennell Avenue West  
Hamilton, Ontario L8N 3T2, Canada

## **Natural sorbents for environmental engineering**

*Short description:* Utilization of non metallic sorbents (bentonites, perlites, zeolites) for environmental protection (wastewater treatment). *Commencing date:* June. *Duration:* 2 weeks. *Qualification:* Bachelor's degree. English. *Deadline for application:* March. *Fees:* \$US 800 (including board and lodging).

*Organizer:* UNIDO Czechoslovakia Joint Programme for Cooperation  
Non metallic Industries  
Pražská 12  
305 11 Plzeň, Czechoslovakia

## **Fifth PTS de-inking symposium**

*Short description:* Printing technology, printing inks and wash, flotation de-inking technology; trends in waste paper treatment; de-inking of water based flexo and rotogravure inks; de-inked pulp in graphic papers. *Commencing date:* April. *Duration:* 4 days. *Qualifications:* German, English. *Deadline for application:* April. *Fees:* DM 900.

*Organizer:* Papiertechnische Stiftung  
Hess Str. 130 a  
8000 München 40, Germany

## **Upgrading of skills in different industrial activities**

*Short description:* Short courses on: quality control and assurance; measuring techniques for different mechanical magnitudes; three coordinate measuring techniques; measuring techniques for electrical magnitudes; analytical chemistry; electronic in vehicles; testing of different materials; modern electronics; microprocessor technique; computer languages and applications; data processing; standardization; memory programmable circuits. *Commencing date:* To be arranged. *Duration:* 1-10 days. *Qualifications:* Professional qualifications. German, English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* Deutsche Technische Akademie GmbH  
Böttcherstrasse 2  
Postfach 16 70  
3330 Helmstedt, Germany

## **Frequency management and planning**

*Short description:* National and international frequency management and planning. *Commencing date:* January. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* TELECON Ltd  
Aleksanterinkatu 15 B  
00100 Helsinki, Finland

## CAO-CFAO/Production intégrée

*Brève description* : Problèmes des formes complexes; application aux petites et moyennes entreprises. *Début du cours* : A arranger. *Durée* : 3 jours. *Qualifications* : Techniciens supérieurs. Français. *Date limite d'inscription* : —. *Droits d'inscription* : FF 5 000.

*Organisateur* : IUT de Saint-Denis  
93206 Saint-Denis, Cedex 01, France

## Classement et réception des bois tropicaux

*Brève description* : Reconnaissance des essences, appréciation des défauts, mesurage, contrats et usages commerciaux. *Début du cours* : Avril, juin, septembre. *Durée* : 1 semaine. *Qualifications* : Français. *Date limite d'inscription* : 1 mois avant le début du cours. *Droits d'inscription* : FF 7 700.

*Organisateur* : INB  
6, avenue de Saint-Mandé  
75012 Paris, France

## Construction en blocs de terre comprimée

*Brève description* : Stages de courte durée sur : production des blocs de terre comprimée; construction en blocs de terre comprimée; techniques de production et de construction; arcs, voûtes et coupoles. *Début du cours* : Mars, juin. *Durée* : 1-2 semaines. *Qualifications* : Français, anglais. *Date limite d'inscription* : 6 semaines avant le début du cours. *Droits d'inscription* : FF 2 500-6 500.

*Organisateur* : CRATerre — EAG  
B.P. 2636  
38036 Grenoble, Cedex 2, France

*Lieu* : Ecole d'Architecture de Grenoble  
10, galerie des Baladins  
38100 Grenoble, France

## Qualité des aliments — microbiologie-hygiène

*Brève description* : Cours de courte durée sur : maîtrise et contrôle de la microbiologie des aliments : notions générales d'écologie et de microbiologie des aliments — influence des traitements sur les micro-organismes; les problèmes généraux de l'analyse microbiologique — les techniques classiques et rapides; microbiologie des laits et produits laitiers; étude des principaux micro-organismes rencontrés dans les aliments. *Début du cours* : Mai, juin, octobre. *Durée* : 1-2 semaines. *Qualifications* : Français. *Date limite d'inscription* : 2 semaines avant le début du cours. *Droits d'inscription* : FF 5 200-8 000.

*Organisateur* : Institut Pasteur de Lille  
B.P. 245  
59019 Lille, Cedex, France

## Analytical measurements in agriculture and food industry

*Short description*: NIR/NIT quick analysers, vitality analysers, pesticide determination by HPLC and overpressured liquid chromatography (OPLC). *Commencing date*: April. *Duration*: 3-5 days. *Qualifications*: Chemist, chemical engineers. *English*. *Deadline for application*: 3 months before commencing date. *Fees*: \$US 50-60 per day.

*Organizer*: Factory of Laboratory Instruments Co. Ltd.  
P.O. Box 33  
1450 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:* \$US 2,500 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. út 59-61  
1052 Budapest, Hungary

*In collaboration with*

Organization for International Technical Scientific  
Co-operation (TESCO)

P.O. Box 5/101  
Rosenberg hp. utca 21  
1367 Budapest, Hungary

## **Industrie textile**

*Brève description :* Cours de courte durée sur : filature de la laine; tissage; manutention des machines; filature du coton; contrôle de la qualité. *Début du cours :* A arranger. *Durée :* 40-150 heures. *Qualifications :* Français, anglais. *Date limite d'inscription :* —. *Droits d'inscription :* Lit 950 000-3 300 000.

*Organisateur :* CERIT Spa.  
Rue Villanova di Sotto 9/A  
33170 Pordenone, Italie

## **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

## **Communication within enterprises**

*Short description:* Importance of keeping employees informed of corporate activities and plans; relationship to work performance. *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

## **Creativity, management of innovation and R&D**

*Short description:* Stimulate efforts in creative and innovative management; identify critical issues that will help and guide R&D effort, creativity and innovation. *Commencing*

*date:* December. *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

### **Distribution**

*Short description:* Improve efficiency in marketing and distribution of consumer products. *Commencing date:* July. *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

### **Hazardous wastes**

*Short description:* Hazardous waste problems in Asian countries; policies and measures for hazardous waste management, including waste minimization. *Commencing date:* To be arranged. *Duration:* 5 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

### **Informal sector**

*Short description:* The informal sector, its role and problems, incentives and limitations, experiences of MCs government policies, role of voluntary organizations, recommendations for the development and enhancement of the 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

### **Information technology applications in service industry**

*Short description:* Impact of information technology and scope for the application of information technology in the 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

### **Management**

*Short description:* Short courses on: banking management; human resource management and productivity; managing organizational change; strategic 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

### **Management of energy demand**

*Short description:* Energy security; economic competitiveness; environmental quality.  
*Commencing date:* To be arranged. *Duration:* 5 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

### **Materials recycling**

*Short description:* Latest techniques of recycling waste; improved resource utilization; protection of the environment. *Commencing date:* November. *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

### **Office automation**

*Short description:* Enable participants to plan the most appropriate office automation systems in their respective work stations. *Commencing date:* October. *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

### **Plant layout and materials handling**

*Short description:* Improve the utilization of facilities and factory space through better layout and materials handling. *Commencing date:* August. *Duration:* 10 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

## **Productivity measurement, monitoring and analysis and subsectoral level**

*Short description:* Enterprise and subsectoral level productivity measurement and monitoring models for selected sectors. *Commencing date:* August. *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

## **Productivity and wage income policy**

*Short description:* Linkage between wages and productivity. *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

## **Small-scale industry**

*Short description:* Short courses on: small industry development; human resources development for promotion of productivity; analysis of productivity problems. *Commencing date:* To be arranged. *Duration:* 5-10 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

## **Urban industries and services**

*Short description:* Overview of the French system of providing and managing urban services. *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

## **Basic risk analysis**

*Short description:* Hazard identification techniques, failure frequencies, effect and consequence calculations, risk management, emergency management. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* -. *Fees:* To be arranged.

*Organizer:* TNO Environmental and Energy Research  
Department of Industrial Safety  
P.O. Box 342  
7300 AH Apeldoorn, Netherlands

## **Handling and storage of agricultural products and minerals in ports and inland**

*Short description:* Agribulk and mineral terminals; unloading/loading operations; storage; preservation of quality; maintenance and repair; safety; environmental aspects; information systems; financial and commercial aspects. *Commencing date:* Throughout the

year. *Duration:* 1-3 weeks. *Qualifications:* Managerial or technical qualifications. *English. Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* G.E.M. Consultants B.V.  
P.O. Box 23055  
3001 KB Rotterdam, Netherlands

### **Hydraulics and pneumatics**

*Short description:* Technique of diagrams and control systems, pumps, motors, compressors, cylinders, valves and auxiliary apparatuses, types of oil and air conditioning, preventive maintenance, localizing and removal of failures. *Commencing date:* May. *Duration:* 2 weeks. *Qualifications:* Engineers with a minimum of one year experience. *English. Deadline for application:* 2 months before commencing date. *Fees:* f. 2,400.

