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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

1988

GUIDE TO TRAINING OPPORTUNITIES
FOR INDUSTRIAL DEVELOPMENT

(Sixteenth issue)

APERÇU DES MOYENS DE FORMATION
POUR LE DÉVELOPPEMENT INDUSTRIEL

(Seizième édition)

REPERTORIO DE
OPORTUNIDADES DE CAPACITACIÓN
PARA EL DESARROLLO INDUSTRIAL

(Decimosexta edición)

Preface

This compilation of industrial training opportunities for personnel from developing countries is the sixteenth edition of a UNIDO publication that first appeared in 1972. It is based on the replies to a questionnaire soliciting information about training facilities, sent to Governments, organizations, institutions and other bodies concerned with industrial training. To reduce the size of this edition entries listed in earlier issues have not been repeated unless a specific request to do so was received from the organizer. Likewise, a single entry frequently covers many courses given by the same organization. Consequently, the current edition is smaller than earlier ones but contains considerably more information. Its approximately 620 entries cover more than 3,200 training courses. It should be emphasized that while these are but a fraction of the facilities existing globally for industrial training, they are possibilities that Governments and organizations believe are of particular interest to UNIDO.

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

The *Guide* is divided into three chapters:

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

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

Chapter 1 follows chronological order, while the entries in chapters 2 and 3 are listed by country in English alphabetical order.

UNIDO is not in a position to give further details on courses in chapters 2 and 3. Readers who wish to have more information are asked to contact the institutions directly, using the mailing address given in each entry.

The training opportunities listed in the *Guide* are not limited to holders of UNIDO fellowships. Any qualified individual from a developing country who has not applied for or won a UNIDO fellowship may apply for a course or be nominated to attend. Such applications and nominations may go directly to the organizer of the course. Applicants for UNIDO fellowships, however, must be nominated by their Governments, and the nominations must be sent through the Resident Representative

of the United Nations Development Programme (UNDP) to UNIDO. Further information on UNIDO training activities is available from the UNIDO Industrial Training Offer Programme, 1988.

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

It is hoped that this publication will continue to benefit those in developing countries who are in need of industrial training. The seventeenth edition of the *Guide* is scheduled to appear in late 1988 and will cover courses to be offered in 1989 and, to the extent possible, 1990.

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Préface

Le présent répertoire des possibilités de formation industrielle offertes aux cadres de pays en développement est la seizième édition d'un document de l'ONUDI publié pour la première fois en 1972. Il a été établi d'après les renseignements fournis par un certain nombre de gouvernements, d'organisations et d'institutions s'occupant de formation industrielle en réponse à un questionnaire sur les possibilités de formation qu'ils offraient. Afin de condenser la présente édition, les rubriques qui figuraient déjà dans les éditions précédentes n'ont été réinsérées que sur la demande expresse des organisateurs. Il est également fréquent qu'une rubrique englobe plusieurs stages mis sur pied par une même organisation. En conséquence, la présente édition, moins volumineuse que les précédentes, contient néanmoins beaucoup plus d'informations. Elle compte quelque 620 rubriques concernant plus de 3 200 stages de formation. Il convient de souligner que ces possibilités de formation ne représentent qu'une infime partie de celles qui sont offertes dans le monde entier mais que les organisations et les gouvernements estiment qu'elles présentent un intérêt particulier pour l'ONUDI.

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

Le présent *Répertoire* comprend trois chapitres :

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

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

Pour le chapitre 1, on a adopté l'ordre chronologique, tandis que dans les chapitres 2 et 3, les possibilités de formation énumérées sont classées dans l'ordre alphabétique anglais des pays hôtes.

Pour obtenir de plus amples renseignements sur les stages visés dans les chapitres 2 et 3, on se mettra en rapport directement avec les institutions intéressées; leurs adresses figurent dans les rubriques consacrées aux stages qu'elles organisent.

Les moyens de formation indiqués ne sont pas réservés exclusivement aux titulaires de bourses de l'ONUDI. S'il remplit les conditions requises, tout ressortissant d'un pays en développement peut demander à participer à l'un de ces stages ou à être désigné pour y participer. Dans le cas des personnes n'ayant pas sollicité ou obtenu une bourse des Nations Unies, les demandes ou les candidatures peuvent être présentées directement à l'organisateur du stage considéré. Les candidats à des bourses de l'ONUDI doivent être désignés par leurs gouvernements et leurs dossiers doivent être soumis à l'Organisation par l'intermédiaire du Programme des Nations Unies pour le développement (PNUD). Pour tous renseignements complémentaires sur les activités de formation de l'ONUDI, prière de consulter la brochure intitulée "Programme de formation industrielle proposé par l'ONUDI pour 1988".

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

L'ONUDI espère que la présente publication sera aussi utile que les précédentes à ceux qui, dans les pays en développement, ont besoin d'une formation industrielle. La dix-septième édition du *Répertoire*, qu'il est prévu de publier à la fin de 1988, indiquera les possibilités de formation offertes pour l'année 1989 et, dans la mesure du possible, pour l'année 1990.

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Prefacio

La presente compilación de oportunidades de capacitación industrial para personal de países en desarrollo constituye la decimosexta edición de una publicación de la ONUDI que apareció por vez primera en 1972. Está basada en las respuestas a un cuestionario enviado a gobiernos, organizaciones, instituciones y otras entidades que se ocupan de la capacitación industrial, solicitando información sobre servicios e instalaciones para este objeto. A fin de reducir las dimensiones de esta edición, no se ha repetido ninguna entrada que figurase en ediciones anteriores salvo cuando se ha recibido una solicitud expresa de la entidad organizadora. Asimismo, una sola entrada sirve, a menudo, para reseñar varios cursos impartidos por la misma organización, lo que explica que la presente edición, pese a ser más pequeña, contenga bastante más información que las anteriores. El *Repertorio* contiene aproximadamente 620 entradas y facilita información sobre más de 3.200 cursos de capacitación. Si bien estas cifras no pasan de ser una fracción de las oportunidades de capacitación industrial existentes en todo el mundo, cabe señalar que se trata de oportunidades consideradas por los gobiernos y las organizaciones competentes como de particular interés para la ONUDI.

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

El *Repertorio* está dividido en tres capítulos:

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

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

En el capítulo 1 se sigue el orden cronológico, mientras que en los capítulos 2 y 3, las entradas se presentan en el orden alfabético inglés de los países en que se ofrece la capacitación.

La ONUDI no está en condiciones de dar más detalles sobre los cursos en los capítulos 2 y 3. Se ruega a los lectores que deseen más información al respecto que se dirijan directamente a esas instituciones, cuyas direcciones figuran junto a cada entrada.

Las oportunidades de capacitación indicadas en el *Repertorio* no se ofrecen sólo a becarios de la ONUDI. Cualquier persona calificada de un país en desarrollo que no haya solicitado u obtenido una beca de la ONUDI puede solicitar su admisión o ser presentada como candidato para participar en uno de estos cursos. Esta solicitud y su candidatura pueden dirigirse directamente al organizador del curso. En cambio, las candidaturas a becas de la ONUDI deben ser presentadas a la Organización por los respectivos gobiernos, por conducto del Representante Residente del Programa de las Naciones Unidas para el Desarrollo (PNUD). En el Programa de Ofertas de Capacitación Industrial, de la ONUDI, para 1988, se ofrece más información sobre las actividades de capacitación de la Organización.

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

Se espera que esta publicación siga beneficiando a aquellas personas de los países en desarrollo que requieran capacitación industrial. La publicación de la decimoséptima edición de este *Repertorio* está prevista para finales de 1988; comprenderá los cursos que vayan a ofrecerse en 1989 y, en la medida de lo posible, en 1990.

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Chapter 1. Training opportunities offered by UNIDO

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

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

At the time of the publication of this *Guide*, the UNIDO group training programmes shown in the list below are scheduled to take place in 1989. They are all organized *subject to the availability of funds* and suitable host facilities. The programmes are held on a regional or interregional basis, this being clearly indicated for each of the programmes listed. Please note that the language in which the course will be conducted is shown for each programme; it is essential that participants are proficient in that language to obtain maximum results out of the programme.

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

The general requirements for admission are an academic degree and several years of practical experience in the particular field.

Further information may be obtained from:

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

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

Chapitre 1. Possibilités de formation offertes par l'ONUDI

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

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

Au moment de la publication du présent *Répertoire*, les programmes de formation groupés de l'ONUDI mentionnés sont programmés pour être organisés en 1988. Tous sont organisés *sous réserve de disposer de fonds nécessaires* et de trouver dans le pays d'accueil des moyens de formation adéquats. Les programmes sont organisés sur une base régionale ou interrégionale; ceci est clairement indiqué pour chacun des programmes figurant dans la liste. Il est à noter que la langue dans laquelle le cours sera conduit est mentionnée pour chaque programme. Il est essentiel que les participants connaissent bien cette langue pour retirer le maximum de résultats du programme.

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

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

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

Service de la formation industrielle, DOI
Organisation des Nations Unies pour le développement industriel
Boîte postale 300
A-1400 Vienne (Autriche)

Toute demande d'information concernant les programmes doit parvenir suffisamment à l'avance à l'ONUDI pour permettre l'échange des communications.

Capítulo 1. Oportunidades de capacitación ofrecidas por la ONUDI

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

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

En el momento de publicarse este *Repertorio*, los programas de capacitación colectiva de la ONUDI mencionados en esta lista están programados para llevarse a cabo en 1988. La organización de cada uno de estos programas *está sujeta a la disponibilidad de los recursos financieros necesarios* así como la disponibilidad de una infraestructura de capacitación adecuada por la entidad huésped. Los programas se celebrarán con carácter regional e interregional, esto está claramente indicado para cada programa anunciado. Por favor, nótese que la lengua en la cual el curso será conducido será indicada en cada programa. Es esencial que los participantes conozcan bien esta lengua para obtener los mayores resultados del programa.

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

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

Puede obtenerse mayor información sobre estos programas escribiendo a:

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

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

JANUARY/JANVIER/ENERO

Maintenance of bio-medical and laboratory equipment

General description: A 3-week course at the Technical University of Budapest followed by 5 weeks of training at 4 leading industrial companies covering the operation of equipment, its electronic system, installation, maintenance and trouble-shooting. *Duration:* 11 January-4 March. *Invited countries:* Interregional programme. *Qualifications:* B.Sc. or M.Sc. in electronics. English.

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

Formation des formateurs dans le secteur de la petite et moyenne entreprise

Description générale : Le programme s'adresse aux chefs d'entreprise et formateurs capables d'appliquer des techniques leur permettant d'établir des diagnostics de leurs PME, d'apprendre à agir en tant que formateurs auprès des PME en utilisant des méthodes de gestion plus efficaces, de développer leurs aptitudes à l'action-conseil dans l'identification des problèmes auxquels sont confrontées les PME et leur solution pratique, de renforcer leurs connaissances théoriques relatives à la gestion financière des PME, et d'établir des plans d'action pour améliorer la situation des PME dans les pays membres de l'UDEAC. Le programme prévoit également des visites d'étude aux PME et l'utilisation des études de cas pour illustrer les aspects théoriques de la formation. *Durée :* 15-29 janvier, 2 semaines. *Pays invités :* Cameroun, Congo, Gabon, Guinée équatoriale, République centrafricaine, Tchad. *Qualifications:* Etre titulaire d'un diplôme universitaire et justifier d'une expérience pratique de 2 à 3 ans dans les secteurs des PME. Français.

Organisme hôte : Secrétariat général de l'Union douanière et économique de l'Afrique centrale (UDEAC) Bangui, République centrafricaine

Production management in manufacturing industry

General 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:* 19 January-8 March. *Invited countries:* Interregional programme. *Qualifications:* Factory managers, production managers or managers having production management responsibility; at least 3 years of practical managerial experience. English.

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

MARCH/MARS/MARZO

Iron and steel industry technology

General description: In-plant training in sintering, iron-making; oxygen-converter, electric-arc and open-hearth furnace steelmaking; ladle metallurgy; continuous steel casting; sheet and section rolling; maintenance of electrical and mechanical equipment; refractory maintenance; environmental protection; foundry practice. Theory of the technological processes involved. Study visits to a number of plants in related industries. *Duration:* 9 March-24 June. 16 weeks. *Invited countries:* Interregional programme. *Qualifications:* For participants with at least 3 years of practical experience; degree in metallurgical,

chemical, electrical or mechanical engineering; directly engaged in iron and steel industry. English.

Host institution: Zaporozh Steel Zaporozhye, Ukrainian Soviet Socialist Republic

Grain milling and storage (with training of trainers)

General 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:* 10 March-17 June. *Invited countries:* Interregional programme. *Qualifications:* University 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 practical 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

Technology and equipment in electric welding

General description: Technology and equipment for electric fusion, resistance, welding processes, modern welding, arc power resources, welding material and structures, constructive technological designing of welded material. In-plant training in plants manufacturing electric welding equipment, metalworking industry as well as laboratories. *Duration:* 16 March-1 July. 16 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree in electrical or mechanical engineering or equivalent; at least 3 years of practical experience related to electric welding. English.

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

Technology and training methodology in diesel engines

General description: Practical know-how and experience in technological, economic and managerial aspects on the utilization, operation and maintenance; design and production of diesel engines and spare parts. In-plant training in the production plants on manufacturing of diesel engines and spare parts or on maintenance operations (with training methodology aspects). *Duration:* 24 March-21 April. *Invited countries:* Interregional programme. *Qualifications:* University degree in mechanical engineering or equivalent; a few years of practical experience in a responsible capacity in State-owned or private enterprise in operation and/or overall maintenance and repair of diesel engines, design or production of such engines or spare parts. English

Host institution: TES Institute
Prague, Czechoslovakia

Management and organization of industrial co-operatives

General description: Intensive training programme consisting of theoretical and practical training in organization and management of industrial co-operatives in metalworking, wood processing and garments industries to upgrade skills and knowledge of participants. *Duration:* March/June. 8 weeks. *Invited countries:* Regional programme for Africa. *Qualifications:* University degree in economics, business administration or co-operatives or equivalent; senior supervisory and managerial post in a co-operative

organization. Preference will be given to participants engaged in 1 of the 3 sub-group specializations. English.

Host institutions: Central Union of Work Co-operatives, Poland
CECTI, Italy

Venues: Poland
Italy

APRIL/AVRIL/ABRIL

Technology of mineral fertilizer production

General description: Lectures and discussions on: nitrogen and phosphate fertilizers; technology and planning of mineral fertilizer production; raw material, present development prospects of world production of mineral fertilizers; key processes and operations and their economic evaluation. One month in-plant training at nitrogen fertilizer plants in the USSR. *Duration:* 5 April-3 July. *Invited countries:* Interregional programme. *Qualifications:* University degree in chemical engineering or chemistry or equivalent; at least 3 years of practical experience in a supervisory or managerial capacity in the fertilizer industry. English.

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

Industrial planning

General description: Technical aspects and methods of industrial planning at different levels; uniform systems of industrial planning at national, regional, sectoral and factory levels (long-term forecasts, long-term, medium-term and annual plans); organs of planning co-ordination of national industrial development plans at international level; strategies, planning and methods for human resources development at national, regional and enterprise levels. *Duration:* 18 April-21 May. 4 1/2 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree and/or extensive experience in industrial planning preferably at national, sectoral and branch levels; senior positions with government or public enterprises. Good English.

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

Cement industry technology

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

Host institution: Cement Research and Development Centre
Ankara, Turkey

Management of middle-size industrial enterprises

General description: Lectures, guided discussions, group work, project work and visits to selected industrial plants. Seven modules: theory of management; managing the economy; production management; organization of enterprises management; management planning in administration; human resources development concepts; training of trainers. *Duration:* April/May. 5 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree preferably in technology or economics or equivalent; at least 5 years of experience in industrial management. The programme is for general managers,

deputy general managers, potential general managers who by virtue of their functions can influence the formulation of plans. English.

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

Design and manufacturing of agricultural machinery

General description: With emphasis on practical training, the programme will cover operations related to casting, heat treatment, moulding, design, manufacturing process, construction and operation of agricultural machinery including walking tractors and quality control. *Duration:* April/July. 14 weeks. *Invited countries:* Interregional programme. *Qualifications:* Agricultural or mechanical engineering; 3-5 years of practical experience in manufacturing of farm machinery implements; industry supervisory responsibilities. English.

Host institution: Zhenjiang Institute of Agricultural Machinery
Zhenjiang, China

Maintenance and repair of railroad equipment

General description: Upgrading practical experience and theoretical knowledge in maintenance and repair of railway equipment. *Duration:* April/July. 12 weeks. *Invited countries:* Regional programme for Africa. *Qualifications:* Engineers in railway maintenance and repair. English.

Host institutions: British Rail Engineering Ltd. (BREL)
Derby, United Kingdom
Kenya Railways
Nairobi, Africa

Venues: United Kingdom
Kenya

Repair and maintenance of diesel engines

General description: The basic working principles, construction and general characteristics of high-speed diesel engines, the basic work involved in the assembly, inspection and adjustment of such engines and the techniques of their installation, maintenance, overhaul and repair. *Duration:* April/July. 14 weeks. *Invited countries:* Interregional programme. *Qualifications:* Mechanical engineering degree; 3-5 years of experience with supervisory responsibilities in maintenance, repair and overhaul of diesel engines. English.