*Organizer:* ROVC Industrial Education  
P.O. Box 117  
6710 BC Ede, Netherlands

### **Industrial and process engineering**

*Short description:* Short courses on: ceramics/glass technology; chemical/ process engineering; electronic design, engineering and manufacturing; mechanical/design engineering; petroleum technology; pharmaceutical technology; project management/cost engineering; technical management. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* The Center for Professional Advancement  
Oudezijds Voorburgwal 316A  
1012 GM Amsterdam, Netherlands

### **Industrial automation**

*Short description:* Reading of all possible switching schemes and learning the functions of the components used in an installation; trouble shooting. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* Engineers with a minimum of one year experience. *English. Deadline for application:* 2 months before commencing date. *Fees:* f. 2,400.

*Organizer:* ROVC Industrial Education  
P.O. Box 117  
6710 BC Ede, Netherlands

### **Project management and programme administration**

*Short description:* Planning, monitoring, intercultural communication. *Commencing date:* January, June, August. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 1 month before commencing date. *Fees:* f. 5,800.

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

### **Promoter course**

*Short description:* International marketing; export marketing; marketing research and planning; packaging and transportation; quality control; product adaptation; costing and



pricing; negotiation techniques; promotion and publicity. *Commencing date:* January, June. *Duration:* 2 weeks. *Qualifications:* Bachelor's degree in economics, marketing, science or equivalent. English. *Deadline for application:* —. *Fees:* —.

*Organizer:* Centre for the Promotion of Imports from Developing Countries CBI  
International Projects and Training Section  
Beursgebouw, 5th floor, Beursplein 37  
P.O. Box 36009  
3001 DA Rotterdam, Netherlands

### Structural packaging design

*Short description:* Characteristics of the product; elements of export packaging; international standards and regulations; importance of high-quality raw material; importance of product information to consumers. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English, French, German, Dutch. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* POMIFER Trade Promotion  
Burgemeester de Manlaan 21  
4837 BN Breda, Netherlands

### Textile finishing

*Short description:* Textile finishing processes: dyeing, printing, coating, washing, process control, environmental protection, energy conservation. *Commencing date:* To be arranged. *Duration:* From 1 week to several weeks, depending on the chosen subjects. *Qualifications:* Production managers. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* TNO Centre for Textile Research  
P.O. Box 6034  
2600 JA Delft, Netherlands

### Process metallurgy of aluminium

*Short description:* Updated and comprehensive review of the state of the art in aluminium production. *Commencing date:* June. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* April. *Fees:* NKr 12,000 (including luncheons).

*Organizer:* Institute of Inorganic Chemistry  
The Norwegian Institute of Technology  
7034 Trondheim, Norway

### Chemical analyses

*Short description:* Short courses on: instrumental analysis: gas chromatography; analysis of resins and polymers; FTIR and UV spectrophotometry; characterization of polymers by gel permeation chromatography and viscosimetric methods. *Commencing date:* February-May. *Duration:* 2 weeks. *Qualifications:* English, French. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Industrial Chemistry Research Institute  
Rydygiera 8  
01-793 Warsaw, Poland

## **Chromatographic analysis**

*Short description:* Qualitative and quantitative analysis, with practical exercises. *Commencing date:* March. *Duration:* 2-3 weeks. *Qualifications:* English, Polish, Russian. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Industrial Chemistry  
Specialized Education Division  
ul. Limanowskiego 23  
02-943 Warsaw, Poland

## **Computer-aided modelling and simulation of power transmission, control and suspension systems**

*Short description:* Modelling of dynamic systems, model representation formalisms, model validation and verification, computer-aided modelling and simulation, non-linear systems, bond graph, modal bond graph, differential equipment, macrostructure modelling, supporting algorithm and programs. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English, French. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* PIMB  
CAE Center  
ul. Kolejowa 57  
01-210 Warsaw, Poland

## **Construction d'entrée d'air et manche d'entrée sous-sonique pour des moteurs à réaction**

*Brève description :* Considération de protection du moteur contre les corps étrangers élevés du sol par le tourbillon avant entrée; calculs, construction, essais; application d'ordinateur. *Début du cours :* A arranger. *Durée :* 1-2 semaines. *Qualifications :* Formation d'ingénieur. Anglais, français, polonais. *Date limite d'inscription :* A arranger. *Droits d'inscription :* A arranger.

*Organisateur :* Institut de l'Aviation  
Al. Krakowska 110/114  
02-256 Varsovie, Pologne

## **Dynamics of structures and machines**

*Short description:* Computer methods for modelling, analysis and simulation of dynamic behaviour of structures and machines. *Commencing date:* February. *Duration:* 2 weeks. *Qualifications:* Degree in mechanical engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Mechanics and Design  
Narbutta 85  
02-524 Warsaw, Poland

## **Flexible operation of power units**

*Short description:* Safe operating conditions; stress status in elements; permissible rates of load changes; monitoring of power unit components; start-up and shut-down; operational experience. *Commencing date:* To be arranged. *Duration:* 14 days. *Qualifications:* Master's degree, graduate engineers. English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

**Organizer:** Institute of Power Technology  
ul. Mory 8  
01-330 Warsaw, Poland

### **Integrated development programming for the refining, petrochemical and chemical industries**

*Short description:* Application of integrated development programming methodology using computer system called MIDA. *Commencing date:* June. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* March. *Fees:* \$US 1,200.

**Organizer:** Joint Systems Research Department (JSRD)  
Academy of Mining and Metallurgy  
Industrial Chemistry Research Institute  
Al. Mickiewicza 30  
Krakow, Poland

### **Introduction to composite materials**

*Short description:* Structural behaviour of composite materials; design of such materials. *Commencing date:* February. *Duration:* 1 week. *Qualifications:* Degree in mechanical engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Institute of Mechanics and Design  
Narbutta 85  
02-524 Warsaw, Poland

### **Landing gears of aircraft**

*Short description:* Landing gears of aircraft: design of structures, loads, tests, analysis. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Engineers. English. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Aviation Institute  
Al. Krakowska 110/114  
02-256 Warsaw, Poland

### **Mathematical modelling in computer-aided design**

*Short description:* Main computer methods used in design analysis. *Commencing date:* February. *Duration:* 2 weeks. *Qualifications:* Degree in mechanical engineering. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

**Organizer:** Institute of Mechanics and Design  
Narbutta 85  
02-524 Warsaw, Poland

### **Microbiological background of biotechnology**

*Short description:* Strain selection, adaptation, improvement and maintenance. *Commencing date:* April/May. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

**Organizer:** IBPRS  
ul. Rakowiecka 36  
02 532 Warsaw, Poland

### **Paint coating**

*Short description:* Pretreatment of surface, selection of coating materials; methods of coating paint application; methods of curing (hardening) paint coatings; testing of film-forming materials; testing of paint coatings. *Commencing date:* To be arranged. *Duration:* 2-3 weeks. *Qualifications:* Secondary technical education, with 1 year of experience in the surface treatment of metals. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* Institute of Precision Mechanics  
ul. Duchnicka 3  
00-967 Warsaw, Poland

### **Radiation protection**

*Short description:* Basic data, regulations; practical exercises and visits to isotope laboratories. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* Engineers. English. *Deadline for application:* 6 months before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Atomic Energy  
Radiation Protection Department  
05-400 Swierk-Otwock, Poland

### **Solid-state fermentation**

*Short description:* Biological, technological, engineering and economical problems. *Commencing date:* September/October. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* IBPRS  
ul. Rakowiecka 36  
02-532 Warsaw, Poland

### **Transfer of technology**

*Short description:* Short courses on: advanced technology; training of trainers; advanced materials; advanced VLSI processing; advanced VLSI design; device technology; information-storage technology; circuit design and signal processing; signal processing and communication; microwave and radar technology; computer-integrated manufacturing; control engineering. *Commencing date:* To be arranged. *Duration:* 3-5 days. *Qualifications:* Technical specialists and decision makers from upper and middle management. English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* CEI-Europe/Elsevier  
P.O. Box 910  
61225 Finspong, Sweden

### **International trade in services**

*Short description:* Challenges and opportunities in the services trade for developing countries. *Commencing date:* March. *Duration:* 1 week. *Qualifications:* Professionals holding international trade responsibilities in the public or private sector. English. *Deadline for application:* February. *Fees:* SwF 1,500 (fellowships available).

*Organizer:* Centre for Applied Studies in International Negotiations  
11a, avenue de la Paix  
1202 Geneva, Switzerland

## **Management of interdependence**

*Short description:* The evolution of the world economy is raising questions about the pattern of trade and therefore of competition, investment and development strategies. Search for innovative policies and strategies for developing countries. *Commencing date:* October. *Duration:* 10 days. *Qualifications:* Professionals and executives holding international responsibilities. English. *Deadline for application:* July. *Fees:* SwF 2,900 (fellowships available).

*Organizer:* Centre for Applied Studies in International Negotiations  
11a, avenue de la Paix  
1202 Geneva, Switzerland

## **Beneficiation of non-metallic minerals**

*Short description:* Development and training of mining engineers in the area of mineral processing. *Commencing date:* August. *Duration:* 5 days. *Qualifications:* Turkish. *Deadline for application:* July. *Fees:* LT 2,000,000.

*Organizer:* Istanbul Technical University  
Faculty of Mining  
Ayazağa  
80626 Istanbul, Turkey

## **Industrial pollution**

*Short description:* Management of industrial wastes in general and of textile industry wastes in particular. *Commencing date:* September. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* January. *Fees:* \$US 200.

*Organizer:* Istanbul Technical University  
Faculty of Civil Engineering  
Environmental Engineering Division  
Maslak  
Istanbul, Turkey

## **Ultrasonography**

*Short description:* Ultrasonography for industrial workers according to national and international related standards. *Commencing date:* February. *Duration:* 2 weeks. *Qualifications:* Technical personnel. Turkish. *Deadline for application:* January. *Fees:* —.

*Organizer:* Istanbul Technical University  
Nuclear Energy Institute  
Ayazağa Tempus, Maslak  
Istanbul, Turkey

## **Waste management in agro-industries**

*Short description:* Various aspects of waste management problems arising from agro-industries will be discussed in a specialized symposium sponsored by IAWPRC and organized by the Turkish National Committee on Water Pollution Research and Control. *Commencing date:* September. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* July. *Fees:* \$US 320.

*Organizer:* Istanbul Technical University  
Department of Environmental Engineering  
Ayazağa  
80626 Istanbul, Turkey

*Contact address:*  
KONGRES IST  
193, Cumhuriyet Caddesi, D. 6  
Elmadag  
80230 Istanbul, Turkey

### **Accountancy**

*Short description:* Computer-based courses for managers; software packages. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Accountancy/computing background. English. *Deadline for application:* 6 weeks before commencing date. *Fees:* £140 per day.

*Organizer:* Short Course Support Unit  
Sheffield City Polytechnic  
43 Broomgrove Road  
Sheffield S10 2NA, United Kingdom

### **Adaptive systems**

*Short description:* Recent advances in adaptive techniques, practical and real-time application of these methods, particularly in underwater systems, noise cancellation and electroacoustics. *Commencing date:* April. *Duration:* 3 days. *Qualifications:* Some experience of signal processing. English. *Deadline for application:* March. *Fees:* £695.

*Organizer:* ISVR  
University of Southampton  
Southampton SO9 5NH, United Kingdom

### **Adhesives**

*Short description:* Short courses on: adhesives technology; structural adhesives; hot melt adhesives. *Commencing date:* To be arranged. *Duration:* 1-4 days. *Qualifications:* Degree in engineering or related discipline. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

*Organizer:* Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### **Advanced systems in manufacturing**

*Short description:* Short courses on: advanced measurement and inspection systems in manufacturing; non-destructive testing; surface science; fatigue and fracture. *Commencing date:* To be arranged. *Duration:* 4-6 days. *Qualifications:* Degree in an engineering discipline. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

*Organizer:* Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, 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:* £840.

**Organizer:** Short Course Support Unit  
Sheffield City Polytechnic  
43 Broomgrove Road  
Sheffield S10 2NA, United Kingdom

### **Applied digital signal processing**

*Short description:* Fundamentals of digital data analysis of deterministic and random signals; advanced topics in digital signal processing; applications of the theory. *Commencing date:* July. *Duration:* 5 days. *Qualifications:* Basic understanding of engineering mathematics. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* Approximately £850.

**Organizer:** ISVR  
University of Southampton  
Southampton SO9 5NH, 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:* To be arranged.

**Organizer:** METCOM Training  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

### **Basic signalling technology**

*Short description:* Lecture-based course with practical sessions for signal engineers with limited experience. *Commencing date:* March. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* February. *Fees:* £2,000.

**Organizer:** Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom.

**Venue:** Doncaster, United Kingdom

### **Building maintenance**

*Short description:* Short courses on: introduction to building management; inspection and maintenance of automatic fire sprinklers; trouble-shooting for air-conditioning systems; inspection and maintenance of air-conditioning systems; trouble-shooting of refrigeration systems; inspection and maintenance of reciprocating refrigeration machines. *Commencing date:* Throughout the year. *Duration:* 2-5 days. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* £300-630.

**Organizer:** Haden Maintenance Training Centre  
23 Gladstone Road  
Croydon, Surrey CR0 2BQ, United Kingdom

### **Computer applications**

*Short description:* Short courses on: Lotus software; introduction to UNIX; the C programming language; programming in ADA; desktop publishing. *Commencing date:* To

be arranged. *Duration*: 1-5 days. *Qualifications*: Experience in programming as appropriate. English. *Deadline for application*: —. *Fees*: To be arranged.

*Organizer*: Thames Valley College  
Business Information Systems Division  
Wellington Street  
Slough SL1 1YG, United Kingdom

### Computer operating systems

*Short description*: Advanced disc operating techniques using DOS 4 from menu creation to data security with utilities to protect files and read hidden information. *Commencing date*: June, September, November. *Duration*: 2 weeks. *Qualifications*: Computer literacy. English. *Deadline for application*: 1 month before commencing date. *Fees*: £650.

*Organizer*: Training Manager  
East Kilbride and District Engineering G.T.A. Ltd.  
3 Law Place  
Nerston Industrial Estate  
East Kilbride, United Kingdom

### Computer science

*Short description*: Short courses on: information systems; programming design; software engineering; database systems; high-performance computer architecture; software design techniques; use of interactive computer systems; expert systems. *Commencing date*: April-September. *Duration*: 4 days. *Qualifications*: Basic knowledge of computer systems. English. *Deadline for application*: 2 months before commencing date. *Fees*: £700-800.

*Organizer*: Department of Computer Science  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### Construction

*Short description*: Sewerage/drainage design, computerized system. *Commencing date*: Throughout the year. *Duration*: 1-3 days. *Qualifications*: Professional qualifications. English. *Deadline for application*: To be arranged. *Fees*: £150-200 per day.

*Organizer*: Short Course Support Unit  
Sheffield City Polytechnic  
43 Broomgrove Road  
Sheffield S10 2NA, United Kingdom

### Corrosion monitoring

*Short description*: Short courses on: corrosion control; corrosion monitoring and inspection; corrosion in oil and gas industries. *Commencing date*: To be arranged. *Duration*: 4 days. *Qualifications*: English. *Deadline for application*: To be arranged. *Fees*: To be arranged.

*Organizer*: Corrosion Monitoring Consultancy (CMC)  
5, Old School Gardens  
School Lane, Eaton Socon  
St. Neots, Cambridgeshire PE19 3JB, United Kingdom



### **Cotton circular knitted fabrics with low shrinkage**

*Short description:* Production of cotton circular knitted fabrics having guaranteed performance specifications, especially with regard to dimensions, weight and shrinkage. *Commencing date:* July. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* March. *Fees:* £3,000 (residential).

*Organizer:* Cotton Technology International  
Suite 200, Scotscroft Building  
858 Wilmslow Road  
Didsbury, Manchester M20 8RX, United Kingdom

### **Defects in weldments**

*Short description:* Short courses on: failure analysis of welded structures; critical assessment of defects in weldments. *Commencing date:* August. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* June. *Fees:* £700.