Host institution: Ministry of Agricultural Machinery
Shanghai Diesel Engines Works
Shanghai, China

MAY/MAI/MAYO

Methods and techniques of pesticide production and formulation

General description: Development of pesticide chemicals; plant design; environmental considerations; equipment used in pesticide formulation; testing of products; formulation of granular and wettable powders, dusts, aerosols, baits and emulsifiable compositions; packaging; quality control distribution. Study tours to major pesticide plants. *Duration:* 16 May-24 June. *Invited countries:* Interregional programme. *Qualifications:* University degree in agricultural or chemical engineering or chemistry or equivalent; at least 3 years of practical experience in a supervisory or managerial capacity in the production and formulation of pesticides. English.

Host institution: Karl Marx University
Leipzig, German Democratic Republic

Modern foundry technology in production of spare parts

General description: Design of modern foundry processes (including economic and technical aspects); foundry materials; melting and casting technologies; pattern-making practice; moulding materials and moulding technology; quality control related to production of spare parts and repair of castings; environmental protection including noise control and other safety and pollution problems. *Duration:* May/June. 7 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in foundry or metallurgy or equivalent; at least 1 year of practical experience (preferably in a supervisory position) in the production of spare parts. English.

Host institution: Foundry Research Institute
Krakow, Poland

JUNE/JUIN/JUNIO

Management of human resources development in industry

General description: The objective of the programme is to upgrade the knowledge and widen the experience of professionals responsible for the planning and co-ordination of training activities in industry in developing countries. Studies of the main topics, such as human resources planning and methodology, are complemented by study visits to educational institutions of all levels, round-table discussions and practice orientation. *Duration:* 21 June-29 July. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree in technology or economics or equivalent; at least 3 years of practical experience in industrial training. Candidates must be responsible for the planning and co-ordination of training activities at regional or sectoral industrial level or advise the policy-making organ dealing with industrial training. English.

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

Utilisation industrielle des herbes médicinales

Description générale : Herbes médicinales provenant de la flore naturelle; établissement des cartes économiques de la flore médicinale; des principes actifs; contrôle qualitatif des produits pharmaceutiques fabriqués à partir d'herbes médicinales; identification des espèces; détermination des caractéristiques physicochimiques des huiles essentielles. Partie théorique, travaux pratiques et visites d'usines. *Durée :* Juin/juillet. 5 semaines. *Pays invités :* Programme interrégional. *Qualifications :* Titulaires d'un diplôme en pharmacie, en chimie, en botanique ou agronomie; l'expérience de la recherche-développement dans le domaine des plantes médicinales et aromatiques. Français.

Organisme hôte : Centre commun ONUDI/ROUMANIE

AUGUST/AOUT/AGOSTO

Environmental assessment and management aspects of air and water pollution from industry

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

Host institution: State University of Ghent
Ghent, Belgium

Technology and equipment in electric welding

General description: Technology and equipment for electric fusion, resistance, welding processes, modern welding, arc power resources, welding material and structures, constructive technological designing of welded material. In-plant training in plants manufacturing electric welding equipment, metalworking industry as well as laboratories. *Duration:* 1 September-16 December. 14 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree in electrical or mechanical engineering or equivalent; at least 3 years of practical experience related to electric welding. English.

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

Metalworking industry

General description: Planning, executing and supervising of the manufacturing processes of machine parts; design of jigs and fixtures, design and use of cutting tools; operation and maintenance, quality control and economics of metalworking operations. Practical studies in laboratories and in-plant training in metalworking (13 to 15 machine-producing factories). *Duration:* 5 September-23 December. *Invited countries:* Interregional programme. *Qualifications:* Degree in mechanical engineering or equivalent; at least 3 years of practical experience in a supervisory or managerial capacity in metalworking, particularly machine tool operations, planning, manufacture and maintenance and repair. English.

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

Documentation et information industrielles

Description générale : Rôle de l'information dans le développement industriel; méthodes de recherche et d'extraction des données et leurs applications pratiques; méthodes de classification; systèmes d'information pour l'industrie. Formation pratique dans les domaines de l'information et de la documentation industrielles et visites d'instituts spécialisés chargés de fournir des renseignements à l'industrie. *Durée :* 6 septembre-25 octobre. 7 semaines. *Pays invités :* Programme interrégional. *Qualifications :* Diplôme universitaire ou diplôme équivalent; quelques années d'expérience pratique dans le domaine de l'information et de la documentation scientifiques et technologiques. Français.

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

Iron and steel industry technology

General description: In-plant training in sintering, iron-making; oxygen-converter, electric-arc and open-hearth furnace steelmaking; ladle metallurgy; continuous steel casting; sheet and section rolling; maintenance of electrical and mechanical equipment; refractory maintenance; environmental protection; foundry practice. Theory of the technological processes involved. Study visits to a number of plants in related industries. *Duration:* 7 September-7 December. 12 weeks. *Invited countries:* Interregional programme. *Qualifications:* For participants with at least 5 years of practical experience; degree in metallurgical, chemical, electrical or mechanical engineering; directly engaged in iron and steel industry. English.

Host institution: Zaporozh Steel
Zaporozhye, Ukrainian Soviet Socialist Republic

Technology and equipment in rice-processing industry

General description: Major trends in the development of silo and rice processing industries; characteristics and range of rice mill products; quality control; modern rice grain and

hulled rice starch technology; modern types of rice granaries; modern technological equipment of rice processing enterprises; basic flow charts for rice processing; preventive maintenance of equipment at rice processing enterprises; quality control. Lecture-type instruction, laboratory practicals, in-plant training in selected enterprises. *Duration:* 21 September-8 December. *Invited countries:* Interregional programme. *Qualifications:* University degree or equivalent; engineers and technicians with at least 3 years of practical experience in a supervisory or managerial capacity in the rice-processing industry. English.

Host institution: Institute for Advanced Training of Managers and Specialists of the USSR
Ministry of State Purchases
Moscow, Union of Soviet Socialist Republics
(with visits to Kiev, Leningrad, Krasnodar, Slavynsk-na-Kubani and Krasnoarmeiskaya)

Methods and technology in the printing industry

General 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. Theoretical training, study visits, practical training in plants manufacturing printing machinery and in printing houses. *Duration:* 26 September-15 October. *Invited countries:* Interregional programme. *Qualifications:* University degree in the field of printing industry or equivalent; managerial or high level technical positions in the printing industry or senior officials of a public or private printing organization with at least 2 years of practical experience. English.

Host institution: VEB Polygraph
Leipzig, German Democratic Republic

Fruit and vegetable processing operations for LDCs

General description: Part I: Seminars on various subjects of fruit and vegetable technology organized on the basis of questionnaires received from participants. Practical demonstration work in fruit and vegetable laboratories and pilot plants of the institute. Part II: Study trips to industrial fruit and vegetable processing plants at Marmara and in the Aegean regions. *Duration:* September/October. 6 weeks. *Invited countries:* Least developed countries. *Qualifications:* Degree in food science and technology; at least 1 year of practical experience in the home country. English.

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

Industrial planning and development

General description: Macro-planning and strategy oriented course. Long-term development issues of industrialization, industrial strategies and planning, industrial incentives and promotional policies, issues on technology transfer and labour employment, issues of financing industrial development, project preparation, project appraisal. Field trip and workshop. *Duration:* September/October. 8 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree or equivalent with basic knowledge and at least 3 years of practical experience in industrial development; industrial development economists at government organizations and public institutions for industrial development and implementation. Applicants aged between 30 and 45 years. Good English.

Host institution: International Development Centre
Tokyo, Japan

Small-scale foundry operations for LDCs

General description: Part I: Seminars at the Marmara Research Institute on various subjects of foundry technology organized on the basis of questionnaires received from participants.

Practical demonstration work. Part II: Practical training in the foundry of Gazi University on the above subjects. Part III: Study visits to foundries near Istanbul, Ankara and Bursa. *Duration*: September/October. 7 weeks. *Invited countries*: Least developed countries. *Qualifications*: Degree in foundry or metallurgy or equivalent; at least 1 year of practical experience in the home country. English.

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

Technologie de l'industrie du ciment

Description générale : Le programme porte sur les techniques de l'industrie du ciment et comprend des sujets tels qu'études de faisabilité, matières premières, gestion de la production, contrôle de la qualité, entretien et réparation, énergie. *Durée* : Septembre/octobre. 5 semaines. *Pays invités* : Programme interrégional. *Qualifications* : Diplôme d'ingénieur en chimie, mécanique, électricité; de 1 à 5 ans d'expérience pratique dans l'industrie du ciment. Français.

Organismes hôtes : Centre de développement et de recherche sur le ciment
Ankara, Turquie

Entretien du matériel ferroviaire

Description générale : 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. 4 semaines. *Pays invités* : Programme régional pour l'Afrique. *Qualifications* : Etre titulaire d'un diplôme d'ingénieur (ou d'un diplôme équivalent), justifier d'une expérience pratique de 2 ans au moins et occuper un poste de cadre technique ou administratif. Préférence sera donnée aux candidats ayant déjà une expérience pratique de l'entretien et de la réparation du matériel roulant de chemin de fer. Français.

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

Lieux : Belgique
Afrique

Technologies textiles (coton, laine)

Description générale : Le programme traitera au cours d'exposés théoriques, de visites d'entreprises, de cas pratiques et de stages des points suivants : techniques de fabrication, contrôle de la qualité, productivité et économie des procédés de fabrication. *Durée* : Septembre/décembre. 12 semaines. *Pays invités* : Programme interrégional. *Qualifications* : Ingénieur ou technicien responsable de la production ou du contrôle de la qualité dans une entreprise textile ou travaillant dans un centre de recherche textile. Français.

Organisme hôte : Centre de recherche et de contrôle lainier et chimique
Laboratoire de Meulemeester de technologie des matières textiles
Chainex et Gand, Belgique

OCTOBER/OCTOBRE/OCTUBRE

Organization and management of agro-industrial enterprises

General description: Theoretical training on different aspects of agro-industrial enterprises: organization planning; management financing and investment policy; economic infra-

structure. Practical training on organizational aspects of agro-industrial enterprises and food processing plants. Study visits to agro-industrial enterprises. *Duration:* October/November. 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in engineering; at least 3 years of managerial experience in food processing. English.

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

Sugar (beet) production

General description: The programme will be carried out both in sugar plants and in a sugar research institute and consists of theoretical and specialized practical in-plant training as well as study visits and an evaluation seminar. It will deal with both economic and technical aspects, including feasibility studies, raw material surveys, maintenance, production technologies and quality control. *Duration:* October/November. 8 weeks. *Invited countries:* Interregional programme. *Qualifications:* Degree in chemical, agricultural, mechanical or electrical engineering; at least 2 years of practical experience; presently employed in the production of sugar. English.

Host institution: Sugar Research Institute
Ankara, Turkey

Small-industry consultancy

General description: The course will enable participants to define the role of small- and medium-scale enterprises in relation to the economic development of the country, to apply the skills and tools acquired in providing consultancy to small- and medium-scale enterprises, and to provide technical assistance and extension services to small- and medium-scale industries. *Duration:* October/December. 6 weeks. *Invited countries:* Least developed countries. *Qualifications:* University degree; at least 3 years of practical experience in the government or private sector engaged in providing consultancy to small- and medium-scale enterprises of the industrial sector. English.

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

Small-scale power plant: design/operation and maintenance

General description: Participants from least developed countries will gain from the results achieved and the experience of a developing country; they will be provided with more working knowledge on the various aspects of energy management and efficiency and with various tools and techniques in achieving fuel efficiency and in increasing energy productivity. *Duration:* October/December. 4 weeks. *Invited countries:* Interregional programmes. *Qualifications:* University degree in mechanical, electrical or chemical engineering or equivalent; at least 2 years of experience in plant or production engineering, or consultancy in energy management at the plant level. Preference will be given to candidates who could generate a multiplier effect. English.

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

Repair and maintenance of medium/small ships

General description: Theory in ships: materials; engines; pumps; electronics; electricity; equipment; maintenance. Practical training on a medium ship-wharf; building of small vessels; repairs; ship repair workshop; training on board of the ship in the port. *Duration:* October/January. 7 weeks. *Invited countries:* Interregional programme. *Qualifications:*

Engineers and technicians; at least 3 years of practical experience in maintenance and repair of medium/small ships. English or French.

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

**DATES NOT YET SPECIFIED/DATES NON ENCORE PRECISEES/
FECHAS TODAVIA NO DETERMINADAS**

Maintenance of gas and oil transportation networks

General description: Theory and practice of designing oil and gas transportation systems; operation and maintenance; telemetry and remote control of oil and gas pipelines; technological instrumentation of oil and gas pipelines; operation and maintenance of remote control, telemetric and instrumentation systems; telecommunication within the oil and gas pipeline system. Visits to plants and practical training. *Duration:* 6 weeks. *Invited countries:* Interregional programme. *Qualifications:* Engineers and technicians; experience in maintenance of gas and oil transportation networks and related telecommunications. English.

Host institution: Hungarian Gas and Oil Transportation Company
Educational Centre Siofok
Siofok, Hungary

Organization of industrial maintenance systems

General description: Theory, workshops and case-studies on planned maintenance systems, collection of data and preparation of documentation, the execution process of maintenance and the role of training for planned maintenance. *Duration:* 3 weeks. *Invited countries:* Sub-regional programme for PTA member, associate and observer countries. *Qualifications:* University degree in mechanical, instrumentation and electrical engineering or equivalent; 2-5 years of industrial experience in maintenance activities in a supervisory/managerial position. English.

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

Reconditioning of spare parts and components for agricultural machinery

General description: Theory and practice-oriented training with testing and demonstrations in workshops and industrial plants on technological processes related to reconditioning of spare parts. *Duration:* 4 weeks. *Invited countries:* Interregional programme. *Qualifications:* University degree in mechanical or related engineering or equivalent; 1-6 years of experience in production and repair of spare parts. English.

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

Chapter 2. Training opportunities offered by institutions other than UNIDO

Chapitre 2. Possibilités de formation offertes par des institutions autres que l'ONUDI

Capítulo 2. Oportunidades de capacitación ofrecidas por instituciones distintas de la ONUDI

A. INDUSTRIAL BRANCHES / SECTEURS INDUSTRIELS / RAMAS INDUSTRIALES

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

Architecture et matériaux de construction en PVD

Description générale : Introduction : étude de cas; rapports architectes – utilisation, études typologiques, modes de vie, modes de construction; rapports architectes – entreprises, recherche de technologies appropriées, étude des matériaux et procédés locaux, problèmes particuliers; rapports architectes – administrations, aspects législatifs, réglementaires et financiers, aspects pratiques d'une activité dans un PVD. *Début du cours* : -. *Durée* : 60 heures. *Qualifications* : Français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : FB 15 000.

Organisme hôte : Centre interuniversitaire de formation permanente (CIFOP)
1B, avenue G. Michel
6000 Charleroi, Belgique

L'industrie de la construction

Description générale : 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. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

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

Tile manufacturing technology

General description : Body preparation; forming; analysis and evaluation of raw materials for the better-suited tile manufacturing; kiln and firing; quality control. *Commencing date* : 13 August 1988. *Duration* : 7 months. *Qualifications* : University degree or equivalent; at least 3 years of experience; between 26 and 45 years of age. English. *Last date for receipt of applications* : 13 June 1988. *Fee* : -.

Host institution : Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Concrete technology

General description: Cement manufacture; aggregate production and selection; testing of raw materials for concrete laboratory and on-site concrete tests, quality control and casting techniques; basic techniques and standard tests. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Professional qualifications. Good English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* To be arranged.

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

Construction materials

General description: Technology and testing of construction materials, including soils, cement, concrete, aggregates, asphalt. Part I covers basic technology and standard tests; part 2 covers more advanced technology and testing followed by individually planned programmes for each participant. *Commencing date:* Part 1: 3rd week in September 1988; part 2: 1st week in January 1988. *Duration:* Part 1, 13 weeks; part 2, 13 weeks. *Qualifications:* Technical or professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* Part 1: £5,500 + VAT (provisional) (fee includes food and accommodation).

Host institution: Laing Technology Group Limited
Page Street
Mill Hill
London NW 7 2ER
United Kingdom

Construction materials and testing

General description: Part 1: Construction components: design, specification and use of construction components, timber components, roof coverings, drainage and sewage disposal, mechanical plant and mechanical handling techniques. Part 2: Construction material testing: technology of testing construction materials, basic technology and standard tests. *Commencing date:* To be arranged. *Duration:* Part 1: 3 months; part 2: 3 months. *Qualifications:* Technical and professional qualifications. Good English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* To be arranged.