*Organizer:* Training Services, TWI  
Abington, Cambridge CB1 6AL, United Kingdom

*Venue:* Jakarta, Indonesia

### **Economics and operations of bunkering**

*Short description:* International supply system for bunker oils (marine fuels for ship propulsion). *Commencing date:* May, October. *Duration:* 5 days. *Qualifications:* Management of shipowners and operators, oil companies and bunker-related organizations. English. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 3,000.

*Organizer:* Neil Cockett  
Yewtree House  
Barfreston  
Dover, Kent CT15 7JH, United Kingdom

*Venue:* May: Singapore  
October: College of Petroleum Studies, Oxford, 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  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

### **Electronic engineering**

*Short description:* Short courses on: parallel computer architecture; CAD for VLSI; discrete signal processing; VLSI design techniques; systems specification; advanced software principles; software engineering; expert systems; digital test and testability; optical fibre sensors and systems; condition monitoring and diagnostics; digital interfacing for sensors and instrumentation. *Commencing date:* To be arranged. *Duration:* 4-12 days. *Qualifications:* Degree in electronic engineering. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

**Organizer:** Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### **Financial management**

*Short description:* Short courses on: business contracts for managers; security investment analysis; financial accounting; corporate finance. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* Graduates. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

**Organizer:** Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### **Industrial hydraulics**

*Short description:* Comprehensive introduction to industrial hydraulics using a simulator panel to give experience of practical circuits. *Commencing date:* Throughout the year. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** METCOM Training  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

### **Industrial instrumentation**

*Short description:* Short courses on: introduction to industrial instrumentation; measurement and control appreciation; instrumentation and measurement; process control; analogue electronics; digital electronics and logic; microprocessor technology and applications; distributed control systems appreciation. *Commencing date:* Throughout the year. *Duration:* 5-10 days. *Qualifications:* Relevant engineering background. English. *Deadline for application:* —. *Fees:* Approximately £396-792.

**Organizer:** Roxby Engineering International Ltd.  
Lagonda Road  
Billingham, Cleveland TS23 4JA, United Kingdom

### **Information technology**

*Short description:* Industrial instrumentation and control; expert system in engineering; energy systems. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Computer background. 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

### **Inspection**

*Short description:* Short courses on: Eddy current inspection, magnetic particle inspection, ultrasonic weld inspection, penetrant inspection, radiography. *Commencing date:* Throughout the year. *Duration:* 1-2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* £420-800.

**Organizer:** Training Services, TWI  
Abington  
Cambridge CB1 6AL, United Kingdom

### **Instructional techniques**

**Short description:** Short courses on: instructional techniques for operator instructors; instructional techniques for skills instructions; instructional presentation skills; design of basic craft training programmes; managing the training function. **Commencing date:** To be arranged. **Duration:** 5 days. **Qualifications:** English. **Deadline for application:** —. **Fees:** Approximately £822-922 (including accommodation).

**Organizer:** Webton Court Management and Training Centre  
Allerton Park  
Leeds LS7 4ND, United Kingdom

### **Intermodal transportation**

**Short description:** Lecture/discussion based course with field visits for middle and senior managers in intermodal related departments. **Commencing date:** June. **Duration:** 2 weeks. **Qualifications:** English. **Deadline for application:** April. **Fees:** £2,800 (all inclusive).

**Organizer:** Training Manager  
Transmark  
169 Westbourne Terrace  
London W2 6JY, United Kingdom

**Venue:** Ipswich, 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:** The British School of Leather Technology  
The Leathersellers Centre  
Nene College  
Moulton Park  
Northampton NN2 7AL, United Kingdom

### **Leather technology update**

**Short description:** Update in new finishing methods, soft leather, advances in the beamhouse, alternatives to chrome. **Commencing date:** To be arranged. **Duration:** 1 week. **Qualifications:** English. **Deadline for application:** 2 months before commencing date. **Fees:** £280.

**Organizer:** The British School of Leather Technology  
The Leathersellers Centre  
Nene College  
Moulton Park  
Northampton NN2 7AL, United Kingdom

## Maintenance

*Short description:* Short courses on: computers in maintenance; cost-effective maintenance; condition-based maintenance; vibration monitoring. *Commencing date:* To be arranged. *Duration:* 2 days-1 week. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Wolfson Maintenance  
Enterprise House  
Manchester Science Park  
Lloyd Street North  
Manchester M15 4EN, United Kingdom

## Management

*Short description:* Short courses on subjects related to: leadership; environmental management; organization; human resources; research and innovation. *Commencing date:* Throughout the year. *Duration:* 1 day-2 weeks. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* To be arranged.

*Organizer:* Brunel Management Programme  
Brunel University  
Uxbridge, Middlesex UB8 3PA, United Kingdom

## Management

*Short description:* Management development and strategy. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Management experience. 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 of a market-orientated economy in the energy sector

*Short description:* Energy sector in the United Kingdom; management in a changing climate; political, economic, legal, social and global factors when allied to supply and demand; safety; the environment; research; investment planning. *Commencing date:* To be arranged. *Duration:* 2-5 days. *Qualifications:* Chairmen, managing directors and chief executives of companies and utilities in the energy sector, senior government officials. English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

## Management problems

*Short description:* Effective maintenance management; production control; quality in manufacturing; quality auditing; total quality management; the application of just-in-time (JIT) in manufacturing; training design and evaluation. *Commencing date:* Throughout the year. *Duration:* 1-5 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* PERA International  
Nottingham Road  
Melton Mowbray, Leicestershire LE13 0PB, United Kingdom

## Metals welding

*Short description:* Short courses on: welding metallurgy; metals welding processes; metals welding production. *Commencing date:* To be arranged. *Duration:* 4 days. *Qualifications:* Degree in engineering or a related discipline. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

*Organizer:* Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

## Middle management

*Short description:* Basic managerial training for specialists who are into their first managerial appointment. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Graduate level or managerial/supervisory experience. English. *Deadline for application:* To be arranged. *Fees:* Approximately £2,600 (fully residential).

*Organizer:* BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

## Middle management

*Short description:* Raise commercial awareness; give international economic background; understand financial accounting procedures. *Commencing date:* To be arranged. *Duration:* 10 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* £500.

*Organizer:* Buckinghamshire College of H.E. Newland Park  
Gorelands Lane  
Chalfont  
St. Giles, Buckinghamshire HP8 4AD, 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; sewing machine instructors; training instructors; safety officers' 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 M20 8QA, United Kingdom

## National (dangerous substances) driver training scheme

*Short description:* A training course for people moving or handling dangerous substances, basically in transport or distribution. *Commencing date:* Throughout the year. *Duration:* Hazfreight 3 days; hazpack 2 days. *Qualifications:* English. *Deadline for application:* To be arranged. *Fees:* £149.50 for 3-day course; £100 for 2-day course.

*Organizer:* Teesside Transport Training Association  
Cargo Fleet Lane  
Middlesbrough, Cleveland, United Kingdom

## **Noise and vibration control**

*Short description:* Short courses on: active control of sound and vibration; community noise and vibration; clinical audiology; engine noise and vibration control; advanced course on noise and vibration. *Commencing date:* March/April, September. *Duration:* 3-5 days. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £600-900.

*Organizer:* ISVR  
University of Southampton  
Southampton, Hampshire SO9 5NH, 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  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

## **Predictive maintenance**

*Short description:* Introduction to the principles of predictive maintenance and its applications. *Commencing date:* April. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* To be arranged.

*Organizer:* Training Manager  
ICI Chemicals and Polymers Ltd.  
Process Plant Services  
P.O. Box 1  
Billingham, Cleveland TS23 1LB, United Kingdom

## **Presentation skills for engineers**

*Short description:* Skills for oral presentations by technologists to non-specialist management personnel. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* Degree in engineering. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

*Organizer:* Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

## **Programme for industry**

*Short description.* Short courses on: aero- and hydro-acoustics; critical currents; neural networks; molecular sensor technology; catalytic reactors; earthquake engineering; remote sensing; river engineering; low-noise RF engineering; chemical engineering for the food industry; electrical drives; prestressed concrete structures; turbomachinery aerodynamics; molecular modelling; energy management; financial econometrics; coatings; manufacturing strategies; engineering design; earth retaining structures; advanced geotechnical analysis; ceramic and metallic composites; mathematics for communications; maximum entropy techniques; nanometre-scale devices; nuclear magnetic resonance in modern chemistry. *Commencing date:* March-September. *Duration:* 2-6 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Programme for Industry  
University of Cambridge  
Department of Engineering  
Trumpington Street  
Cambridge CB2 1PZ, United Kingdom

### **Quality system assessment**

*Short description:* Knowledge and skills involved in assessing quality systems. *Commencing date:* January, April, July, September. *Duration:* 5 days. *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

### **Refinery corrosion and inspection**

*Short description:* Materials and corrosion problems in the oil refinery industry and their solutions. *Commencing date:* July. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* June. *Fees:* £700.