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

Low-cost housing

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

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

Chemical industries / Industrie chimique / Industrias quimicas

Ammonia-urea (NPK) plants

General description: Quality control measures in ammonia-urea plants. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Ammonium nitrate plants

General description: Management and production in ammonium nitrate plants: process steps; neutralization of ammonia with nitric acid; prilling and granulation techniques; study of P & I diagrams; supply of utilities; initial signal and shut-down systems; process control system; start-up and shut-down procedures; off gas treatment. *Commencing date:* Throughout the year except in July and August. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Management and production in ammonia plant

General description: Organization of ammonia plant; natural gas supply; desulphurization; steam reforming; Benfield system; high pressure section; synthesis loop; trip system of single train plant; revamping of NH_3 converter; start-up and shut-down system; Argon and CO_2 liquifaction plant; computer process control system; study of diverse P and I diagrams; pilot burner and auxiliary boiler; monitoring and control system of compressors and turbines; analytical control of process steps; control loops; co-operation with technical departments; inspection and revision intervals; predictive and preventive maintenance system; planning of overhaul time; data collecting and monitoring. *Commencing date:* Throughout the year except in July and August. *Duration:* 6-8 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Management and production in urea plant

General description: Organization of urea plant; modification of urea prills; corrosion problems and other problems faced in urea plants; data collecting and monitoring. *Commencing date:* Throughout the year except in July and August. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Material testing, corrosion problems, inspecting and overhauling chemical plants

General description: Material testing; metallography; laboratory; inspection and revision. *Commencing date:* Throughout the year except in July and August. *Duration:*

4-6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Nitric acid plants

General description: Management and production in nitric acid plants including: organization of nitric acid plants; ammonia evaporation and combustion; nitrous gasses compression and absorption; cooling of absorption tower; start-up and shut-down procedures. *Commencing date:* Throughout the year except in July and August. *Duration:* 4 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Plastics technology

General description: Introduction (trends in polymer physics, principles of mould design), practice work in small groups (compounding, computation, controlling, injection and compression moulding), small group discussions. *Commencing date:* October. *Duration:* 7 weeks. *Qualifications:* University degree and experience in industry. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

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

Polymer engineering and plastics technology

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

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

Chemical analysis of mineral samples

General description: Course and practical training in chemical analysis of ores and mineral samples: titrimetry, electrolysis, polarography, spectrophotometry, atomic absorption, fluorimetry, plasma emission spectrometry. *Commencing date:* To be arranged. *Duration:* To be arranged. *Qualifications:* Degree in chemistry. English, French, Spanish. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Université Catholique de Louvain
Laboratoire de Traitement des Minerais
2, place Ste Barbe
1348 Louvain-la-Neuve, Belgium

Pharmaceuticals

General 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; scientific visits to pharmaceutical plants. *Commencing date*: To be arranged. *Duration*: Approximately 3 months. *Qualifications*: Pharmacist, chemist or chemical engineer. English or French. *Last date for receipt of applications*: -. *Fee*: BF 40,000 (approximately).

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

Technologies nouvelles

Description générale: Les technologies nouvelles comportant les technologies de mise en forme des matières plastiques, du moulage des alliages non ferreux, du travail du verre, de la fabrication des outillages; conception et dimensionnement de pièces en matériaux nouveaux; contrôle de la qualité; traitement des données technologiques par l'informatique. *Début du cours*: A arranger. *Durée*: 5 mois. *Qualifications*: Qualifications professionnelles. Français, anglais. *Dernier délai pour la soumission des candidatures*: -. *Droit d'inscription*: SUS 5 000.

Organisation hôte: C.R.I.F.
200, rue du Chéra
4000 Liège, Belgique

Ceramics

General description: Applied drawing; physics and chemistry; geology and mineralogy; quality control; manufacturing process; ceramics technology; planning and control of production; industrial equipment and facilities; industrial hygiene and work safety; human relations on the job. *Commencing date*: 1 February. *Duration*: To be arranged. *Qualifications*: Professional or technical qualifications. Portuguese. *Last date for receipt of applications*: 30 October. *Fee*: To be arranged.

Host institution: Escola SENAI, Armando de Arruda Pereira
Rua Niteroi 180
Centro
09.510 Sao Caetano do Sul, Sao Paulo, Brazil

Manufacturing of plastic products

General description: German executive experts will lecture on economical production methods: selection of raw material and feedstock, process technology, machinery and technical equipment, maintenance management, management of quality and control, organization. *Commencing date*: To be arranged. *Duration*: 3-14 days. *Qualifications*: Professional qualifications. English, French, Spanish. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Organizer: Haus der Technik eV
POB 10 15 43
4300 Essen 1, Federal Republic of Germany

Venue: Various countries

Manufacturing of rubber products

General description: German executive experts will lecture on economical production methods: selection of raw material and feedstock, process technology, machinery and technical equipment, maintenance management, management of quality and control, organization. *Commencing date*: To be arranged. *Duration*: 3-14 days.

Qualifications: Professional qualifications. English, French, Spanish. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Organizer: Haus der Technik eV
POB 10 15 43
4300 Essen 1, Federal Republic of Germany

Venue: Various countries

Bruts, raffinage, produits, schémas de fabrication

Description générale : Les produits pétroliers; les pétroles bruts et leur constitution; les procédés et unités de raffinage. *Début du cours :* Mars, juin, octobre, novembre 1988. *Durée :* 5 jours. *Qualifications :* Ingénieurs et cadres des secteurs pétroliers et parapétroliers. Français (peut être organisé en anglais). *Dernier délai pour la soumission des candidatures :* 1 mois avant chaque séminaire. *Droit d'inscription :* FF 5 700.

Organisme hôte : ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison, France

Les catalyseurs dans l'industrie du raffinage et de la pétrochimie: lourde

Description générale : Caractéristiques et propriétés des catalyseurs industriels, mise en œuvre, exploitation et suivi des performances des catalyseurs industriels. *Début du cours :* Décembre 1988. *Durée :* 5 jours. *Qualifications :* Ingénieurs d'exploitation, de procédés, de projets, de démarrage. *Dernier délai pour la soumission des candidatures :* -. *Droit d'inscription :* FF 5 800 par participant.

Organisme hôte : ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison, France

Distillation sur simulateur

Description générale : Signification des paramètres de fonctionnement d'une colonne de distillation; pouvoir de séparation d'une colonne de distillation industrielle; paramètres de réglage et régulation. *Début du cours :* Mai 1988. *Durée :* 5 jours. *Qualifications :* Ingénieurs et cadres techniques de l'industrie du raffinage et de la pétrochimie. Français (peut être organisé en anglais). *Dernier délai pour la soumission des candidatures :* 1 mois avant la date de début du séminaire. *Droit d'inscription :* FF 10 500.

Organisme hôte : ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison, France

Industrie du pétrole, du gaz naturel, de la pétrochimie, engineering, parapétrolier

Description générale : Séminaires d'information et de perfectionnement de cadres et ingénieurs (plus de 300 séminaires par an) dans les domaines suivants : exploration géologique et géophysique; forage et production; gisements pétroliers; raffinage, pétrochimie, chimie; engineering; moteurs et applications de produits pétroliers; économie des hydrocarbures et de l'énergie, gestion des projets, transports. *Début du cours :* Toute l'année. *Durée :* 3 jours à 3 semaines (catalogue sur demande). *Qualifications :* Ingénieurs et cadres des secteurs pétroliers et parapétroliers. Français ou anglais. *Dernier délai pour la soumission des candidatures :* 1 mois avant chaque séminaire. *Droit*

d'inscription : Environ FF 5 600 pour 1 semaine; FF 11 000 pour 2 semaines; FF 15 000 pour 3 semaines.

Organisme hôte : ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison, France

Technologie du matériel pétrolier, pétrochimique et chimique

Description générale : Les matériaux et leur dégradation; les capacités, les tuyauteries, accessoires et les instruments; les machines tournantes; le matériel d'échange thermique; surveillance et maintien en état des matériels. *Début du cours* : Juin 1988. *Durée* : 2 semaines. *Qualifications* : Ingénieurs des industries pétrolières, pétrochimiques et chimiques. Français. *Dernier délai pour la soumission des candidatures* : 1 mois avant la date du début du séminaire. *Droit d'inscription* : FF 11 200.

Organisme hôte : ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B P. 311
92506 Rueil-Malmaison, France

Manufacturing processes for PVC or polyurethane-based artificial leather

General description: Manufacture, preparation of raw material, preparation and manufacture of coating substance and fleece, reversal process. *Commencing date*: -. *Duration*: 1-6 months. *Qualifications*: German, English. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Organizer: Forschungsinstitut für Leder- und Kunstlederherstellung
Freiberg, German Democratic Republic
Contact address:
Intercoop
Storkower Strasse 120
DDR-1055 Berlin, German Democratic Republic

Optimization of petroleum-processing

General description: The course demonstrates modern methods of optimization in crude distillation and other processes, and presents essential results. Special emphasis is placed on: crude distillation with several circulating flow rates (refluxes); cracking of gas oil, atmospheric and vacuum residues; production systems in petroleum processing plants; transport of highly viscous crude oil. *Commencing date*: 13 September 1988. *Duration*: 10 days. *Qualifications*: Engineers, chemists and physicists working in crude processing. English. *Last date for receipt of applications*: 31 March 1988. *Fee*: To be arranged.

Host institution: Technological University Leuna-Merseburg
Geusaer Strasse
4200 Merseburg, German Democratic Republic

Biotechnology

General description: Fermentation, purification, immuno-diagnostics, genetic engineering, food, waste treatment, production management, toxicology, marketing, management principles, processing engineering. *Commencing date*: October 1988. *Duration*: 18 months. *Qualifications*: Honours degree in science or engineering. English. *Last date for receipt of applications*: 7 July 1988. *Fee*: Approximately £1R 1,500.

Host institution: University College
Galway, Ireland

Ceramic engineering

General description: Ceramics in Japan; body preparation; glaze preparation; raw materials; analysis of raw materials; kiln and firing; quality control. *Commencing date:* 8 April 1988. *Duration:* 8 months. *Qualifications:* University degree or equivalent; at least 3 years of practical experience; between 25 and 35 years of age. English. *Last date for receipt of applications:* 9 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Ceramic glaze and decoration

General description: Ceramic materials and bodies; glaze preparation and its application; pigment making and colouring; decoration techniques. *Commencing date:* 9 April 1988. *Duration:* 5 months. *Qualifications:* University degree or equivalent; under 40 years of age. English. *Last date for receipt of applications:* 9 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Petrochemical industry for Middle East countries

General description: Characteristics of petrochemical industry; products and plant technology of petrochemical industry; requirements for petrochemical industry substantialization; petrochemical industry in Japan; the role of Japan in the establishment of petrochemical industries in developing countries. *Commencing date:* 21 January 1988. *Duration:* 6 weeks. *Qualifications:* University degree or equivalent; presently engaged in responsible assignment and development planning in this field. *Last date for receipt of applications:* 21 November 1987. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Plastics

General description: Compression moulding, transfer moulding and injection moulding of thermosets; extrusion and blow moulding; injection moulding of thermoplastics. *Commencing date:* 8 September 1988. *Duration:* 3 months. *Qualifications:* University degree or equivalent; at least 3 years of experience; between 25 and 40 years of age. English. *Last date for receipt of applications:* 10 July 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Plastic tooling technology and practice

General description: Plastics tooling technology; mould and die manufacturing processes; mould and die finishing processes; plastics mould and die design practice. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and

industrial engineering or in mechanical engineering with suitable working experience or equivalent. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Energy saving in injection moulding of plastics

General 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. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: TNO Plastics and Rubber Research Institute
P.O. Box 71
2600 AB Delft, Netherlands

Training in laboratory techniques

General description: Training is offered in the following fields: analytical testing, physical testing, quality control of fertilizers, corrosion measurement, beneficiation of phosphate rock, phosphoric acid production, fertilizer granulation. It is useful for personnel engaged in R & D. Training is offered at the Fertilizer Research and Development Institute at Faisalabad. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* SUS 500 per month.

Host institution: National Fertilizer Corporation of Pakistan (Pvt.) Ltd.
Alfalah Building
Shahrah-e-Quaid-e-Azam
Lahore, Pakistan

Diseño de moldes de inyección

Descripción detallada: Proporcionar las recomendaciones más usuales para la construcción de moldes de inyección a los pequeños y medianos industriales del ramo. Contenido: Tipos de moldes; boquillas de inyección; atemperado de moldes; tipos de refrigeración; proceso de desmoldeo; selección de máquinas. *Fecha de iniciación:* Abril. *Duración:* 15 días. *Requisitos de admisión:* Ser pequeño o mediano industrial del ramo o trabajador con buena experiencia. Español. *Fecha límite de inscripción:* 1 marzo, 1 julio. *Costo de matrícula:* Para ser acordado.

Institución huésped: SENATI-Programa de Apoyo a la Pequeña y Mediana Empresa Industrial (IDAMPEI)
Casilla 1769
Lima, Perú

Orientation course for engineers in fertilizer industry

General description: Management; production planning and control; reformation technology and ammonia synthesis; nitric acid and ammonium nitrate technology; maintenance planning and materials technology; instrumentation technology; maintenance of turbines, compressors and boilers; pollution control; industrial safety; water preparation including boiler feed water. *Commencing date:* September 1988. *Duration:* 6 weeks. *Qualifications:* Experience in fertilizer industry. English. *Last date for receipt of applications:* March 1988. *Fee:* To be arranged.

Host institution: Türkiye Gübre Sanayii A.S.
Id. Hiz. Dai. Bsk
Egitim Md.
Konya Devlet Yolu 70, Ankara, Turkey

Training in the utilization of medicinal and aromatic plants in the pharmaceutical and related industries (TRUMAP)

General description: Collection, authentication and post harvest treatment of wild plants; plant propagation; standardization of plant drugs; techniques and technology of distillation; extraction; separation and equipment design; formulation of plant extracts into dosage forms; management of R and D; marketing; economic and regulatory aspects of medicinal and aromatic plants and drugs obtained therefrom. *Commencing date:* June 1988. *Duration:* 3 weeks. *Qualifications:* University degree in pharmacy, chemistry, chemical engineering or botany and experience in the field of medicinal and aromatic plants. *English. Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Medicinal Plants Research Centre
University of Anatolia
Eskischir, Turkey

Analytical procedures for testing laboratories: plastics

General description: The course provides training in procedures for routine and investigational chemical analysis. It is essentially practical in nature and involves extensive project work to provide "hands-on" experience. The techniques include: classical wet chemistry, atomic absorption, infra-red spectroscopy, gas chromatography, liquid chromatography, size exclusion chromatography, on-site analysis. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Degree or equivalent in analytical chemistry or a related field. *English. Last date for receipt of applications:* -. *Fee:* £2,500 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom
(in collaboration with Yarsley Technical Centre Ltd.)

Design, manufacture and operation of injection moulds for plastics

General description: Practical courses involving "hands-on" work experience in: basic mould design; basic mould making; operation of injection moulds; advanced mould design. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Engineer, technician, toolmaker. *English. Last date for receipt of applications:* -. *Fee:* £2,500-£4,000 a month.

Host institution: Yarsley Technical Centre Ltd.
Redhill, Surrey, United Kingdom

Fertilizer Industry

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

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

Glass reinforced plastic technology

General description: Safe working practice; basic polymer chemistry; material selection; contact moulding techniques; plug and mould manufacture; mechanical processes; faults

analysis; cutting, trimming and finishing. *Commencing date:* January, May, September 1988. *Duration:* 6 weeks. *Qualifications:* English. *Last date for receipt of applications:* 8 weeks before commencing date. *Fee:* £2,000.

Host institution: Marine Builders
Training Trust
Hazel Road
Woolston, Southampton SO2 7GB, United Kingdom

Modern chemical techniques

General description: Core course comprises the following 12 topics: mass spectrometry, nuclear magnetic resonance spectrometry, gas chromatography, separation techniques involving charged species, flow injection analysis, X-ray powder diffraction, electrochemical techniques, thermal gravimetric analysis, ultra-violet and visible spectrophotometry, Fourier transform infrared spectrophotometry, flame photometry, atomic absorption spectrometry. *Commencing date:* October 1988. *Duration:* 9 months. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Chemistry Department
University College of Swansea
Singleton Park
Swansea SA2 8PP, United Kingdom

Practical applications of plastic injection moulding

General description: Theory of plastic injection mould fitting and practice of condition setting and operation through to microprocessor technology and CNC applications. Course in 8 modules; courses arranged to suit applicants' needs. *Commencing date:* Throughout the year. *Duration:* As required. *Qualifications:* English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £260 a week.

Organizer: Skills Training Agency
Overseas Training Unit
Skills House
Holy Green, Moorfoot
Sheffield S1 4PQ, United Kingdom

Venue: Coventry Skillcentre
Coventry, West Midlands, United Kingdom

Product design and development for injection moulded plastic parts

General description: Product design criteria affecting function, aesthetics, toolmaking and processing; prototype manufacture and testing methods; development of product; basic mould design theory; basic processing theory. The course is essentially practical in nature and involves extensive project work to provide "hands-on" experience. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Mechanical/production engineering degree, FNC, or equivalent. Experience in drawing techniques and drawing office practice. English. *Last date for receipt of applications:* -. *Fee:* £2,500 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom
(in collaboration with Yarsley Technical Centre Ltd.)

Testing of plastics and other polymeric and similar materials

General description: Principles of materials and product testing; chemical analysis techniques; measurement of mechanical properties; thermal property measurement; wear and corrosion testing; fire testing; fitness-for-purpose testing. The course is essentially practical in nature and involves extensive project work to provide "hands-on" experience. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Degree or

equivalent in an appropriate scientific or engineering discipline. English. *Last date for receipt of applications*: -. *Fee*: £2,500 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom
(in collaboration with Yarsley Technical Centre Ltd.)

Genetic engineering for the production of drugs and pharmaceuticals

General description: Nucleic acid chemistry, ribonucleic acid biochemistry, enzyme preparations for the recombinant deoxyribonucleic acid work, theory and practice of fermentation technology. *Commencing date*: 13 September. *Duration*: 7 weeks. *Qualifications*: Graduates in chemistry, physical chemistry, biology, medicine, pharmacy, biotechnology. English. *Last date for receipt of applications*: 15 February. *Fee*: To be arranged.