**Organizer:** Training Services, TWI  
Abington  
Cambridge CB1 6AL, United Kingdom

**Venue:** Kuala Lumpur, Malaysia

### **Redesigning the manufacturing organization**

*Short description:* Method for the analysis of working methods and procedures and its application to company structure and practices, including human-factor issues. *Commencing date:* To be arranged. *Duration:* 3-10 days. *Qualifications:* Engineers or managers. English. *Deadline for application:* —. *Fees:* £500-700.

**Organizer:** AMTRI  
Hulley Road  
Macclesfield, Cheshire SK10 2NE, United Kingdom

### **Senior management course**

*Short description:* A senior general management programme to be run jointly with Strathclyde Graduate Business School. *Commencing date:* Autumn. *Duration:* 2 weeks. *Qualifications:* For senior executives or those about to be promoted to executive/director level. English. *Deadline for application:* To be arranged. *Fees:* Approximately £4,000 (fully residential).

**Organizer:** BEI Training Services  
16-18 Chequer Street  
St. Albans, Hertfordshire AL1 3YD, United Kingdom

### **Specialist engineering**

*Short description:* Engineering in boilers, vessels and heat exchangers and various techniques for preventive engineering. *Commencing date:* October. *Duration:* 2 weeks. *Qualifications:* Graduate engineers or experienced engineering managers. English. *Deadline for application:* 3 weeks before commencing date. *Fees:* To be arranged.

**Organizer:** Training Manager  
ICI Chemicals and Polymers Ltd.  
Process Plant Services  
P.O. Box 1  
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  
Savoy Tower  
77 Renfrew Street  
Glasgow G2 3BZ, Scotland, United Kingdom

### **Supervisory management studies**

*Short description:* Skills and techniques needed to implement change on the shopfloor, in the office and in all departments of a company. *Commencing date:* To be arranged. *Duration:* 4 modules of 5 days each. *Qualifications:* English. *Deadline for application:* —. *Fees:* Approximately £2,400 (including accommodation).

**Organizer:** Webton Court Management and Training Centre  
Allerton Park  
Leeds LS7 4ND, United Kingdom

### **Tailor-made engineering courses**

*Short description:* Courses in engineering subjects tailor-made to the students' specifications and needs. Suitable for groups from a single organization. *Commencing date:* To be arranged. *Duration:* 1-18 weeks. *Qualifications:* Engineering graduates or engineering work experience. English. *Deadline for application:* 9 weeks before commencing date. *Fees:* To be arranged.

**Organizer:** British Centre for Engineering and Scientific Training  
Brooklands Close  
Windmill Road  
Sunbury-on-Thames, Middlesex TW16 7DX, United Kingdom

### **Techniques of instruction**

*Short description:* Knowledge and skills of, and practical experience in, instructional techniques. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 4 weeks before commencing date. *Fees:* £250 per week.

**Organizer:** Providence Group Services  
Grainger House, Cradley Road, Five Ways  
Cradley Heath  
Warley, West Midlands B64 6AG, United Kingdom

### **Timber grading**

*Short description:* Practical skills and understanding for grading of timber. *Commencing date:* February, April, June, September. *Duration:* 2 weeks. *Qualifications:* Basic knowledge of timber. English. *Deadline for application:* 2 months before commencing date. *Fees:* £1,990.



**Organizer:** Head, Overseas Operations  
Timber Research and Development Association  
Hughenden Valley  
High Wycombe, Buckinghamshire HP14 4ND, United Kingdom

### **Total quality assurance techniques and systems**

**Short description:** Quality control in manufacturing, with emphasis on statistical process control. **Commencing date:** To be arranged. **Duration:** 5 days. **Qualifications:** Degree in engineering. **English.** **Deadline for application:** To be arranged. **Fees:** Approximately £700 per week.

**Organizer:** Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### **Total quality management**

**Short description:** Knowledge and skills for quality management. **Commencing date:** Throughout the year. **Duration:** 1 day. **Qualifications:** Managers. **English.** **Deadline for application:** 4 weeks before commencing date. **Fees:** £140.

**Organizer:** Short Course Support Unit  
Sheffield City Polytechnic  
43 Broomgrove Road  
Sheffield S10 2NA, United Kingdom

### **Training and development**

**Short description:** Core competences required to meet the training needs of any organization. **Commencing date:** To be arranged. **Duration:** 3 modules, total 20 days. **Qualifications:** English. **Deadline for application:** —. **Fees:** Approximately £2,400 (including accommodation).

**Organizer:** Webton Court Management and Training Centre  
Allerton Park  
Leeds LS7 4ND, United Kingdom

### **Training and instruction**

**Short description:** Instructional and presentation skills, practical application. **Commencing date:** Throughout the year. **Duration:** 2 weeks. **Qualifications:** English. **Deadline for application:** 4 weeks before commencing date. **Fees:** £350 per week.

**Organizer:** Teesside Transport Training Association  
Cargo Fleet Lane  
Middlesbrough, Cleveland, United Kingdom

### **Training management**

**Short description:** Advanced programme dealing with the practice and management of training at a senior level. **Commencing date:** To be arranged. **Duration:** 4 modules of 5 days each. **Qualifications:** English. **Deadline for application:** —. **Fees:** Approximately £2,400 (including accommodation).

**Organizer:** Webton Court Management and Training Centre  
Allerton Park  
Leeds LS7 4ND, United Kingdom

### **Training of trainers**

*Short description:* Short courses on: foundation course for trainers; identification and analysis of training needs; training design; training evaluation; participative methods; advanced participative methods; the workplace trainer; organizational behaviour and behavioural sciences; internal consultancy; managing the training function; making flexible training work; training the occasional trainer; influencing skills; action learning; training for profit; knowledge and skills for sales trainers; training the information technology trainer; training administration; effective presentation. *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

### **Urban and regional studies**

*Short description:* Continuing professional development for surveyors; modern practice/computer programs; housing management. *Commencing date:* To be arranged. *Duration:* 1 day. *Qualifications:* Professional qualifications. English. *Deadline for application:* To be arranged. *Fees:* £150-200 per day.

*Organizer:* Short Course Support Unit  
Sheffield City Polytechnic  
43 Broomgrove Road  
Sheffield S10 2NA, United Kingdom

### **Warehouse management**

*Short description:* Short courses on: warehouse layout and methods; warehouse management; physical distribution; parts stores system design. *Commencing date:* February-October. *Duration:* 4 1/2 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* NMHC Ltd.  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 0AL, United Kingdom

### **Welding inspection**

*Short description:* Welding inspection and quality control, failure assessment. *Commencing date:* October. *Duration:* 1 week. *Qualifications:* English. *Deadline for application:* September. *Fees:* £700.

*Organizer:* Training Services, TWJ  
Abington  
Cambridge CB1 6AL, United Kingdom

*Venue:* Kuala Lumpur, Malaysia

### **Welding of plastics**

*Short description:* Technologies of plastic fusion jointing. *Commencing date:* To be arranged. *Duration:* 3 days. *Qualifications:* Degree in an engineering or related discipline. English. *Deadline for application:* To be arranged. *Fees:* Approximately £700 per week.

**Organizer:** Continuing Education Centre  
Brunel University  
Uxbridge, Middlesex UB8 3PH, United Kingdom

### **Weld quality**

*Short description:* Design, manufacture, non-destructive testing and quality assurance of welded constructions. *Commencing date:* January, May, October. *Duration:* 2 weeks (with 2 weeks practical option). *Qualifications:* Relevant industrial experience. English. *Deadline for application:* —. *Fees:* £700 for each 2 weeks' programme.

**Organizer:** W. McEwan OBE  
Paisley College Quality Centre  
Paisley College, High Street  
Paisley PA1 2BE, Renfrewshire, Scotland, United Kingdom

### **Analysis and negotiation of BOO and BOT projects**

*Short description:* For officials and managers responsible for developing and executing infrastructure development, planning and investment. *Commencing date:* June, December. *Duration:* 2 weeks. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* \$US 3,050.