Host institution: Center for Genetic Engineering and Biotechnologies
Vojvode Stepe 283
Belgrade, Yugoslavia

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

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

General description: MNOS and CMOS IC design; IC system design (architecture, design methodologies); CAD tools for IC design; testing ICs; hands-on experience: design of an IC and fabrication by silicon production facility. *Commencing date*: To be arranged. *Duration*: 12-18 months. *Qualifications*: English (understanding French recommended). *Last date for receipt of applications*: -. *Fee*: BF 200,000 (excludes cost of IC fabrication).

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

Electronics

General description: Drawing; organization and norms; basic operations; electrical measurements; sequence control; basic and applied electronic circuits; circuit analysis; process control; basic computation; microcomputers. *Commencing date*: 1 February. *Duration*: -. *Qualifications*: Professional or technical qualifications. Portuguese. *Last date for receipt of applications*: 30 October. *Fee*: To be arranged.

Host institution: Escola SENAI de Eletrônica e Eletrotécnica Cesar Rodrigues
Rua Sao Jerônimo 1717
Horto
30.000 Belo Horizonte, Minas Gerais, Brazil

Electrotechnical course

General description: Drawing; general electronics; basic operations; electrical measurements; sequence control; basic electronic circuits; electrical installations; electrical machinery and its applications; process control; microcomputation. *Commencing date*: 1 February. *Duration*: -. *Qualifications*: Professional or technical qualifications. Portuguese. *Last date for receipt of applications*: 30 October. *Fee*: To be arranged.

Host institution: Escola SENAI de Eletrônica e Eletrotécnica Cesar Rodrigues
Rua Sao Jerônimo 1717
Horto CEP 30.000, Belo Horizonte, Brazil

Practical electronics and instrumentation and metrology

General description: Short practical courses on: analog and digital electronics, active filters, trouble-shooting; microprocessors in instruments and control, intelligent sensors, real-time data acquisition and processing; force, length, thrust and torque measurements; non-destructive measurements. *Commencing date:* Throughout the year. *Duration:* 2-4 weeks. *Qualifications:* Professional qualifications. English, Russian. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Bulgarian Ship Hydrodynamics Centre
Varna 9003, Bulgaria

Industrial engineering

General description: Electronics for process control and analytical instrumentation, laboratory equipment evaluation and preventive maintenance. *Commencing date:* To be arranged. *Duration:* 1-8 weeks. *Qualifications:* Professional qualifications. English (possibly Arabic). *Last date for receipt of applications:* -. *Fee:* SwF 1,400-SwF 4,800.

Host institution: P & R Techconsult Ltd.
Association of Advanced Technical Services GmbH
P.O. Box 3885
Nicosia, Cyprus

Electronics for industry

General description: Courses in: power electronics, electronic trouble-shooting, introduction to data communication, the RS 232 interface, statistical multiplexity, satellite dish installation, electronics for electricians, component identification, electronic test equipment, introduction to digital hardware and advanced digital hardware, basic and advanced industrial electronics skills. *Commencing date:* Throughout the year. *Duration:* -. *Qualifications:* Professional or technical qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Basic electronics in instrumentation

General description: The course, which includes laboratory sessions, provides instruction on: the principles of basic electronic theory, components and analogue circuits used in process control and measurement instruments; introduction to electronic instrumentation to pneumatic, mechanical and electrical mechanics and technicians. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Some experience in a technical field. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £339.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL
United Kingdom

Digital systems and electronics

General description: Power electronics; testing and testability considerations for integrated circuits and systems; pattern recognition and image processing; VLSI design. *Commencing date:* January 1988. *Duration:* -. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Brunel University
Continuing Education
Oxbridge, Middlesex UB8 3PH, United Kingdom

Electronics

General description: Courses in: introductory electronics; digital techniques; microprocessors; semi-conductors; data communications; microwave techniques. *Commencing date:* Throughout the year. *Duration:* 2-52 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: IAL Bailbrook College
London Road West
Bath, Avon BA1 7JD, United Kingdom

Fundamentals of electronic measuring devices

General description: The course, which includes laboratory sessions, provides instruction on: the principles used in common electronic measurement transmitters; the calibration and ranging of electronic measurement transmitters; electronic theory, circuit diagrams; principles of motion balance, force balance devices; pressure measurement; flow measurement. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Instrument engineers and senior technicians. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £483.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Graduate course in industrial formation (electronics)

General description: Half of the course will be devoted to general engineering training, covering some engineering technology applications and some aspects of engineering as a dimension of business. The other half will be directed towards practical electronics, culminating in a relevant electronic project. *Commencing date:* 4 January 1988. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. *Last date for receipt of applications:* December 1987. *Fee:* £1,100.

Host institution: Department of Professional Engineering Formation
East Warwickshire College
Lower Hillmorton Road
Rugby, Warwickshire CV21 3QS, United Kingdom

Industrial instrumentation, process control and microprocessors

General description: The course modules, which consist of detailed theoretical and practical studies, consist of: measurement and control appreciation; instrumentation and measurement; process control; analog electronics; digital electronics and logic; microprocessor technology; microprocessor applications. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Technical qualification in electrical, mechanical or chemical disciplines. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Roxby Engineering International Ltd
Lagonda Road
Cowpen Industrial Estate
Billingham, Cleveland TS23 4JA, United Kingdom

Professional training in microprocessors

General description: Intensive course, with practical emphasis, on a range of microprocessor techniques; sessions in laboratory with Z80 floppy-disk development systems. Experiments and projects cover sequencing to instrumentation and control. On completion, participants should be able to advise on and implement microprocessor systems. *Commencing date:* January, March, June and September, or by arrangement. *Duration:* 10 working days. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £425.

Host institution: Department of Electrical Engineering
University of Manchester
Dover Street, Manchester M13 9PL, 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

Description générale : 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. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

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

Marine fishery

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

Host institution: International Training and Contact (ITC)
Velodroomstraat 68
2600 Antwerp, Belgium

Meat processing

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

Host institution: International Training and Contact (ITC)
Velodroomstraat 68
2600 Antwerp, Belgium

Technology transfer and development in food processing industries

General description: Concept of technology transfer; national strategy and international framework for transfer and development of technology; possibilities of and impediments to transfer and development of technology at national and regional levels; contracts on different forms of technology transfer; parties involved, modes of implementation and sources of finance in industrial projects; negotiation on and evaluation of technology transfer contracts. *Commencing date*: March 1988. *Duration*: 3 weeks. *Qualifications*: Decision makers with relevant responsibilities in planning offices and ministries and in the food industry from selected African countries. English. *Last date for receipt of applications*: -. *Fee*: -.

Organizer: PRODEC
Latuankatu 4
00100 Helsinki, Finland, in collaboration with UNCTAD

Venue: United Republic of Tanzania

Microbiologie des aliments

Description générale : Etude des principaux micro-organismes rencontrés dans les aliments. *Début du cours* : Octobre 1988, 1989. *Durée* : 1 semaine. *Qualifications* : Réservé aux techniciens des laboratoires des industries alimentaires, des organismes officiels de contrôle et d'analyses médicales. Français. *Dernier délai pour la soumission des candidatures* : 1^{er} septembre 1988, 1989. *Droit d'inscription* : FF 4 100-FF 4 200 H.T. environ.

Organisme hôte : Institut Pasteur de Lille
B.P. 245
1, rue du Professeur-Calmette
59019 Lille Cedex, France

Microbiologie des aliments

Description générale : 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 les techniques rapides). *Début du cours* : 2 au 13 mai 1988. *Durée* : 2 semaines. *Qualifications* : Réservé aux responsables des laboratoires des industries alimentaires, des organismes officiels de contrôle et d'analyses médicales. Français. *Dernier délai pour la soumission des candidatures* : 1^{er} avril 1988. *Droit d'inscription* : FF 6 200 H.T. environ.

Organisme hôte : Institut Pasteur de Lille
B.P. 245
1, rue du Professeur-Calmette
59019 Lille Cedex, France

Microbiologie des aliments

Description générale : Microbiologie des boissons (eaux, jus de fruit, bières, vins); microbiologie des produits de la mer (poissons et coquillages). *Début du cours* : Mai 1989. *Durée* : 2 semaines. *Qualifications* : Réservé aux responsables des laboratoires des industries alimentaires, des organismes officiels de contrôle et d'analyses médicales. Français. *Dernier délai pour la soumission des candidatures* : 15 avril 1989. *Droit d'inscription* : FF 6 400 H.T. environ.

Organisme hôte : Institut Pasteur de Lille
B.P. 245
1, rue du Professeur-Calmette
59019 Lille Cedex, France

Microbiologie des aliments

Description générale : Microbiologie des laits et produits laitiers : étude des principaux micro-organismes rencontrés dans le lait; étude microbiologique des laits des produits laitiers. *Début du cours* : 16 mai 1988, septembre 1989. *Durée* : 2 semaines. *Qualifications* : Réservé aux responsables des laboratoires des industries alimentaires, des organismes officiels de contrôle et d'analyses médicales. Français. *Dernier délai pour la soumission des candidatures* : 1 avril 1988, 1 septembre 1989. *Droit d'inscription* : FF 6 200-FF 6 400 H.T. environ.

Organisme hôte : Institut Pasteur de Lille
B.P. 245
1, rue du Professeur-Calmette
59019 Lille Cedex, France

Automation of food production processes

General description: Analysis of, and model formation for, selected food production processes; structuring of control systems; presentation of practical examples. *Commencing*

date: To be arranged. *Duration:* 3 weeks. *Qualifications:* Engineers, technologists. English. *Last date for receipt of applications:* 31 March 1988, 1989. *Fee:* To be arranged.

Host institution: Berlin Humboldt University
Unter den Linden
DDR-1086 Berlin, German Democratic Republic

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

General description: Training in operation of machines for drying and ventilation. Includes theory, laboratory work, practical exercises and technical excursions. *Commencing date:* 2 May. *Duration:* 2 months. *Qualifications:* A degree or certificate in agriculture or engineering. German, English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Getreidewirtschaft
6600 Greiz, German Democratic Republic

Meat industry management

General description: Application of scientific and technical findings in production; theory, technical excursions, studies at factories and scientific institutions. *Commencing date:* February. *Duration:* 6 months. *Qualifications:* University or engineering school graduate, experience in meat industry; possession of a health certificate for work in food-stuff industry. German and other languages. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* Approximately SUS 500 a week (including accommodation and full board).

Host institution: AIS fuer Tierproduktion und Fleischwirtschaft
1400 Oranienburg, German Democratic Republic

Meat processing industry (technical/technological processes)

General description: Perfection of professional knowledge of managerial staff on the basis of latest scientific discoveries concerning branches of the meat processing industry through lessons, excursions and studies in plants and scientific laboratories. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Professional qualifications. German; other languages by arrangement. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: VEB Interagrarkooperation
Raschwitzer Strasse 11-13
7113 Markkleeberg, German Democratic Republic

Operating the evaporator station in the sugar industry

General description: Deepening of theoretical knowledge about process stage evaporation, as well as the operation of the evaporator station. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Completed training in a relevant discipline. German and other languages. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Operation of butter production plants

General description: Technological flow in the production of butter and function of all the machines in the production line, maintenance and care, small repairs; one third of the course devoted to theory, two thirds to practical work. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Professional qualifications. German and

other languages. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Operation of cheese production plants

General description: Production of fresh, soft and hard cheeses, critical assessment of the final product, maintenance and small repairs of the plant; 5 months' training in specialized cheese production enterprises and 1 month in the engineering school. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Professional qualifications. German and other languages. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Operation of plants for production of fresh and sour milk beverages

General description: Production technology and the function of all the machines in the production chain. Maintenance and small repairs; one third of the course devoted to theory, two thirds to practical work. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Professional qualifications. German and other languages. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Operation of plants for sterilized milk production

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

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Operation of vacuum evaporative crystallizer and centrifuges

General description: Quality requirements of white sugar, crystallization process and layout, molasses, set-up and function of machines and instruments, training in their operation. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* Completed training in a relevant discipline. German and other languages. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* To be arranged.

Host institution: Ingenieurschule fuer Milchwirtschaft
3600 Halberstadt, German Democratic Republic

Food hygienics tests and their instruments

General description: Quality test of food products; instruments and equipment of quality test; laboratory analysis. *Commencing date:* -. *Duration:* 3 months. *Qualifications:* Professional qualifications. Basic English, French, Spanish, German or Arabic. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Organization for International Technical and Scientific Co-operation (TESCO)
Nagy Lajos Kir Ut 202-204
1149 Budapest XIV, Hungary

Machine production and assembly for food industries

General description: Production, operation and maintenance of machines and equipment necessary for the processing of the most important food products (foodstuffs). *Commencing date:* -. *Duration:* 5 months. *Qualifications:* Professional qualifications. Basic English, French, Spanish, German or Arabic. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Organization for International Technical and Scientific
Co-operation (TESCO)
Nagy Lajos Kir Ut 202-204
1149 Budapest XIV, Hungary

Mechanization of fishery, fish processing

General description: Planning of fish pond; effect of direct current, alternating current and intermittent direct current on fish; breeding-pool container; zoology laboratory. *Commencing date:* -. *Duration:* 3 months. *Qualifications:* Professional qualifications. Basic English, French, Spanish, German or Arabic. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Organization for International Technical and Scientific
Co-operation (TESCO)
Nagy Lajos Kir Ut 202-204
1149 Budapest XIV, Hungary

Operation and maintenance of milling industrial machinery (cereals processing)

General description: Getting acquainted with cereals processing machinery; different technologies and machines of cereals processing; operation and maintenance of cereals processing industry. *Commencing date:* -. *Duration:* 2 months. *Qualifications:* Professional qualifications. Basic English, French, Spanish, German or Arabic. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Organization for International Technical and Scientific
Co-operation (TESCO)
Nagy Lajos Kir Ut 202-204
1149 Budapest XIV, Hungary

Processes and installations in the fruit and vegetable sector

General description: Chemical and microbiological aspects; post harvest aspects; processing and preservation technologies; plants; techniques of production organization, management and control; techniques of marketing and distribution of fresh and preserved fruit and vegetables. *Commencing date:* 1 May. *Duration:* 5 months. *Qualifications:* University degree in chemistry, food sciences or food technologies, agriculture, industrial chemistry, chemical engineering, mechanical engineering, fruit and vegetable plant engineering. English, French; Spanish on request. *Last date for receipt of applications:* 28 February. *Fee:* \$US 5,000.

Host institution: International Polytechnic for Industrial and Economic
Development (PISIE)
Via S. Marco 13
P.O. Box 364
60035 Jesi, Italy

Quality control for processed foods

General description: Lectures, discussions, case-studies and visits related to: basic principles of quality control; controlling the quality of raw materials from the production point; modern methods of processing foods and the built-in control for quality; management, nutritional, and economic considerations in quality control and problems encountered. *Commencing date:* -. *Duration:* 4 weeks. *Qualifications:* Middle and higher level

officials of small- and medium-scale food processing industries of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 100 for participants from profit-making organizations.

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

Venue: China

Cereal chemistry

General description: Training in chemical and physical cereal laboratory methods and the relation between analytical results and technology; technology of milling for food or feed, baking of bread, biscuits and flour confectionery products, extrusion cooking, roasting, steaming, drum drying, pasta production and pelleting. *Commencing date:* To be arranged. *Duration:* -. *Qualifications:* Professional qualifications. Dutch, English or German. *Last date for receipt of applications:* -. *Fee:* f. 6,000 per month.

Host institution: TNO Cereals, Flour and Bread Institute
P.O. Box 15
6700 AA Wageningen, Netherlands

Food safety

General description: Postgraduate course on food microbiology, hygiene and food contaminants. *Commencing date:* Autumn 1988. *Duration:* 3 weeks. *Qualifications:* Professional qualifications, university degree. English. *Last date for receipt of applications:* 1 September 1988. *Fee:* To be arranged.

Host institution: TNO Division of Nutrition and Food Research
P.O. Box 360
Utrechtseweg 48
3700 AJ Zeist, Netherlands

Food technology

General description: Meat processing; fish handling and preservation; cereal technology. *Commencing date:* To be arranged. *Duration:* 3-6 weeks. *Qualifications:* Professional qualifications. English, German. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: TNO Division of Nutrition and Food Research
P.O. Box 360
Utrechtseweg 48
3700 AJ Zeist, Netherlands

International course on agro-industry

General description: Planning aspects in rural industries; technology for the production and processing of agricultural products; management aspects in rural industries; excursions to industries and institutions. *Commencing date:* June 1988. *Duration:* 6 weeks. *Qualifications:* University degree or equivalent; at least 3 years of experience in the field. English. *Last date for receipt of applications:* April 1988. *Fee:* f. 5,000-f. 6,000.

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

Ciencia y tecnología de alimentos

Descripción general: El curso se basa en el estudio profundo de los fundamentos científicos de la tecnología de alimentos, de sus procesos industriales, de las técnicas de control de

fabricación y de los problemas específicos de las principales industrias de la alimentación. Las asignaturas que cursan son las siguientes: química de los alimentos, tecnología de la conservación de alimentos, control analítico y de calidad de alimentos, control microbiológico e higiene en la industria de alimentos; tecnologías específicas: industrialización de frutas y hortalizas, tecnología postcosecha de los cereales. *Fecha de iniciación:* 15 septiembre. *Duración:* 10 meses. *Calificaciones:* titulados de facultades de ciencias químicas, ciencias biológicas, farmacia, veterinaria, de escuelas técnicas superiores de ingeniería y titulados equivalentes del extranjero. Español. *Fecha límite para la recepción de las solicitudes:* Extranjeros: hasta el 15 de abril. Españoles: hasta el 15 de julio. *Derechos de inscripción:* Ptas. 75.000 para alumnos españoles, Ptas. 100.000 para alumnos extranjeros; Ptas. 25.000 por alumno, gastos por trabajo experimental.

Institución huésped: Instituto de Agroquímica y Tecnología (CSIC)
Jaime Roig 11
46010 Valencia
España

Milling technology

General description: Wheat, rye and maize milling technology (theoretical and practical courses); basic scientific subjects relating to milling technology (theoretical and practical courses); physics and mathematics with the main sub-units in pneumatics, electro-technics and programmable control systems; course also covers brewing technology and oat milling techniques as well as technical drawing and plant management. *Commencing date:* 1st Monday in September. *Duration:* 10 months. *Qualifications:* Professional qualifications. Experience in practical cereal processing. German, English. *Last date for receipt of applications:* 1 year in advance. *Fee:* SwF 2,100.

Host institution: The Swiss School of Milling
Tellstrasse 2
9000 St. Gallen
Switzerland

Beet sugar production

General description: All aspects of the production of beet sugar including supervisory skills, industrial safety and management techniques. *Commencing date:* September-December. *Duration:* Up to 4 months. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: BSD Ltd. (British Sugar PLC)
P.O. Box 26
Oundle Road
Peterborough PE2 9QU
United Kingdom

Beet sugar production and technology

General description: Courses on: process technology; new developments in the sugar industry; welding; training of electrical and mechanical engineers for sugar factories; process instrumentation. *Commencing date:* Throughout the year. *Duration:* 3 days-10 months. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: BSD Ltd. (British Sugar PLC)
P.O. Box 26
Oundle Road
Peterborough PE2 9QU
United Kingdom

Glass and optical industries / Industrie de la verrerie et de l'optique / Industrias del vidrio y ópticas

Sciences et techniques verrières

Description générale : 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* : Q:alifications professionnelles. Français, anglais. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : Ecole supérieure du verre (ESV)
c/o C.I.Fo.P.
1b, avenue Général Michel
6000 Charleroi, Belgique

Glass technology

General description: Machinery and mold; furnace; batch handling; sheet glass; container glass. *Commencing date*: 7 January 1988. *Duration*: 11 weeks. *Qualifications*: University degree or equivalent; at least 3 years of experience in the glass production; between 25 and 35 years of age. English. *Last date for receipt of applications*: 7 November 1987. *Fee*: -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

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

Description générale : 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. *Dernier délai pour la soumission des candidatures* : 25 juin. *Droit d'inscription* : FB 80 000.

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

Shoemaking

General description: Modelling; materials used; manufacturing processes; quality control; drawing; composition and expression; statistics; organic and inorganic chemistry; physics; mathematics; hygiene and work safety. *Commencing date*: -. *Duration*: One year full time. *Qualifications*: Professional qualifications. Portuguese. *Last date for receipt of applications*: 30 October of the previous year. *Fee*: To be arranged.

Host institution: Escola de Calçados
SENAI, Ildefonso Simoes Lopes
Avenida Pedro Adams Filho 6338
99.025 Novo Hamburgo, Rio Grande do Sul, Brazil

Tanning

General description: Qualitative and quantitative chemistry analysis; chemistry and physics; tanning; leather and skins; drawing; markets: organization and norms; quality control. *Commencing date:* -. *Duration:* One year full time. *Qualifications:* Professional qualifications. Portuguese. *Last date for receipt of applications:* 30 October of the previous year. *Fee:* To be arranged.

Host institution: Escola de Curtimento
SENAI
Rua Gragório Matos 111
93.600 Estância, Velha, Rio Grande do Sul, Brazil

Leather manufacturing and finishing processes

General description: Raw hide and its economic use; rational execution of liquor process; environmental protection and design. *Commencing date:* -. *Duration:* 1-6 months. *Qualifications:* Professional qualifications. German, English. *Last date for receipt of applications:* None. *Fee:* To be arranged.

Organizer: Forschungsinstitut für Leder- und Kunstlederherstellung
Freiberg, German Democratic Republic
Contact address:
Intercoop
Storkower Strasse 120
DDR-1055 Berlin, German Democratic Republic

Shoe design and construction

General description: Science of colours; last and shoe construction; practical training. *Commencing date:* -. *Duration:* Generally 3 months. *Qualifications:* Professional qualifications. German, English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Organizer: Ingenieurschule für Lederverarbeitungstechnik
Weissenfels, German Democratic Republic
Contact address:
Intercoop
Storkower Strasse: 120
DDR-1055 Berlin, German Democratic Republic

Leather and skin tanning processes and techniques

General description: Tanning technology; tanning chemistry; tanning equipment and plants; health and related subjects; techniques of production organization, management and control; marketing techniques of tanned leather; planning and design criteria for tanneries. *Commencing date:* September. *Duration:* 4 months. *Qualifications:* School-leaving diploma or university degree in tanning chemistry, chemical engineering or experience as a tanning entrepreneur. English, French; Spanish on request. *Last date for receipt of applications:* 30 June. *Fee:* \$US 4,000.

Host institution: International Polytechnic for Industrial and Economic
Development (PISIE)
Via S. Marco 13
P.O. Box 364
60035 Jesi, Italy

Leather garment design, pattern-making and manufacture

General description: Creation of design, planning, and execution. *Commencing date:* 1 September, 1 March. *Duration:* 4 months. *Qualifications:* Professional qualifications or B.A.

English, French; Spanish on request. *Last date for receipt of applications:* 30 July, 30 January. *Fee:* SUS 4,000.

Host institution: International Polytechnic for Industrial and Economic Development (PISIE)
Via S. Marco 13
P.O. Box 364
60035 Jesi, Italy

Leather goods design, pattern-making and manufacture

General description: Fashion design; general aspects of leather goods; pattern-making and assembly techniques; management techniques; in-factory training; visual design. *Commencing date:* 1 September, 1 March. *Duration:* 4 months. *Qualifications:* Professional qualifications or B.A. degree. English, French; Spanish on request. *Last date for receipt of applications:* 30 July, 30 January. *Fee:* SUS 4,000.

Host institution: International Polytechnic for Industrial and Economic Development (PISIE)
Via S. Marco 13
P.O. Box 364
60035 Jesi, Italy

Shoe design, pattern-making and manufacture

General description: Design and pattern-making techniques; manufacturing plants and techniques; production techniques for footwear components; visual design; in-factory training and field trips. *Commencing date:* 1 January, 1 July. *Duration:* 4 months. *Qualifications:* Professional qualifications or B.A. English, French; Spanish on request. *Last date for receipt of applications:* 30 November, 30 May. *Fee:* SUS 4,000.

Host institution: International Polytechnic for Industrial and Economic Development (PISIE)
Via S. Marco 13
P.O. Box 364
60035 Jesi, Italy

Leather quality control

General description: Theoretical and practical training in laboratories covering both the physical and chemical quality control of leather and leather goods, as well as environmental goods and environmental control activities. *Commencing date:* 1 April, 1 September. *Duration:* 13 weeks. *Qualifications:* B.Sc. in chemical engineering or equivalent. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* To be arranged.

Host institution: TNO Leather and Shoe Research Institute
Mr van Coothstraat 55
5141 ER Waalwijk, Netherlands

Leather technology

General description: Technical training courses for work and department managers in leather-producing factories (tanneries). Practical training in manufacturing the desired types of leather, with emphasis on the chemico-technological aspect, mechanical operations and environmental problems. Attention is given to knowledge of sorting and judging hides and skins, and semi-manufactured and finished leather. Training in mechanical operations includes knowledge and maintenance of machines and safety measures. A theoretical course can also be taken. *Commencing date:* 1 April, 1 September. *Duration:*

13 weeks. *Qualifications:* Professional qualifications. *Last date for receipt of applications:* 1 January, 15 May. *Fee:* To be arranged.

Host institution: TNO Leather and Shoe Research Institute
Mr van Coothstraat 55
5141 ER Waalwijk, Netherlands

Shoe designing and pattern cutting

General description: Sizing systems, insole design and pattern cutting, upper design and pattern cutting, design and pattern cutting of different types of shoes, grading of upper and insole patterns, pattern cutting and the making of a shoe up to bottoming. *Commencing date:* 1 April, 1 September. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 1 January, 15 May. *Fee:* To be arranged.

Host institution: TNO Leather and Shoe Research Institute
Mr van Coothstraat 55
5141 ER Waalwijk, Netherlands

Leather garments manufacturing technology

General description: History of leather garments; problem emerging from design and production; creation of design and style; drawing and pattern-cutting techniques; developing patterns in different sizes; use of equipment, accessories and work tools; cutting of materials, assembling, stitching and finishing; marketing and organization techniques. *Commencing date:* 15 July. *Duration:* 1 year. *Qualifications:* University entrance. English. *Last date for receipt of applications:* 30 May. *Fee:* PRs 1,555 a month.

Host institution: Leather Products Development Centre
P.O. Box No. 2375
Nazimabad, Karachi-18, Pakistan

Acabado de cueros

Descripción detallada: Capacitar al pequeño y mediano industrial en la tecnología del acabado de cueros mayores y menores en un proceso apropiado. Contenido: operaciones de pre-acabado; clasificación y acabado del cuero; productos de acabado; impregnación; ligantes; pigmentos. *Fecha de iniciación:* Mayo, septiembre. *Duración:* 15 días. *Requisitos de admisión:* Ser pequeño o mediano curtidor o técnico de la pequeña industria. Español. *Fecha límite de inscripción:* 1 abril, 1 agosto. *Costo de matrícula:* Para ser acordado.

Institución huésped: SENATI-Programa de Apoyo a la Pequeña y Mediana Empresa Industrial (IDAMPEI)
Casilla 1769
Lima, Perú

Basic leather production techniques

General description: The course provides an introduction to leather manufacture and an opportunity for participants to make a number of leathers according to their particular interests, e.g., shoe upper leathers, clothing leathers, vegetable tanned leathers, hair on leathers. Applications for the course will be considered throughout the academic year. *Commencing date:* -. *Duration:* 4 weeks. Longer courses can be arranged. *Qualifications:* Professional qualification. English. *Last date for receipt of applications:* Two months before commencing date. *Fee:* £1,000.

Host institution: National Leather Sellers Centre
Nene College
Moulton Park, Northampton NN2 7AL, United Kingdom

Effluent treatment and the recycling of process liquors

General description: The course deals with the treatment of tannery waste liquors and current legislation for their disposal in various countries. Participants will have the opportunity

to analyse effluents and to carry out small-scale experiments in aeration, coagulation, filtration and recycling of lime sulphide and chrome liquors. Applications for the course will be considered throughout the academic year. *Commencing date:* -. *Duration:* 4 weeks. Longer courses can also be arranged. *Qualifications:* Professional qualification. English. *Last date for receipt of applications:* Two months before commencing date. *Fee:* £1,000.

Host institution: National Leather Sellers Centre
Nene College
Moulton Park, Northampton NN2 7AL, United Kingdom

Leather familiarization

General description: A course principally designed for suppliers (chemicals and machinery) to the industry or users (shoemakers, clothing manufacturers etc.) to provide a background knowledge of leather and leather manufacture. Applications for the above course will be considered throughout the academic year. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* Two months before commencing date. *Fee:* £500.

Host institution: National Leather Sellers Centre
Nene College
Moulton Park Campus
Northampton NN2 7AL, United Kingdom

Leather technology

General description: A detailed advanced course dealing with all areas of leather manufacture (processing) from raw material to finished leather; chemical and physical testing; engineering and chemical engineering. *Commencing date:* September. *Duration:* 34 weeks. *Qualifications:* Professional qualifications and industrial experience. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* £4,000.

Host institution: National Leather Sellers Centre
Nene College
Moulton Park, Northampton NN2 7AL, United Kingdom

Leather technology update

General description: Update in modern techniques of leather manufacture or testing dealing with a specific process stage or type of testing e.g., raw material, beamhouse tannage, finishing. Applications for the above course will be considered throughout the academic year. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* Two months before commencing date. *Fee:* £500.

Host institution: National Leather Sellers Centre
Nene College
Moulton Park Campus
Northampton NN2 7AL, United Kingdom

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

General description: Testing and analysis in a leather control laboratory based on the official methods of analysis of the International Union of Leather Technologists and Chemists Societies; sampling, sample preparation, physical and fastness tests on selected leathers; analysis of chromium and vegetable tanned leathers and of chromium and vegetable tanning materials; analysis of waste tanning liquors. Applications for the course will be considered throughout the academic year. *Commencing date:* -. *Duration:* 4 weeks. Longer courses can also be arranged. *Qualifications:* Professional qualifications.

English. *Last date for receipt of applications:* Two months before commencing date.
Fee: £1,000.

Host institution: National Leather Sellers 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

Posgrado en siderurgia

Description general: Destinado a jóvenes profesionales de la ingeniería que deseen capacitarse en materia siderúrgica. Comprende 900 horas de teoría y 400 horas de práctica en plantas siderúrgicas. *Fecha de iniciación:* Abril 1988. *Duración:* 9 meses. *Calificaciones:* Título de ingeniero. Español. *Fecha límite para la recepción de las solicitudes:* Marzo 1988. *Derechos de inscripción:* Costo matrícula: Consultar.

Institución huésped: Instituto Argentino de Siderurgia
Pasaje Carlos Maria Della Paolera 226
1104 Buenos Aires, Argentina

Construction métallique

Description générale : 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. *Dernier délai pour la soumission des candidatures :* -. *Droit d'inscription :* A arranger.

Organisme hôte : Spoorvegmateriel en Metaalconstructies, BN
Vaartdijkstraat 5
8200 Brugge, Belgique

Exploitation et gestion du transport ferroviaire

Description générale : Infrastructure ferroviaire : voie, ouvrages d'art; matériel ferroviaire fixe; matériel ferroviaire roulant; exploitation des transports en commun; transports urbains et suburbains; gestion commerciale des transports; liaisons maritimes; demande et offre de transport; analyse des systèmes et réseaux de transport; méthodes quantitatives de gestion; problèmes de planification des transports; application de l'informatique aux transports. *Début du cours :* 12 septembre 1988. *Durée :* 14 semaines. *Qualifications :* Diplôme d'ingénieur ou d'économiste et/ou expérience ou niveau professionnel équivalent. Français. *Dernier délai pour la soumission des candidatures :* 30 juin 1988. *Droit d'inscription :* FB 120 000 (20 stagiaires).

Organisme hôte : Institut de formation internationale aux transports (IFIT)
17/B15, boulevard de la Meuse
5100 Jambes, Belgique

Development and management of railway transport

General description: Railway substructure; stationary equipment; rolling stock; urban and inter-urban railways; commercial management of transport; maritime connections; analysis of transport systems and networks; quantitative methods of management; computer applications. *Commencing date:* 14 March 1988. *Duration:* 14 weeks. *Qualifications:* Bachelor's or master's degree in engineering or business administration and/or high-

level employee. English. *Last date for receipt of applications*: 31 December 1988. *Fee*: BF 120,000 based on 20 participants.

Host institution: Institute for International Training in Transport (IFTT)
Boulevard de la Meuse, 17/B15
Jambes, Belgium

Ship hydrodynamics

General description: Different courses and seminars designed mainly for the developing countries covering all or separate fields: advanced methods for ship resistance reduction and wave resistance theories; application of wave resistance theory to ship design; investigation of ship resistance and squat in restricted water; application of boundary layer theory to ship design; practical problems in the field of propeller design and experimental verification; investigation of cavitation phenomena; resistance of high-speed river and marine vessels; ship manoeuvring and steering; dynamics of floating bodies; application of express methods and non-conventional approaches to energy and fuel saving. *Commencing date*: Throughout the year. *Duration*: 2 weeks-10 months. *Qualifications*: Professional qualifications. English, Russian. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: Bulgarian Ship Hydrodynamics Centre
Varna 9003, Bulgaria

Application of friction welding in mechanical and automobile engineering

General description: Calculation and design of friction-welded joints; quality assurance in friction welding, including non-destructive testing; friction welding techniques, including process controls; theory and experimentation. *Commencing date*: To be arranged. *Duration*: -. *Qualifications*: Welding engineers (designers and production engineers). English. *Last date for receipt of applications*: 31 March 1988, 1989. *Fee*: To be arranged.

Host institution: Technical University of Karl-Marx-Stadt
Post Box 964
9010 Karl-Marx-Stadt
German Democratic Republic

Cleaning and processing engineering (grain)

General description: Training in operating machines for cleaning and processing grain, oil-seeds, leguminous crops, grass seeds. Theory, practice, laboratory work and technical excursions. *Commencing date*: 2 May. *Duration*: 2 months. *Qualifications*: Degree or certificate in agriculture or engineering. German and English. *Last date for receipt of applications*: 5 months before commencing date. *Fee*: To be arranged.