**Organizer:** Center for Financial Engineering in Development  
2301 E St. NW, A206  
Washington, D.C. 20037, United States of America

### **Management skills**

*Short description:* Short courses on: 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:* To be arranged.

**Organizer:** Training and Development Institute  
P.O. Box 23975  
Washington, D.C. 20026, United States of America

### **Plastics technology**

*Short description:* Short courses on: plastics injection molding, extrusion, recycling, polyethylene resins, plaster technology, polymer testing. *Commencing date:* To be arranged. *Duration:* 2-3 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* To be arranged.

**Organizer:** Plastics Institute of America  
Suite 100  
277 Stanfield Road  
Farfield NJ 07004-1932, United States of America

### **Privatización — organización, estructura y ejecución**

*Breve descripción:* Para funcionarios y ejecutivos responsables de la planificación, administración e implementación de programas de privatización. *Fecha de iniciación:* Julio, noviembre. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 2 semanas antes del curso. *Derechos de inscripción:* \$US 3,500.

*Organizadon:* Center for Financial Engineering in Development  
2301 E St. NW, A206  
Washington, D.C. 20037, United States of America

**Restructuring industrial enterprises**

*Short description:* For officials and managers responsible for planning and implementing enterprise restructuring initiatives. Case-oriented work in management and financial restructuring techniques. *Commencing date:* September, March. *Duration:* 2 weeks  
*Qualifications:* English. *Deadline for application:* 2 weeks before commencing date  
*Fees:* \$US 3,050.

*Organizer:* Center for Financial Engineering in Development  
2301 E St. NW, A206  
Washington, D.C. 20037, United States of America

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

### Aceros Inoxidables

*Breve descripción:* Proceso de corrosión de aceros inoxidables; prevención de las fallas por corrosión; selección del acero inoxidable adecuado para cada operación; diseño; decapado y pasivado; inspección y normalización. *Fecha de iniciación:* Abril. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* 3 meses antes del curso. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Instituto Nacional de Tecnología Industrial (INTI)  
Sector Electroquímica Aplicada  
C.C. 157  
1650 San Martín  
Pcia. de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Leandro N. Alem 1067, 5o. piso  
1001 Capital Federal, Argentina

### Corrosión del acero en el hormigón armado

*Breve descripción:* Introducción a la corrosión del 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:* Para ser acordado.

*Organizador:* Instituto Nacional de Tecnología Industrial (INTI)  
Sector Electroquímica Aplicada  
C.C. 157  
1650 San Martín  
Pcia. de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Leandro N. Alem 1067, 5o. piso  
1001 Capital Federal, 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:* Para ser acordado.

**Organizador:** Instituto Nacional de Tecnología Industrial (INTI)  
Sector Electroquímica Aplicada  
C.C. 157  
1650 San Martín  
Pcia. de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Leandro N. Alem 1067, 5o. piso  
1001 Capital Federal, 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  
Pcia. de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Leandro N. Alem 1067, 5o. piso  
1001 Capital Federal, 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:* Para ser acordado.

**Organizador:** CITIP  
C.C. 157  
1650 San Martín  
Pcia. de Buenos Aires, Argentina  
*Dirección de la entidad a contactar:*  
INTI  
Relaciones y Proyectos Internacionales  
Leandro N. Alem 1067, 5o. piso  
1001 Capital Federal, Argentina

#### **Automatas programables (SPS) aplicados a los mandos eléctricos de maquinaria**

*Breve descripción:* Programación y aplicación de robots con algún nivel de inteligencia artificial. *Fecha de iniciación:* Octubre. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* Julio. *Derechos de inscripción:* —.

**Organizador:** División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

**Lugar:** Centro Colombo Alemán,  
Barranquilla, Regional Atlántico, Colombia

## **Mandos y controles eléctricos de máquinas**

*Breve descripción:* Diseño, manejo y mantenimiento de mandos y controles eléctricos de máquinas y equipos. *Fecha de iniciación:* Octubre. *Duración:* 2 semanas. *Calificaciones:* Instructores y técnicos. Español. *Fecha límite de inscripción:* Julio. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

## **Mantenimiento de sistemas hidráulicos**

*Breve descripción:* Dirigir y operar el mantenimiento de equipos de mandos hidráulicos. *Fecha de iniciación:* Septiembre. *Duración:* 2 semanas. *Calificaciones:* Instructores y técnicos. Español. *Fecha límite de inscripción:* Julio. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

## **Mecanizado eficaz**

*Breve descripción:* Realizar un intercambio de experiencias y desarrollo tecnológicos adquiridos en los procesos de mecanizado, los cuales han permitido la actualización tecnológica en la formación profesional, aumento de la productividad en la industria y la generación de bienes de capital. *Fecha de iniciación:* Marzo. *Duración:* 2 semanas. *Calificaciones:* Personal técnico, tecnólogos y de ingeniería, profesores universitarios. Español. *Fecha límite de inscripción:* Enero. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro de Desarrollo ASTIN de Cali  
Regional del Valle  
Calle 52, No. 2-bis-15  
Salomia, Cali, Valle del Cauca, Colombia

## **Organización y administración del mantenimiento industrial I y II**

*Breve descripción:* Administrar y dirigir el mantenimiento de máquinas industriales, equipo pesado y agrícola. *Fecha de iniciación:* Junio y septiembre. *Duración:* 1 semana. *Calificaciones:* Ingenieros, técnicos, instructores. Español. *Fecha límite de inscripción:* 2 meses antes del curso. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barranquilla, Regional Atlántico, Colombia

## **Programación y control de microprocesadores**

*Breve descripción:* Programación, control de microprocesadores aplicado a la solución de problemas de la ingeniería industrial. *Fecha de iniciación:* Junio. *Duración:* 2 semanas. *Calificaciones:* Técnicos, ingenieros. Español. *Fecha límite de inscripción:* Abril. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro Colombo Alemán  
Barraquilla, Regional Atlántico, Colombia

## **Tratamiento térmico**

*Breve descripción:* Tratamiento térmico de los aceros en la fabricación de bienes de capital. *Fecha de iniciación:* Mayo. *Duración:* 2 semanas. *Calificaciones:* Personal técnico tecnólogos y de ingeniería. Español. *Fecha límite de inscripción:* Febrero. *Derechos de inscripción:* —.

*Organizador:* División Cooperación Técnica  
Calle 57 No. 8-69, Torre Central, Piso 5  
Bogotá, Colombia

*Lugar:* Centro de Desarrollo ASTIN de Cali  
Regional del Valle  
Calle 52, No. 2-bis-15  
Salomia, Cali, Valle del Cauca, Colombia

## **Enfoques y métodos para la capacitación a dirigentes**

*Breve descripción:* El curso brinda información para profesores sobre aspectos de enfoques y métodos a utilizar durante la capacitación a dirigentes. *Fecha de iniciación:* Atil. *Duración:* 2 semanas. *Calificaciones:* Español. *Fecha límite de inscripción:* Marzo. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Escuelas Superior de Cuadros del Ministerio  
de la Industria Básica  
Carretera de Vento km 10 ½  
Municipio Boyeros, Ciudad Habana, Cuba

## **Concrete technology**

*Short description:* Concrete technology, cement and aggregates, their properties, specifications and testing; reinforcing steel, admixtures, concrete mix design, non-destructive testing, quality control, formwork and scaffolding, laboratory tests. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Engineers/managers with 5-8 years of experience. *English.* *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India  
*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Civil Engineering  
Pune 411 001, India



## **Construction and doubling of railway track**

*Short description:* Project planning, management and quality assurance, modern surveying equipment, properties of soil, earth work and its quality control, earth moving equipment and material testing, construction contracts, quality control in concrete production, placing and curing, quality control in linking permanent way. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Engineers/managers with 5-8 years of experience. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* RITES  
New Delhi, India

*Contact address:*  
Group General Manager (Training)  
New Delhi House  
27 Barakhamba Road  
New Delhi 110 001, India

*Venue:* Indian Railways Institute of Civil Engineering  
Pun: 411 001, India

## **Extension motivation programme**

*Short description:* To enhance involvement of bank managers/industrial officers in entrepreneurship development for creating better support for entrepreneurship development programmes and potential entrepreneurs. *Commencing date:* January. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Deadline for application:* 2 months before commencing date. *Fees:* \$US 700 (including accommodation and meals).