Host institution: Ingenieurschule für Getreidewirtschaft
6600 Greiz
German Democratic Republic

Conveying engineering (grain)

General description: Competent operation, maintenance and care of continuous conveyors. Theory, laboratory work, practical exercises and technical excursions. *Commencing date*: 2 May. *Duration*: 2 months. *Qualifications*: Degree or certificate in agriculture or engineering. German and English. *Last date for receipt of applications*: 5 months before commencing date. *Fee*: Approximately \$US 500 a week (includes accommodation and full board).

Host institution: Ingenieurschule für Getreidewirtschaft
6600 Greiz
German Democratic Republic

Welding technology and quality control (agricultural machinery)

General description: Repair of agricultural machinery by welding and welding quality control.
Commencing date: To be arranged. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. German, English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: VEB Interagrarkooperation
Raschwitzer Strasse 11-13
7113 Markkleeberg
German Democratic Republic

Computer numerical control, machine tool technology and practice

General description: CNC/NC machine tool technology; CNC/NC machine tool practice I; CNC/NC machine tool practice II. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and industrial engineering or equivalent. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Tooling technology

General description: Principles of tool design; design and manufacture of plastic moulds; design and manufacture of press tools and dies; precision machining practice; CMC machining processes and tooling; CAD/CAM tooling technology. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and industrial engineering, or in mechanical engineering. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Welding technology and practice

General description: Welding technology; welding processes and practice; welding management and quality control. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and industrial engineering or equivalent. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Welding technology

General description: Basic and improved skills in all aspects of welding. *Commencing date:* Throughout the year. *Duration:* -. *Qualifications:* Professional or technical qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Metal finishing engineering

General description: Basic metals; electroplating; electroless plating; aluminium anodizing; pollution control; physical and chemical vapour deposition. *Commencing date:* 8 April 1988. *Duration:* 5 months. *Qualifications:* University degree or equivalent; at least 2 years of experience; under 40 years of age. English. *Last date for receipt of applications:* 9 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Metal works and engineering

General description: Metallic materials and practical metallurgy; heat treatment; foundry; welding; mechanical engineering; plastic forming of metals; industrial management. *Commencing date:* October 1988. *Duration:* 8 months. *Qualifications:* University degree or equivalent; at least 3 years of experience; between 26 and 35 years of age. English. *Last date for receipt of applications:* 22 August 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Practical welding technology

General description: General welding procedures; selection and usage of welding rods; practical welding procedures for process equipment; advanced inspection methods of welds; case-study and discussion of welding problems. *Commencing date:* 20 January 1988. *Duration:* 2 weeks. *Qualifications:* English. *Last date for receipt of applications:* 10 December 1987. *Fee:* ¥81,000 (plus half of the round trip airfare to be borne by participant).

Host institution: Japan Cooperation Center for Petroleum Industry Development (JCCP)
P.O. Box 1180
Sunshine 60 Bldg. 3-1-1, Higashi-Ikebukuro, Toshima-ku
Tokyo 170, Japan

Properties and testing of steel products

General description: Introduction of steel production; properties of steel production; fundamental properties of steel; testing and inspection techniques of steel products. *Commencing date:* 7 May 1988. *Duration:* 3 months. *Qualifications:* University degree in metallurgy, mechanics or chemical engineering; at least 2 years of practical experience; under 35 years of age. English. *Last date for receipt of applications:* 7 March 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Tooling and production facility practical engineering

General description: Basic knowledge of machining; process design for product manufacturing; materials for making jigs and tools, and heat treatment; design work management and control for tools and jigs; tool making equipment and measuring instruments;

practical knowledge of tools; tools and factory management. *Commencing date:* 10 December 1988. *Duration:* 6 months. *Qualifications:* University degree or equivalent; at least 5 years of experience; in charge of tool engineering production management, production engineering; under 45 years of age. English. *Last date for receipt of applications:* 10 October 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Welding technology

General description: Arc welding; welding machinery and equipment; aluminium alloys welding processes; welding theory, design and inspection method. *Commencing date:* 2 April 1988. *Duration:* 7 months. *Qualifications:* University degree or equivalent; between 26 and 35 years of age. English. *Last date for receipt of applications:* 2 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Welding course

General description: Welding process; welding metallurgy; non-destructive testing; welding design; welding inspection. *Commencing date:* -. *Duration:* 9 months. *Qualifications:* Mechanical and metallurgical engineers. Portuguese. *Last date for receipt of applications:* July. *Fee:* -.

Host institution: Instituto de Soldadura e Qualidade
Universidade Nova de Lisboa
Lisbon, Portugal

Automotive engine and vehicle design technology

General description: In Part I and Part II of the MSc course, which lasts six months, students study at an advanced level 12 selected topics in internal combustion and vehicle engineering. The lecture course is supported by comprehensive laboratory work on performance, noise, emissions and general engine testing. The main feature of Part III of the MSc course is a research project on a problem concerning internal combustion engines or vehicles. The project can be a design study, experimental or theoretical investigation. *Commencing date:* 1 October 1988. *Duration:* -. *Qualifications:* An honours degree or equivalent qualification in engineering, physical science or mathematics. English. Candidates whose mother tongue is not English are required to pass an approved test in English. *Last date for receipt of applications:* 1 August 1988. *Fee:* £5,025.

Host institution: University of Southampton
Southampton SO9 5NH,
United Kingdom

Design, construction and maintenance of precision engineering equipment

General description: This course is designed for engineers working in jobbing workshops, or testing laboratories, whose function is to design and construct specialized items of new equipment, or maintain and repair existing plant. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Mechanical/production engineering degree, higher

national certificate, or equivalent. At least two years of practical experience in a workshop environment. English. *Last date for receipt of applications:* -. *Fee:* £2,500 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom
(in collaboration with Yarsley Technical Centre Ltd.)

Investigation of the failure of metallic components and structures

General description: Project planning; sample preparation; chemical analysis; metallographic techniques; electron microscopy; fractographic techniques; energy dispersive analysis of X-rays (EDAX) using S.E.M.; property determination; interpretation of results; reporting and implementation. Training is given in techniques suitable for on-site and laboratory investigations. *Commencing date:* To be arranged. *Duration:* 1-6 months. *Qualifications:* Degree or equivalent in metallurgy, engineering or a related field. English. *Last date for receipt of applications:* -. *Fee:* £5,500 per month. (additional trainees, £2,500 per month).

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom

Machining processes

General description: Practical training in the skillful operation of machine tools, including: centre lathes; horizontal and vertical milling machines; surface grinding; shaping machines. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Marine engineering

General description: Modular course consisting of: basic craft skills; engine construction and operation (petrol and diesel); engine and stern gear installation; ancillary equipment operation and maintenance; pipework and plumbing; boat electrics. *Commencing date:* January, April and September. *Duration:* 48 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* £3,200 plus VAT.

Host institution: International Boatbuilding Training Centre
Marine Training House
Harbour Road
Oulton Broad
Lowestoft, Suffolk NR32 3LZ, United Kingdom

Marine, shipbuilding and ship repair technology

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

Host institution: AMARC (T.E.S.) Ltd.
Ellison Street
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

Railway engineering programme for overseas administrations

General description: Covers practical and management techniques and procedures for maintenance of locomotives and rolling stock, including both mechanical and electrical aspects. The emphasis is on acquisition of knowledge and skills required to solve problems encountered on railways in developing countries. *Commencing date:* 4 January 1988, 8 January 1989. *Duration:* 26 weeks. *Qualifications:* Degree or equivalent and 3 years of experience in engineering. English. *Last date for receipt of applications:* 1 October 1987, 1 October 1988. *Fee:* £9,800 (1988), £10,300 (1989).

Host institution: British R.
Overseas Training Unit
Railway Engineering School
London Road
Derby DE2 8UX, United Kingdom

Shipbuilding and ship repair

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

Host institution: AMARC (T.E.S.) Ltd.
Ellison Street
Hebburn, Tyne and Wear NE31 1YN, United Kingdom

Welding

General description: Practical training in various forms of welding processes to a variety of international standards. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Welding technology and inspection

General description: Specializes in the design, metallurgical processes and inspection aspects of welds. Practical case-study work gives examples of the application of theory in an industrial environment. *Commencing date:* Throughout the year. *Duration:* 2-4 weeks. *Qualifications:* Experience in welding industry. *Last date for receipt of applications:* -. *Fee:* £320 - £550.

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

Metallurgical industries / Industrie métallurgique / Industrias metalúrgicas

Foundry

General description: Work preparation; moulding; drawing; techniques for preparing the sand; fusion and leaking; finishing and thermal treatment; quality control; casting moulding;

organization and norms. *Commencing date:* 1 February. *Duration:* -. *Qualifications:* Professional qualifications. Portuguese. *Last date for receipt of applications:* 30 October. *Fee:* To be arranged.

Host institution: Centro de Fundação de Itaúna
Rua Lília Antunes 99
Santo Antonio
35.680 Itaúna, Minas Gerais, Brazil

Instrumentation

General description: Electricity and general and applied electronics, organization and norms; general and applied instrumentation; pneumatics and general and applied hydraulics; calculus and technical drawing; physics and applied chemistry; technical English. *Commencing date:* 1 February (Rio de Janeiro), 1 March (Rio Grande do Sul). *Duration:* -. *Qualifications:* Professional qualifications. Portuguese. *Last date for receipt of applications:* 30 October. *Fee:* To be arranged.

Host institution: Centro Tecnológico Euvaldo Lodi
Praça Natividade Saldanha, 19 Benfica
26.360 Rio de Janeiro, RJ, Brazil
or
Centro Tecnológico de Mecânica de Precisão
SENAI - "Plínio" Gilberto Kroeff"
BR 116 n° 3585
93.010 Sao Leopoldo, Rio Grande do Sul, Brazil

Pirometalurgia del cobre

Descripción general: Visión global de la metalurgia extractiva de minerales sulfurados; proceso tradicional fusión mate-conversión, procesos modernos, tostación de concentrados de cobre; fundamentos termodinámicos; proceso fundición mate-conversión; proceso tradicional de fundición mate en horno de reverbero y sus alternativas; proceso de conversión; refinación a fuego de cobre para preparación de ánodos y reciclaje de scrap; distribución de impurezas entre metal, escoria y gas; problemas de contaminación en la pirometalurgia del cobre. *Fecha de iniciación:* 15 abril. *Duración:* 2 semanas. *Calificaciones:* Español o inglés. *Fecha límite para la recepción de las solicitudes:* 15 marzo. *Derechos de inscripción:* \$US 1,200.

Institución huésped: Centro de Investigación Minera y Metalúrgica (CIMM)
Casilla 170, Correo 10
Santiago, Chile

Testing at foundries

General description: Training in modern techniques of testing casting materials; training in modern techniques of analysing the structure and texture of casting alloys; testing of mould materials at foundries; casting behaviour and properties of casting materials. *Commencing date:* To be arranged. *Duration:* 1-4 weeks. *Qualifications:* Foundry engineers and materials technologists. English. *Last date for receipt of applications:* 31 March 1988, 1989. *Fee:* To be arranged.

Host institution: Mining Academy in Freiberg
Akademiestrasse 6
9200 Freiberg, German Democratic Republic

Electrical steel making

General description: Current situation of electrical steel making in Japan; management of electrical furnaces, dissolution method and material control. *Commencing date:* October 1988. *Duration:* 5 months. *Qualifications:* University degree or equivalent; at least

2 years of experience; under 35 years of age. English. *Last date for receipt of applications:* 22 August 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Foundry engineering

General description: Foundry sands; mould properties and sand mixtures; moulding processes; foundry raw materials; fuels; melting furnaces and melting; casting design; modernization of foundry shops. *Commencing date:* 13 August 1988. *Duration:* 7 months. *Qualifications:* University degree or equivalent; presently engaged in foundry; at least 2 years of experience; under 35 years of age. English. *Last date for receipt of applications:* 13 June 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Iron and steel

General description: Courses on: basic oxygen furnaces: continuous slab casting operations, continuous slab caster maintenance; cold rolling mills: finishing lines operations, mechanical maintenance, electrical maintenance; hot rolling mills: operations, mechanical maintenance, electrical maintenance; metallurgical quality control. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Ercoli Iron and Steel Plant
Ercoli, Turkey

Analytical procedures for testing laboratories: metallic materials

General description: Classical wet chemistry methods; atomic absorption. (Flame and ETA), emission spectroscopy; mass spectroscopy; energy dispersive analysis of X-rays (EDAX) using S.E.M.; UV spectrometry; X-ray analysis; X-ray photo-electron spectroscopy; differential thermal analysis. The course provides training in procedures for routine and investigational chemical analysis. It is practical and involves extensive project work to provide "hands-on" experience. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Degree or equivalent in an appropriate discipline. English. *Last date for receipt of applications:* -. *Fee:* £2,500-£4,000 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom

Foundry appreciation

General description: An appreciation of casting and moulding techniques. The course is suitable for a wide range of people including senior staff, graduates and technician apprentices, particularly those involved in design, estimating, purchasing, inspection. *Commencing date:* Throughout the year. *Duration:* 10 days. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Foundry technology

General description: Choice of casting method; sand moulding and permanent mould design and preparation; gating and feeding techniques; melt quality control; test techniques; precise course content by arrangement. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Degree or equivalent in metallurgy or a related field. English. *Last date for receipt of applications:* -. *Fee:* £2,500-£4,000 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom

Foundry technology

General description: Basic principles of metal founding and their application to the production and user industries; the effect of casting design and material selection in the successful application of finished products; foundry principles in relation to specific processes in the manufacture and use of castings. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Industrial metallurgy

General description: Fundamentals of heat treatment; heat treatment furnaces and methods; metallographic techniques; mechanical and non-destructive testing techniques; precise course content by arrangement. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Degree or equivalent in metallurgy or a related field. English. *Last date for receipt of applications:* -. *Fee:* £2,500-£4,000 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom

Heat treatment of metals

General description: Theory and practical application of different heat treatment processes for steel, cast iron and aluminium alloys; temperature measurement and control; quenching principles and practice; hardenability and hardness distribution; controlled atmospheres in heat treatment; carburizing, carbonitriding and nitriding; induction hardening; practical work with different heat treatment equipment (salt baths, chamber furnace, pit furnace, induction hardening equipment); laboratory testing of heat treated components; specification for heat treatment processes; errors in heat treatment and their consequences. *Commencing date:* By arrangement. *Duration:* Usually 3 months. *Qualifications:* Diploma or degree in mechanical engineering or metallurgy. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Faculty of Mechanical Engineering and Naval Architecture
Material Science Department
Djure Salaja 1
41000 Zagreb, Yugoslavia

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

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

Description générale: Les polymères utilisables dans le conditionnement et l'emballage; leurs diverses propriétés chimiques, physiques, rhéologiques; le conditionnement des produits

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

Organisme hôte : Centre d'études des matières plastiques
Université de Liège
2, rue Armand-Stewart
4000 Liège, Belgique

Emballage

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

Organisme hôte : Institut belge de l'emballage
15, rue Picard
1020 Bruxelles, Belgique

Manufacturing of packaging

General description: German executive experts will lecture on economical production methods: selection of raw material and feedstock, process technology, machinery and technical equipment, maintenance management, management of quality and control, organization. *Commencing date*: To be arranged. *Duration*: 3-14 days. *Qualifications*: Professional qualifications. English, French, Spanish. *Last day for receipt of applications*: -. *Fee*: To be arranged.

Organizer: Haus der Technik eV
POB 10 15 43
4300 Essen 1, Federal Republic of Germany

Venue: Various countries

Packaging design and engineering

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: marketing and distribution; packaging planning and design; the unit-load system; packaging materials, methods and machinery; materials handling, package testing and quality control; standardization in packaging. *Commencing date*: -. *Duration*: 3 weeks. *Qualifications*: Packaging engineers in industry and technical consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 100 for participants from profit-making organizations.

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

Venue: To be decided.

Emballage et conditionnement

Description et conditionnement : Les emballages de transport et d'exportation des fruits et légumes frais; les caractéristiques techniques des emballages en papier et en carton; le contrôle de la qualité des matériaux d'emballages et des emballages; la conserve végétale et animale en boîte métallique; conception, design et impression dans le domaine des emballages. *Début du cours* : -. *Durée* : 2-3 semaines. *Conditions d'admission* : Français ou arabe. *Date limite d'inscription* : -. *Frais d'inscription* : A arranger.

Organisé par : Institut marocain d'emballage et du conditionnement
Route de Nouaceur, Km 9,5
B.P. 8006
Casa Oasis, Maroc

Packaging technology

General description: Retail packaging; packaging research; information/documentation; processability of packaging materials; quality control. *Commencing date*: To be arranged. *Duration*: -. *Qualifications*: Professional qualifications. English. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: TNO Packaging Research Institute
P.O. Box 169
2600 AD Delft, Netherlands

Pulp and paper industries / Industrie de la pâte à papier et du papier / Industrias de la celulosa y el papel

Paper and cellulose

General description: Natural resources; pulp and wood chemistry; technology for manufacturing pulp and paper; technological sampling; technical drawing; industrial equipment; graphic arts; applied chemistry and mathematics. *Commencing date*: 1 February. *Duration*: -. *Qualifications*: Professional qualifications. Portuguese. *Last date for receipt of applications*: 30 October. *Fee*: To be arranged.

Host institution: Escola SENAI Theobaldo de Nigris
Rua Bresser 2.315
Mooca
03.017 Sao Paulo, Brazil

Pulp and paper technology

General description: Theoretical and practical training in: wood chemistry, pulp technology, paper technology; laboratory courses; individual research projects. *Commencing date*: 1 September. *Duration*: 10 months. *Qualifications*: Admission through NORAD. B.Sc. or M.Sc. in chemistry or chemical engineering with experience in pulp or paper industry. English. *Last date for receipt of applications*: Inquire with NORAD. *Fee*: -.

Host institution: The Norwegian Institute of Technology
Laboratory of Chemical Engineering
Pulp and Paper Laboratory
7034 Trondheim-NTH, Norway
in conjunction with:
Royal Norwegian Ministry of Development Cooperation (NORAD)
P.O. Box 8142 Dep.
0033 OSLO 1, Norway

Textile industries / Industrie textile / Industrias textiles

Industrie textile

Description générale : 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. Dernier délai pour la soumission des candidatures : -. *Droit d'inscription* : FB 20 000 par mois.

Organisme hôte : Centre de recherche et de contrôle lainier et chimique (CELAC)
Zoning de Petit Rechain
6911, avenue du Parc
4655 Chaineux, Verviers, Belgique

Textiles

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

Organisme hôte : Centexbel
24, rue Montoyer
1040 Bruxelles, Belgique

Textiles

General description: Textiles and garment technology; finishing and dyeing; maintenance; drawing; hygiene and safety; time and motion; introduction to computers; textile fibres; statistics; organization and norms; quality control; production control; spinning and weaving; knitting; textile finishing. *Commencing date*: 1 February. *Duration*: -. *Qualifications*: Professional qualifications. Portuguese. *Last date for receipt of applications*: 30 October. *Fee*: To be arranged.

Host institution: Centro Tecnológico da Indústria Química e Têxtil
Rua Dr. Manoel Cotrim 195
20.061 Rio de Janeiro, RJ, Brazil

Manufacturing of clothing

General description: German executive experts will lecture on economical production methods: selection of raw material and feedstock, process technology, machinery and technical equipment, maintenance management, management of quality and control, organization. *Commencing date*: To be arranged. *Duration*: 3-14 days. *Qualifications*: Professional qualifications. English, French, Spanish. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Organizer: Haus der Technik eV
POB 10 15 43
4300 Essen 1, Federal Republic of Germany

Venue: Various countries

Knitting technology

General description: Fundamentals of knitting technology; technological principles and characteristics of knitting machines, products of flat knitting, of large diameter circular knitting and of warp knitting. Intended for the staff of knitting enterprises working in the management, production, technology, marketing, research and export departments, as

well as for teachers with a previous knowledge of knitting techniques. *Commencing date:* To be arranged. *Duration:* 3 weeks. *Qualifications:* Management experience. English. *Last date for receipt of applications:* 31 March 1988, 1989. *Fee:* To be arranged.

Host institution: Dresden University of Technology
Mommsenstrasse 13
8027 Dresden, German Democratic Republic

Fashion design

General description: Core courses: socio-economic forecasting; design economics; expressive tendencies; the history of costume; fashion design; textile and accessory design; fashion marketing and communications. *Commencing date:* January 1988. *Duration:* 10 months. *Qualifications:* Graduates or persons with an equivalent amount of professional experience. Italian, English. *Last date for receipt of applications:* October 1987. *Fee:* SUS 14,000 (includes all fees).

Host institution: Domus Academy
Edificio I/C
Milanofiori
20090 Assago (Milan), Italy

Textile machinery and textiles

General description: Theoretical and practical training in: textiles technologies, mechanics applied to textiles and machine design, electronics applied to textile, statistical analysis and quality control, chemical elements, finishing and dyeing, computer science, EDP and information systems, marketing applied to textile, textile plants, conditioning systems. *Commencing date:* November (for foreign students an intensive course of Italian will be held from September to the end of October). *Duration:* 6 months. *Qualifications:* Degree in engineering or industrial chemistry or equivalent. Italian. *Last date for receipt of applications:* 30 June. *Fee:* To be arranged.

Host institution: CERIT S.p.A. (Regional Centre for Technical Innovation)
Via Villanova di Sotto
33170 Pordenone, Italy

Cotton weaving engineering

General description: Preparatory process of weaving; mechanism of weaving machine; loom operation and maintenance; designing and analysis of different fabrics; physical and chemical testing method of fabrics; modern techniques of management of weaving mills. *Commencing date:* 9 April 1988. *Duration:* 5 months. *Qualifications:* University degree or equivalent; presently engaged in the production as the mill manager and/or weaving master; between 30 and 45 years of age. English. *Last date for receipt of applications:* 9 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Polymers and textiles technology

General description: Structure and properties of fibres; dyeing, finishing and testing methods of textiles; application of computers in the processing of textile products; utilization of native plant fibre; development of synthetic polymers; industrial application of synthetic polymers. *Commencing date:* 10 August 1988. *Duration:* -. *Qualifications:* University

degree or equivalent; at least 3 years of experience; between 25 and 35 years of age. English. *Last date for receipt of applications:* 10 June 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

International garment CAD/CAM pattern design

General description: The garment-computed-aided-design (CAD)/computer-aided-manufacturing (CAM)-pattern-design course is intended for pattern-engineers and members of the technical staff active in product development. Theoretical and practical training covers: pattern engineering and preparation; conversion of manual grading techniques into computerized grading; grading techniques and their organization; computerized cutplanning; marker-making and the use of raw materials with the help of a computerized system; options and registrations of computerized cutting; general knowledge of computer grading and marker systems. *Commencing date:* March, September 1988, March, September 1989. *Duration:* 3 weeks. Courses arranged according to needs. *Qualifications:* Knowledge of pattern engineering and/or grading, experience in the cutting-room required; computer experience not required. English. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* f. 4,500.

Host institution: TNO Fibre Research Institute
Clothing Department
Hengelosestraat 715
7521 PA Enschede, Netherlands

International garment technology

General description: Theoretical and practical training for work and department managers in factories producing clothing covering: quality; assembling techniques; machinery; organization; pattern engineering techniques. *Commencing date:* April, September 1988, 1989. *Duration:* 8 weeks. Courses arranged according to needs. *Qualifications:* Knowledge of clothing industry and/or some years of working experience in production. English. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* f. 9,000.

Host institution: TNO Fibre Research Institute
Clothing Department
Hengelosestraat 715
7521 PA Enschede, Netherlands

Textile industry

General description: Spinning and weaving, including preparation of yarn, piece dyeing, finishing, printing and testing. *Commencing date:* Throughout the year. *Duration:* 4-12 weeks. *Qualifications:* Degree from a technical school. German, English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Ten Cate Consultants BV
P.O. Box 58
7600 GD Almelo, Netherlands

Textiles

General description: Sizing of spun yarns; card clothing; preparation and weaving of cotton and blended yarns; wet-processing of textiles; garment technology; testing methods and testing of fibres, yarns, fabrics, non-woven carpets and quality assurance. *Commencing date:* To be arranged. *Duration:* 4 days-3 months. *Qualifications:* Professional qualifi-

cations. English or German. *Last date for receipt of applications:* —. *Fee:* To be arranged.

Host institution: TNO Fibre Research Institute
P.O. Box 110
2600 AC Delft, Netherlands

Textile technology and management course

General description: Theory and practice of industrial organization and management: costing, maintenance, production control, quality control, statistics, trouble-shooting, operative selection and training; theory and practice of textile manufacturing processes: spinning of cotton and synthetics, weaving, knitting, dyeing, finishing, and printing. In-plant training, case-studies. *Commencing date:* January, September 1988. *Duration:* 4 months. *Qualifications:* Production managers and technical staff; secondary-level education and at least two years of work experience in textile industry. Good knowledge of English. *Last date for receipt of applications:* 4 months before commencing date. *Fee:* To be arranged.

Organizer: Ten Cate Consultants BV
P.O. Box 58
7600 GD Almelo, Netherlands
in collaboration with:
Textile Engineering College
I.H.B.O. "De Maere"
P.O. Box 1075
7500 BB Enschede, Netherlands

Cotton fibre technology, testing and evaluation

General description: Basic statistics; general fibre technology; fibre structure; fibre properties in relation to end-use; fibre identification; cotton testing and evaluation; testing of cotton in process; analysis and evaluation of test results; cotton marketing. *Commencing date:* April 1988. *Duration:* 8 weeks. *Qualifications:* Education at least up to university entrance level and technical qualifications in either agricultural subjects, preferably related to cotton production or in textile technology at least up to higher national diploma (or equivalent) level. English. *Last date for receipt of applications:* 29 February 1988. *Fee:* To be arranged.

Host institution: International Institute for Cotton
Kingston Road
Didsbury, Manchester M20 8RD
United Kingdom

Cotton textiles: management principles and techniques

General description: Leadership; control data and procedure; work-force potential; selection; communications; training; health and safety. *Commencing date:* June 1988. *Duration:* 4 weeks. *Qualifications:* Management trainees/supervisors, departmental managers etc. *Last date for receipt of applications:* 31 March 1988. *Fee:* To be arranged.

Host institution: International Institute for Cotton
Kingston Road
Didsbury, Manchester M20 8RD
United Kingdom

General textiles

General description: A course designed to introduce scientists or engineers to the fundamentals of textile processing, properties and uses. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Preferably previous scientific training. English. *Last*

date for receipt of applications: 1 month before commencing date. *Fee:* £600 (plus living costs).

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

Textiles for chemists

General description: A course designed for chemists entering the industry as dyers or finishers to introduce them to general aspects of the textile industry, with special emphasis on dyeing and finishing. *Commencing date:* To be arranged. *Duration:* 7 days. *Qualifications:* Preferably previous chemical training. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £350 (plus living costs).

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

Sizing and weaving of cotton yarns

General description: Basic statistics; general fibre technology; basic principles of yarn preparation and weaving; theory and practice of warp sizing — sizing agents, size mixes and preparation, sizing machines; weaving technology — factors influencing the choice of ancillary equipment for the loom, techniques to use in warp gaiting, control of weft, choice of drawing-in and denting; type of selvage construction; techniques of weaving densely set warps; fault identification; fault prevention and correction; testing and quality control. *Commencing date:* April 1988. *Duration:* 8 weeks. *Qualifications:* A sound general education combined with some industrial experience in the textile industry. English. *Last date for receipt of applications:* 29 February 1988. *Fee:* To be arranged.

Host institution: International Institute for Cotton
Kingston Road
Didsbury, Manchester M20 8RD, United Kingdom

Textile technology

General description: Introductory, intermediate and advanced courses on cotton and man-made fibres, yarns and fabrics; textile processes and machinery for yarn and fabric (woven, knitted, non-woven) production; dyeing, printing; finishing; testing; working hazards; energy conservation; quality control; technical management. *Commencing date:* Throughout the year. *Duration:* 1 day-6 months. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* —. *Fee:* To be arranged.

Host institution: Shirley Institute
Didsbury
Manchester M20 8RX, United Kingdom

Wet-processing of cotton textiles

General description: The final appearance, quality and performance of a fabric can be greatly enhanced, or seriously impaired, by the care given to the preparatory finishing processes of desizing, scouring, bleaching, mercerizing, easy-care treatment and recent developments in low add-on finishing. The course therefore emphasizes these aspects of wet-processing but is sufficiently flexible to allow attention to be given to dyeing and printing techniques, if required. *Commencing date:* April 1988. *Duration:* 8 weeks. *Qualifications:* A sound general education, preferably up to university entrance level; some practical experience in wet-processing of textiles is essential. English. *Last date for receipt of applications:* 29 February 1988. *Fee:* To be arranged.

Host institution: International Institute for Cotton
Kingston Road
Didsbury, Manchester M20 8RD, United Kingdom

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

Technologie du bois

Description générale : 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. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : FB 15 000 par mois.

Organisme hôte : Station de technologie forestière
1, avenue du Maréchal Juin
5800 Gembloux, Belgique

Fundamentos de muebles y modulares

Descripción detallada: Analizar características y medidas de muebles; croquis y perspectivas de muebles; planos de fabricación; introducción al diseño de muebles y modulares; fundamentos de decoración de interiores. *Fecha de iniciación*: Mayo, octubre. *Duración*: 15 días. *Requisitos de admisión*: Ser pequeño o mediano industrial del ramo o trabajador con buena experiencia. Español. *Fecha límite de inscripción*: 1 abril, 1 septiembre. *Costo de matrícula*: Para ser acordado.

Institución huésped: SENATI-Programa de Apoyo a la Pequeña y Mediana Empresa Industrial (IDAMPEI)
Casilla 1769
Lima, Perú

Timber technology: timber engineering and wood protection

General description: Timber technology; mechanical properties of timber; structural design of solid and glued-laminated beams and columns; structural timber joints; wood-based panels; timber in building; protection by design; protection against natural effects; followed by options in either timber engineering or wood protection. *Commencing date*: October 1988. *Duration*: 12 months. *Qualifications*: Degree or appropriate relevant experience. English. *Last date for receipt of applications*: May 1988. *Fee*: £6,000.

Host institution: Department of Civil Engineering and Department of Pure and Applied Biology
Imperial College
University of London
London SW7 2BU, United Kingdom

B. INDUSTRIAL FUNCTIONS / FONCTIONS DANS L'INDUSTRIE / FUNCIONES INDUSTRIALES

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

Computer process control system

General description: Introduction; electronic and pneumatic components; transmitters; operation amplifiers; transistor transducers; digital data conversion units; arrangement of process control units; computer process control manual; safety equipment; alarm system.
Commencing date: Throughout the year except in July and August. *Duration:* 4-6 weeks.
Qualifications: Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Automatique

Description générale: Ingénieur civil en automatique. Le programme, réparti sur une année académique, comprend les enseignements suivants : génie informatique; micro-processeurs; signaux aléatoires; systèmes thermiques; automates séquentiels; transducteurs et mesures automatisées; identification, modélisation et commande des processus industriels; programmation mathématique ainsi qu'un projet de fin d'études de 300 heures. Le diplôme est accessible aux ingénieurs civils électriciens et mécaniciens diplômés par la Faculté polytechnique de Mons. Moyennant certains compléments à déterminer dans chaque cas particulier, il est accessible à tous les ingénieurs civils.
Début du cours : Septembre. *Durée :* 1 an. *Qualifications :* Ingénieur civil. Français.
Dernier délai pour la soumission des candidatures : Octobre. *Droit d'inscription :* FB 17 500.

Organisme hôte : Faculté polytechnique de Mons
9, rue de Houdain
7000 Mons, Belgique

Automated ship design

General description: Short or longer courses covering all or separate fields: scientific and technical trends in shipbuilding, current research programmes, power plants, systems and devices; computerization of ships and shipyards; automation of ship design, technological preparation, production processes, planning and control; numerical methods and software engineering; choice of computer techniques and their application to the automation of engineering activities etc. *Commencing date:* Throughout the year. *Duration:* 4 weeks-10 months. *Qualifications:* English, Russian. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Bulgarian Ship Hydrodynamics Centre
Varna 9003
Bulgaria
in collaboration with the Shipbuilding Institute,
the Centre of Shipbuilding Cybernetics and technical institutes

Microprocessors and microcomputers

General description: Intensive course with theoretical and practical emphasis on microprocessors and microcomputers; laboratory sessions with 6800/6809 development system; exercises with 2920 analog microprocessors; personal and industrial microcomputers. Practical considerations; applications in data processing and industrial control. Advanced techniques. *Commencing date:* Throughout the year. *Duration:* 6-12 weeks. *Qualifications:* Professional qualifications. English, Russian. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Bulgarian Ship Hydrodynamics Centre
Varna 9003, Bulgaria
in collaboration with technical institutes in Varna and Sofia

Computer technology

General description: Elementary, intermediary and advanced levels, computer software development and network planning. *Commencing date:* To be arranged. *Duration:* 1-8 weeks. *Qualifications:* Professional qualifications. English (possibly Arabic). *Last date for receipt of applications:* -. *Fee:* SwF 3,300-SwF 7,800.

Host institution: P & R Techconsult Ltd.
Association of Advanced Technical Services GmbH
P.O. Box 3885
Nicosia, Cyprus

Computer aided design (CAD)/Computer aided manufacturing (CAM)

General description: Interregional workshop dealing with CAD/CAM conceptual approach and practical applications; methods and use of computer hardware and software in CAD, CAPP (computer aided process planning), CAM; personal computers, micro-, mini-computers applications in CAD/CAM; practical work in CAD/CAPP and CAM laboratories and industrial visits including Brno International Engineering Fair. *Commencing date:* September 1988, 1989. *Duration:* 3 weeks. *Qualifications:* Managers and/or civil engineers with a university degree, preferably in mechanical engineering or electronics with at least 3 years of experience in design and manufacturing. English. *Last date for receipt of applications:* 31 May 1988, 1989. *Fee:* Governments/IPF projects are expected to provide travel for participants.

Host institution: National Technical Consultancy and Training Centre
Národní 22
Prague, Czechoslovakia

Personal computers programming and their industrial and management applications

General description: Interregional workshop dealing with personal computers (PC) conceptual approach and practical applications; methods and use of PC hardware and software in draftsmen's automation, computer based learning, databank systems, office automation, demonstrations and practical use of software for production and maintenance planning and management and technological information retrieval systems. *Commencing date:* October 1988, 1989. *Duration:* 2 weeks. *Qualifications:* Managers/engineers with a university degree preferably in economics/management/electronics with at least 3 years of experience; basic knowledge of computer systems necessary. English. *Last date for receipt of applications:* 15 August 1988, 1989. *Fee:* Government and/or IPF projects are expected to provide travel for participants.