*Organizer:* Entrepreneurship Development Institute of India  
Bhat, P.O. 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:* 2-12 days. *Qualifications:* Middle- to higher-level engineers and managers. English. *Deadline for application:* 2 months before commencing date. *Fees:* To be arranged.

*Organizer:* The Fertilizer Association of India  
10, Shaheed Jit Singh Marg  
New Delhi 110 067, India

## **Improving performance of small- and medium-size enterprises**

*Short description:* Short courses on: technology transfer for small and medium-size enterprises; assessing capabilities of promotion of small and medium-size ventures; performance improvement of small and medium-size enterprises, rural entrepreneurship development; training of teachers. *Commencing date:* March, July. *Duration:* 1-2 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* 1 month before commencing date. *Fees:* \$US 1,000 (including accommodation and meals).

*Organizer:* Entrepreneurship Development Institute of India  
Bhat, P.O. Chandkheda 382 424  
Dist. Gandhinagar, Gujarat, India

## Management

*Short description:* Short courses on: administrative management; stores management; value engineering; workstudy appreciation; behavioural science; material and purchase management; financial management. *Commencing date:* Throughout the year. *Duration:* 1-2 weeks. *Qualifications:* English. *Deadline for application:* —. *Fees:* Rs 1,200 per week.

*Organizer:* Director, Training and Sponsored Research  
Research and Development Organization  
Ministry of Defence  
Sena Bhawan, 'B' Wing  
DHQ PO New Delhi 110 011, India

## Manpower planning

*Short description:* Short courses on: human resource development; computer application in manpower planning; manpower planning for different economic sectors; demography, statistics and data analysis; training of trainers; manpower forecasting; human resource management for government officers at different levels. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

*Organizer:* Institute of Applied Manpower Research  
Indraprastha Estate, Mahatma Gandhi Marg  
New Delhi 110 002, India

## Production management

*Short description:* Short courses on: production management; project management; team building; production planning and control; managerial effectiveness. *Commencing date:* January-July. *Duration:* 2 weeks. *Qualifications:* Degree/diploma with 2-3 years of experience in a responsible position. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 1,200.

*Organizer:* National Institute for Training in Industrial Engineering  
(NITIE)  
Vihar Lake  
Bombay 400 087, India

## Refresher course for tool designers

*Short description:* Engineering tolerances, form and position tolerance, metrology equipment, mould design, jigs and fixtures, design details of press tools, principles of gauge design, materials and heat treatment, process planning. *Commencing date:* April. *Duration:* 80 hours. *Qualifications:* Tool designers. English. *Deadline for application:* December 1991. *Fees:* \$US 500.

*Organizer:* General Manager (Training)  
NTTF Training Centre  
P.O. Box 5857  
No. 23/24, II Phase  
Peenya Industrial Area  
Bangalore 560 058, India

## Refresher course for tool-room operators

*Short description:* Limits, fits, engineering tolerances, form and position tolerances, measuring equipment, cutting tools, SPM's spark erosion, wire erosion; practicals on

conventional machines, observation on special-purpose machines, jig boring, jig grinding, press tools, jigs and fixtures, moulds. *Commencing date:* June. *Duration:* 80 hours. *Qualifications:* Tool-room operators. English. *Deadline for application:* February. *Fees:* \$US 500.

*Organizer:* General Manager (Training)  
NTTF Training Centre  
P.O. Box 5857  
No. 23/24, II Phase  
Peenya Industrial Area  
Bangalore 560 058, India

### Teachers' training in entrepreneurship

*Short description:* Orientation in 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 (including accommodation and meals).

*Organizer:* Entrepreneurship Development Institute of India  
Bhat, Chandkheda 382 424  
Dist. Gandhinagar, Gujarat, India

### Tool-room inspectors' course

*Short description:* Limits, fits and tolerances, form and position tolerance, shaft, hole and position measuring instruments, taper/angle measuring, inspection procedure, gauges and their uses, case studies and visit/film show; observation and study of tool-room measuring equipment. *Commencing date:* June. *Duration:* 40 hours. *Qualifications:* Tool-room inspectors. English. *Deadline for application:* February. *Fees:* \$US 250.

*Organizer:* General Manager (Training)  
NTTF Training Centre  
P.O. Box 5857  
No. 23/24, II Phase  
Peenya Industrial Area  
Bangalore 560 058, India

### Maintenance cost control

*Short description:* Cost control theory; the annual budget; control of expenses for maintenance. *Commencing date:* July. *Duration:* 2 weeks. *Qualifications:* Bachelor's degree in mechanical or electrical engineering. English. *Deadline for application:* To be arranged. *Fees:* \$US 1,000.

*Organizer:* The Arab Potash Co., Ltd.  
P.O. Box 1470  
Amman, Jordan

### Gestion

*Brève description:* Cours de courte durée sur : marketing, comptabilité, finances, informatique, gestion. *Début du cours :* A arranger. *Durée :* 3-7 jours. *Qualifications :* Français. *Date limite d'inscription :* 10 jours avant le début du cours. *Droits d'inscription :* FF 1 500-3 500.

**Organisateur :** INSCAF  
DRE Maison des produits  
67 Ha — B.P. 946  
Antananarivo, Madagascar

### **Industrial management**

*Short description:* Short courses on: industrial engineering; sales and marketing; personnel development; management development; industrial relations; quality control circles; management accounting; total quality control; low-cost automation. *Commencing date:* Throughout the year. *Duration:* 2 days-2 weeks. *Qualifications:* Working experience in the subject relevant to the course. English. *Deadline for application:* 1 week before commencing date. *Fees:* To be arranged.

**Organizer:** National Productivity Centre  
Ministry of Trade and Industry  
Peti Surat 64  
46904 Petaling Jaya, Malaysia

### **Gestion et mise en œuvre des programmes de privatisation**

*Brève description :* Acquisition des techniques administratives, organisationnelles, juridiques et financières nécessaires à la gestion des programmes de privatisation. *Début du cours :* A arranger. *Durée :* 2 semaines. *Qualifications :* Français. *Date limite d'inscription :* A arranger. *Droits d'inscription :* A arranger.

**Organisateur :** Ministère de la promotion économique (DIPIP)  
B.P. 480  
Niamey, Niger

### **Informatique de gestion**

*Brève description :* Introduction à la technique informatique, notion de différents systèmes, saisie et traitement des données comptables et financières. *Début du cours :* A arranger. *Durée :* 2-3 semaines. *Qualifications :* Français. *Date limite d'inscription :* A arranger. *Droits d'inscription :* A arranger.

**Organisateur :** Ministère de la promotion économique (DIPIP)  
B.P. 480  
Niamey, Niger

### **Normalisation et contrôle de qualité des produits industriels**

*Brève description :* Initiation aux critères internationaux de normalisation et aux techniques de contrôle de qualité. *Début du cours :* A arranger. *Durée :* 2-3 semaines. *Qualifications :* Français. *Date limite d'inscription :* A arranger. *Droits d'inscription :* A arranger.

**Organisateur :** Ministère de la promotion économique (DIPIP)  
B.P. 480  
Niamey, Niger

### **Trainer's development**

*Short description:* Short courses on: needs analysis; systems approach to skills training; industrial safety work hop for trainers. *Commencing date:* To be arranged. *Duration:* 5 days-2 weeks. *Qualifications:* University degree or equivalent. English. *Deadline for application:* January-February. *Fees:* \$US 1,100-1,500 (including boarding).

**Organizer:** Industrial Training Fund  
P.M.B. 2199  
Jos, Plateau State, Nigeria

### **Banca y comercio internacional**

**Breve descripción:** Resaltar la importancia del comercio exterior para las empresas y los países en desarrollo, y sus instituciones financieras que deben actuar como agentes financieros del cambio empresarial que fomente una mayor integración económica, por la vía de las operaciones comerciales internacionales. **Fecha de iniciación:** Para ser acordado. **Duración:** 2 semanas. **Calificaciones:** Profesionales, ejecutivos en actual ejercicio con experiencia financiera en instituciones financieras. Español. **Fecha límite de inscripción:** 2 semanas antes del curso. **Derechos de inscripción:** \$US 500.

**Organizador:** Asociación Latinoamericana de instituciones financieras de desarrollo (ALIDE)  
Av. Paseo de la República 3211  
Lima 100, Perú

### **Gestión financiera, empresarial y bancaria**

**Breve descripción:** Economía bancaria, análisis, crédito, gestión bancaria. **Fecha de iniciación:** Para ser acordado. **Duración:** 2 semanas. **Calificaciones:** Profesionales, ejecutivos en actual ejercicio con experiencia financiera. Español. **Fecha límite de inscripción:** 2 semanas antes del curso. **Derechos de inscripción:** \$US 500.

**Organizador:** Asociación Latinoamericana de instituciones financieras de desarrollo (ALIDE)  
Av. Paseo de la República 3211  
Lima 100, Perú

### **Construction**

**Short description:** Short courses on: construction methods and techniques; planning and control; concreting works; line and grade; masonry; earthworks—vertical construction; earthworks—horizontal construction; heavy equipment management; quality control; work-study methods in construction; value and cost engineering. **Commencing date:** To be arranged. **Duration:** 3-11 days. **Qualifications:** Bachelor's degree, preferably in engineering or architecture, with 2 years of experience in construction. English. **Deadline for application:** 1 week before commencing date. **Fees:** \$US 250-600.

**Organizer:** Construction Manpower Development Foundation (CMDF)  
6th floor, Prudential Bank Building  
2158 Pasong Tamo, Makati  
Metro Manila, Philippines

### **Electromechanics**

**Short description:** Short courses on: pneumatic and hydraulic; air conditioning for cars; industrial refrigeration and air conditioning; commercial refrigeration and air conditioning; domestic refrigeration and air conditioning; industrial sequence control; industrial electricity; electric machine rewinding; appliance servicing; electric wiring system design. **Commencing date:** January, April. **Duration:** 2 1/2 weeks. **Qualifications:** Professional qualifications. English. **Deadline for application:** To be arranged. **Fees:** P 1,400-2,000.

**Organizer:** Office of Manpower Skills Development (OMSD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

## Export promotion

*Short description:* Short courses on: basics of exporting; organizing for export; financing exports; letters of credit; costing and pricing of products for export; negotiating with foreign buyers; market information; exhibitions and visual merchandising; participating in trade fairs; testing of fabrics and garments; fabric and garment inspection; testing of wooden furniture; testing of processed foods and vegetables; testing for colour fastness, fibre composition and harmful substances in garments; testing of frozen marine products; testing of fruits and vegetables preserved in sugar; canning of food products; packaging of processed foods. *Commencing date:* To be arranged. *Duration:* 1-5 days. *Qualifications:* English. *Deadline for application:* —. *Fees:* P 200-1,300.

*Organizer:* Philippine Trade Training Center  
International Trade Center Complex  
Roxas Blvd., cor. Gil Puyat Ave.  
1300 Pasay City, Philippines

## Management and development of training

*Short description:* Short courses imparting knowledge and skills for the identification of training needs and techniques for managing and developing training programmes. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* Professional qualifications. English. *Deadline for application:* —. *Fees:* \$US 253.

*Organizer:* Institute of Vocational Training and Development (IVTD)  
National Manpower and Youth Council  
Taguig, Metro Manila, Philippines

## Cutting with laser CO<sub>2</sub>

*Short description:* Use of laser CO<sub>2</sub> for cutting of metal, plastics and wood. *Commencing date:* June. *Duration:* 2 days. *Qualifications:* Professional experience. Portuguese. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 80,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## Generating and using steam

*Short description:* Selection of equipment; procedures for energy saving. *Commencing date:* May. *Duration:* 8 days (3 hours per day). *Qualifications:* Professional experience. Portuguese. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 85,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## Industrial automation and robotics

*Short description:* Different approaches to manufacturing in industry under the impact of robots and plant automation. *Commencing date:* April. *Duration:* 3 days. *Qualifications:* English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 100,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Industrial safety**

*Short description:* Technical and organizational measures for the prevention of dangerous situations in the industrial environment. *Commencing date:* April. *Duration:* 3 days. *Qualifications:* Professional experience. Portuguese, English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 85,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Quality costs**

*Short description:* Training in the quality field. *Commencing date:* May. *Duration:* 3 days. *Qualifications:* Professional experience. Portuguese, English. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 100,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Welding with high-density energy beams (electrons and laser beam)**

*Short description:* Latest technologies for welding, e.g. steels. *Commencing date:* June. *Duration:* 3 days. *Qualifications:* Professional experience. Portuguese. *Deadline for application:* 2 weeks before commencing date. *Fees:* Esc 85,000.

*Organizer:* Instituto de Soldadura e Qualidade  
Rua Tomás de Figueiredo 16A  
1500 Lisbon, Portugal

## **Internal audit control**

*Short description:* The internal audit aspect; the auditing process. *Commencing date:* November. *Duration:* 10 days. *Qualifications:* Graduates. Arabic. *Deadline for application:* October. *Fees:* To be arranged.

*Organizer:* Saudi Basic Industries Corporation  
P.O. Box 5101  
Riyadh 11422, Saudi Arabia

## **Petrochemicals—management**

*Short description:* Short courses on: risk management; quality management; statistical process control. *Commencing date:* February-October. *Duration:* 3-5 days. *Qualifications:* Graduates. English. *Deadline for application:* 1 month before commencing date. *Fees:* To be arranged.

*Organizer:* Saudi Basic Industries Corporation  
P.O. Box 5101  
Riyadh 11422, Saudi Arabia

## **Fertilizer industry**

*Short description:* Short courses on: production planning and control; coal gasification; gas purification and ammonia synthesis; nitric acid production; ammonium sulphate production; production of ammonium nitrate fertilizers; technical safety; first aid; pollution control; chemical analysis in fertilizer industry; instrumentation technology; maintenance; management concepts. *Commencing date:* April-June. *Duration:*

1-3 days. *Qualifications:* Engineers or technicians working in fertilizer industry. English. *Deadline for application:* 3 months before commencing date. *Fees:* \$US 45 per day (including board and lodging).

*Organizer:* TÜGSAŞ  
Eğitim Genel Müdürlüğü  
Konya Devlet Yolu No. 70  
06330 Ankara, Turkey

### **Post-graduate training opportunities**

*Short description:* Courses of different duration related to the following subjects: science education; statistics; international business finance; international finance; personnel management; architecture; public administration; corporate finance; marketing; physics; chemistry; banking; business administration; personal computers; mechanical engineering; information systems; industrial engineering; electrical engineering; metallurgical engineering; civil engineering; computer engineering; petroleum engineering; mining engineering. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Turkish, English. *Deadline for application:* 3 months before commencing date. *Fees:* To be arranged.

*Organizer:* Middle East Technical University  
Continuing Education Center  
Ankara, Turkey

### **Productivity improvement**

*Short description:* Promotion of productivity concept; ways to increase productivity. *Commencing date:* Throughout the year. *Duration:* 3-5 days. *Qualifications:* Managers. Turkish. *Deadline for application:* —. *Fees:* To be arranged.

*Organizer:* National Productivity Centre of Turkey  
Gelibolu Sk. 5  
06690 Kavaklıdere, Ankara, Turkey

### **Solid waste incineration**

*Short description:* Conventional and fluidized-bed incineration; air pollution control; disposal of generated ashes. *Commencing date:* February. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* January. *Fees:* \$US 750.

*Organizer:* Turkish National Committee on Solid Wastes  
Boğaziçi University  
80815 Bebek, Istanbul, Turkey

### **Solid waste management**

*Short description:* Solid waste classification and characterization, collection, transfer stations, recycling, disposal, sanitary landfill, composting, incineration, introduction to hazardous waste management. *Commencing date:* June. *Duration:* 5 days. *Qualifications:* English. *Deadline for application:* April. *Fees:* \$US 600.

*Organizer:* Turkish National Committee on Solid Wastes  
Boğaziçi University  
80815 Bebek, Istanbul, Turkey



## **Desarrollo gerencial**

*Breve descripción:* Técnicas fundamentales de la capacidad para dirigir, especialmente preparado para el directivo, que trabaja en el comercio, la industria, la banca y empresas estatales o en cualquier otra actividad formalmente organizada, adiestrando a los gerentes con técnicas que aumentarán su capacidad. *Fecha de iniciación:* Para ser acordado. *Duración:* 27 horas. *Calificaciones:* Gerentes y jefes de departamento. Español. *Fecha límite de inscripción:* Para ser acordado. *Derechos de inscripción:* Para ser acordado.

*Organizador:* Centro Nacional de Tecnología y Productividad Industrial  
Sarandí 690 D, 2do. Entrepiso  
Montevideo, Uruguay