Host institution: National Technical Consultancy and Training Centre
Národní 22
Prague, Czechoslovakia

Cycle : Spécialistes en automatisation des processus industriels

Description générale : Programme: électronique; informatique; éléments de procédés; mesure industrielle; actionneurs; régulation; automatismes; informatique industrielle; gestion de production; qualité industrielle; gestion; projet industriel. *Début du cours* : Fin septembre. *Durée* : 9 mois. *Qualifications* : Ingénieurs ou diplômés de l'université : Maîtrise, MST, DEA, Doctorat; dossier et entretien. Français. *Dernier délai pour la soumission des candidatures* : 10 septembre. *Droit d'inscription* : FF 40 000.

Organisme hôte : Institut supérieur d'automatique et d'informatique industrielles (ISAI)
Chemin du Temple
ZI Nord
13645 Arles, France

Filière : automatismes logiques

Description générale : 5 stages : initiation aux automatismes; pratique des automatismes; automatismes complexes; réseaux locaux industriels; initiation à la robotique. *Début du cours* : Une ou plusieurs sessions sont programmées au cours de l'année. *Durée* : -. *Qualifications* : Sur dossier. Français. *Dernier délai pour la soumission des candidatures* : 3 mois avant le début du stage. *Droit d'inscription* : Environ FF 5 000 net la semaine (repas et hébergement en sus).

Organisme hôte : IRA
Chemin des Moines
13644 Arles Cedex, France

Formation à la conception et à la fabrication assistée par ordinateur

Description générale : Apporter une bonne connaissance des problèmes de production, la maîtrise de l'outil informatique pour permettre d'être opérationnel en matière de dessin assisté (DAO) de méthodes et de programmation de machines à commande numérique. *Début du cours* : octobre 1988. *Durée* : 500 heures. *Qualifications* : Techniciens supérieurs ou ingénieurs en mécanique ou électromécanique ayant au moins 3 ans d'expérience professionnelle en production. *Dernier délai pour la soumission des candidatures* : 2 mois avant le début du stage. *Droit d'inscription* : -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Formation en automatique avancée et robotique

Description générale : Donner à des techniciens ayant une bonne connaissance des problèmes de la production les outils indispensables à la mise en œuvre des techniques de l'automatique jusques et y compris les robots industriels. *Début du cours* : octobre 1988. *Durée* : 900 heures. *Qualifications* : Techniciens supérieurs en mécanique ou électrotechnique ou niveau équivalent. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Data communication

General description: Introduction and basic concepts; theoretical foundation; tools, equipment and monitors; networks and performance considerations; communication services and media; local area networks; application and security workshop. *Commencing date*: February, November 1988. *Duration*: 4 months. *Qualifications*: Middle-level data pro-

cessing professionals. English. *Last date for receipt of applications:* January, October 1988. *Fee:* HKMA member, SHK 2,465. Non-member, SHK 2,565.

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

Engineering drafting and CAD practice

General description: Drafting practice and procedures; engineering drafting and design; CAD and drafting. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and industrial engineering or equivalent. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Industrial automation

General description: Automation elements and systems; CAD automation; applications of industrial automation. *Commencing date:* 1 October 1988. *Duration:* 7 months. *Qualifications:* Certificate in production and industrial engineering or in mechanical engineering with at least one year of post-qualification industrial experience. English, Cantonese. *Last date for receipt of applications:* 1 May 1988. *Fee:* Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Computer systems analysis and design

General description: Basics of design, brief review of computer resources; qualities of good design, design strategies, selection of computer system, security measures. *Commencing date:* 22 August 1988. *Duration:* 2 weeks. *Qualifications:* Executives involved or interested in the design of computer-based information systems; a degree with some experience in computer programming and familiarity with basic computer technology essential. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Integrated programme on low-cost automation

General description: Training in the application of fluid power, electric and electronic controls to low-cost automation. *Commencing date:* 5 January 1988. *Duration:* 8 weeks. *Qualifications:* Degree or diploma in engineering with experience in the relevant fields. English. *Last date for receipt of applications:* 30 November 1987. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Computer courses for industry

General description: CAD design, computer-aided manufacture, computer-based training programmes, data processing, computer use in business operations, computer applications, microprocessing, analog electronics, industrial instrumentation. *Commencing date:*

Throughout the year. *Duration*: -. *Qualifications*: Professional qualifications. English. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Computer use in business management

General description: Theoretical and practical training of computer applications in accounting, finance, planning, marketing, production, budget, management control and decision-making. *Commencing date*: To be arranged. *Duration*: 3 weeks. *Qualifications*: Technical or professional qualifications. Italian, English. *Last date for receipt of applications*: To be arranged. *Fee*: To be arranged.

Host institution: CERIT S.p.A. (Regional Centre for Technical Innovation)
Via Villanova di Sotto
33170 Pordenone, Italy

Informative systems

General description: Introduction to the computer: theoretical basis, operative systems, language of programming (Basic, Pascal), softwares, computer applications in information and design. *Commencing date*: To be arranged. *Duration*: 5 weeks. *Qualifications*: Technical or professional qualifications. Italian, English. *Last date for receipt of applications*: To be arranged. *Fee*: To be arranged.

Host institution: CERIT S.p.A. (Regional Centre for Technical Innovation)
Via Villanova di Sotto
33170 Pordenone, Italy

Automation in small and medium industries

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: principles and means of automation; (actuators, fluid applications, relay circuits, electronic circuits, sensors, control by computers); automation systems and devices (jigs and fixtures, feeding devices, transfer devices, processing devices, assembly devices, control devices). *Commencing date*: -. *Duration*: 2 weeks. *Qualifications*: Technical consultants of national productivity organizations or similar institutes, and senior plant and production engineers of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 50 for participants from profit-making organizations.

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

Venue: China

Computer applications in manufacture

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to the feasibility and application of computers in the various activities of manufacturing industries, such as production planning and control, inventory control, etc. *Commencing date*: -. *Duration*: 3 weeks. *Qualifications*: Senior engineers from industry and technical consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications*: 3 months

before commencing date. *Fee:* SUS 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Introduction to process computers

General description: Outline of process computer systems; introduction to distributed control systems; introduction to process control theory; computer control practice; maintenance of process computers; outline of advanced control; on-site observation at refineries and instrument factories. *Commencing date:* 18 February 1988. *Duration:* 4 weeks. *Qualifications:* English. *Last date for receipt of applications:* 10 January 1988. *Fee:* Y105,000 (plus half of the round trip airfare to be borne by participant).

Host institution: Japan Cooperation Center for Petroleum
Industry Development (JCCP)
P.O. Box 1180
Sunshine 60 Bldg. 3-1-1, Higashi-Ikebukuro, Toshima-ku
Tokyo 170, Japan

Office automation

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: office automation (OA) equipment and applications; OA and the office environment; OA and new technologies; planning and implementing OA; exercises on personal computers and word processors. *Commencing date:* -. *Duration:* 3 weeks. *Qualifications:* Consultants of national productivity organizations or similar institutes and senior office managers of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Computer use in business operations

General description: Essentials of computer programming, systems analysis and specific software designed to solve major problems in accounting, finance, planning, marketing, production and quality control. *Commencing date:* 2 May, 24 October 1988, 1 May, 23 October 1989. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent and experience in a relevant field. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* f. 10,000.

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

Information and data processing systems

General description: Courses covering the main fields of information systems and training of systems analysts. *Commencing date:* To be arranged. *Duration:* 4-10 weeks. *Qualifications:* Professional qualifications. English or French. *Last date for receipt of applications:* -. *Fee:* SUS 540 a week (including accommodation and meals).

Host institution: International Centre for Management Development (CEPECA)
Otopeni
Soseaua Odai 2C
Bucharest, Romania
in collaboration with Electronic Data Processing and Consulting Centre

Applications for computers in railway management, finance operations and engineering

General description: The course, which is designed for managers and not for data processing specialists, gives a general overview of the state of the art in computer applications in a railway context. Includes practical "hands-on" experience of some of the systems in use on British Rail. The applications are on mainframe, minis and micros, stand-alone and networked. *Commencing date:* 3 October 1988, 2 October 1989. *Duration:* 4 weeks. *Qualifications:* Basic knowledge of computing. English. *Last date for receipt of applications:* 22 July 1988, 21 July 1989. *Fee:* £1,900 (1988), £2,050 (1989).

Host institution: British Rail
Overseas Training Unit
Railway Engineering School
London Road
Derby DE2 8UX, United Kingdom

Computer aided manufacturing and production engineering

General description: Computer skills; programming theory: CNC turning; practical application of turning; programming theory: CNC milling; practical application of milling; advanced programming theory; robot programming and operating; robot loading/unloading linked to CNC application; programming, setting and operating a machining centre; CAD and CAM; practical use of CAM on CNC machines; drawing components using CAD and linking to CAM; loading programmes into CNC machines and interfacing with robots and conveyors. *Commencing date:* To be arranged. *Duration:* -. *Qualifications:* Good industrial manufacturing background, mathematically competent with a technical bias. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Organizer: Skills Training Agency
Overseas Training Unit
Level 3
Moorfoot
Sheffield S1 4PQ, United Kingdom

Venue: Sheffield Skillcentre
Richmond Park Road
Sheffield S13 8HT, United Kingdom

Computer applications and development

General description: Short courses on microcomputer appreciation; database management systems; word and data processing; financial modelling; programming; management information systems; computer hardware and software; analysis and design; particular emphasis on tropical agriculture and rural development. *Commencing date:* Throughout the year. *Duration:* Varies. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: MASDAR Technology
MASDAR House
141 Nine Mile Ride
Finchampstead
Wokingham, Berkshire, RG11 4HY, United Kingdom

Computer subjects

General description: Introduction, lectures and hands-on training in writing programmes for industrial and commercial applications in the popular programming languages. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Professional quali-

fications. Good English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* To be arranged.

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

Computing for business applications

General description: Provides a thorough training in the skills required for computing in a business environment. The course modules include an introduction to computing, systems development, programming, microcomputer applications and interpersonal skills. Aimed at mature personnel from developing countries who will be setting up and running a computer department in a commercial environment. *Commencing date:* January. *Duration:* 6 months (plus 3 months optional secondment). *Qualifications:* Graduates or equivalent with some business experience. *Last date for receipt of applications:* -. *Fee:* £44,950.

Host institution: Datasolve Education
Glen House
Stag Place
London SW1E 5AG, United Kingdom

Expert systems and advanced computer programming

General description: A range of courses including: software engineering; information science and technology; graphics standards; advanced Unix and C language; international standards for data communications; security and encryption within data communications networks. *Commencing date:* January 1988. *Duration:* Differs from course to course. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* None. *Fee:* Differs from course to course.

Host institution: Brunel University
Continuing Education
Uxbridge, Middlesex UB8 3PH, United Kingdom

Introduction to process computers

General description: The course, which includes laboratory sessions, provides instruction on: functional outline of process computers and measurement and control interface equipment; definition of computer terminology and concepts; how to identify the difference between the computer and hardware and software; analogue and digital interface devices and functions; signal conditioning, algorithms, sequential control, digital and set-point control; software operating systems, terms and languages. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Instrument engineers and senior technicians. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £336.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Management information systems

General description: Decision-making process computer technology and M.I.S.; micro-computers in M.I.S.; control systems M.I.S. in practice; technology and the course project. *Commencing date:* 8 March 1988. *Duration:* -. *Qualifications:* Graduates with

several years of administrative experience, responsible for decision making. English.
Last date for receipt of applications: Mid January 1988. *Fee:* Approx. £3,500.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Large-scale control systems: theory and applications

General description: Basic and practical knowledge of the application of modelling and control, optimization techniques, software for computer control and computer networks with particular emphasis on subjects relevant to the participants' own institutions.
Commencing date: October 1988. *Duration:* 9 months. *Qualifications:* Professional qualifications. *Last date for receipt of applications:* June 1988. *Fee:* SUS 3,500.

Host institution: Centre for Large-Scale Control and Decision Systems
Institute for Measurement and Control
Faculty of Technical Sciences
University of Novi Sad
Novi Sad, Yugoslavia

Energy / Energie / Energia

Energies renouvelables

Description générale: Disponibilité et mesure des sources des énergies renouvelables : solaire, éolienne, hydraulique; description des équipements, techniques commerciales, performer: 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 PVD, transfert de technologie, joint-venture. *Début du cours:* A arranger. *Durée:* 2 mois. *Qualifications:* Ingénieur industriel. Français ou anglais. *Dernier délai pour la soumission des candidatures:* -. *Droit d'inscription:* A arranger.

Organisme hôte: Science
98, avenue de Tervueren
1040 Bruxelles, Belgique

Gestion de l'énergie dans les bâtiments administratifs

Description générale: Aspects techniques : analyse technique appliquée aux bâtiments, analyse technique appliquée aux installations de chauffage, autres améliorations énergétiques, diagnostic énergétique d'un bâtiment; aspects économiques : prix et tarifs des énergies, comptabilité énergétique; aspects législatifs : clauses techniques et administratives des contrats et marchés publics, aides et subventions; aspects comportementaux : attitudes des utilisateurs, motivation, évaluation des actions. *Début du cours:* -. *Durée:* 150 heures. *Qualifications:* Français. *Dernier délai pour la soumission des candidatures:* -. *Droit d'inscription:* FB 35 000.

Organisme hôte: Centre interuniversitaire de formation permanente (CIFOP)
1B, avenue General Michel,
6000 Charleroi, Belgique

Utilisation rationnelle de l'énergie

Description générale: Energétique et thermodynamique; appareils de transformation des énergies primaires; transport d'énergie et vecteurs énergétiques; principaux appareils utilisateurs de l'énergie; contrôle et régulation; principaux points faibles des systèmes énergétiques et les équipements existants pour les pallier; principaux équipements de mesure d'un auditeur; principes de la comptabilité énergétique dans une entreprise; schéma théorique d'un audit énergétique; principaux remèdes; calcul des économies et

des investissements; programmes informatiques légers pour l'audit, rapport d'audit. Participation à l'audit de 5 entreprises différentes. Visite de 2 ou 3 entreprises modèles. *Début du cours* : A arranger. *Durée* : 2 mois. *Qualifications* : Niveau ingénieur industriel. Français ou anglais. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : INIEX
200, rue du Chéra
4000 Liège, Belgique

Energy management

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: energy management strategies and programmes; fuel combustion; insulation practice; boiler and furnace design and operation for energy economy; efficient utilization of steam and electric power; waste heat utilization; total energy—cogeneration systems; energy audit; measurement and instrumentation for energy saving. *Commencing date* : -. *Duration*: 1½ weeks. *Qualifications*: Technical consultants of national productivity organizations or similar institutes and senior plant/production engineers concerned with diagnosis of problems in energy utilization at the plant level of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 50 for participants from profit-making organizations.

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

Venue: Republic of Korea

Energy management (fuel efficiency at the plant level)

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: energy management strategies and programmes; fuel combustion; insulation practice; boiler and furnace design and operation for energy economy; efficient utilization of steam and electric power; waste heat utilization; total energy—cogeneration systems, energy audit; measurement of and instrumentation for energy saving. *Commencing date* : -. *Duration*: 3 weeks. *Qualifications*: Technical consultants of national productivity organizations or similar institutes and senior plant engineers concerned with the diagnosis of energy utilization problems in small and medium industries of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 100 for participants from profit-making organizations.

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

Venue: India

Energy conservation in industry

General description: Energy aspects of major process unit operations (combustion, burners, steam generation, heat pumps, pumps and fans, drying, evaporation, lighting, cogeneration, insulation); use of instruments for practical work in industries; energy management. *Commencing date*: To be arranged. *Duration*: 2 weeks. *Qualifications*: Professional qualifications. English (Chinese textbooks available). *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: TNO Division of Technology for Society
Heat and Refrigeration Engineering Department
P.O. Bo. 342
7300 AH Apeldoorn, Netherlands

Energy management

General description: The course aims at providing trainee engineers with ways of managing energy consumption, including the implementation of technical methods to reduce energy wastage and to permit energy renewal, if possible; the utilization of optimization and planning techniques; the application of government energy policies and the evaluation of renewable energy resources. *Commencing date:* 10 October 1988. *Duration:* 15 days. *Qualifications:* B.Sc. in chemical engineering or mechanical engineering (thermodynamic branch). Portuguese. *Last date for receipt of applications:* 5 September 1988. *Fee:* Esc 350,000.

Host institution: PARTEX – Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Environment / Environnement / Medio ambiente

Environmental protection, energy management and optimization

General description: Energy control; single train unit (NH₃); gas compression; urea plant; environmental protection, safety aspects; air pollution; water pollution; waste water control and purification; fire brigade; alarm system; storage of combustible and inflammable material; use of solvents. *Commencing date:* Throughout the year except in July and August. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Environmental control in the chemical and pharmaceutical industries

General description: Study of the natural and human environment; analysis of the principal sources of air, water and soil pollution; effects of pollutants on human health; methods of prevention and control. *Commencing date:* Beginning of August. *Duration:* 6 weeks. *Qualifications:* Civil engineers, pharmacists, biologists, chemical engineers. Course held in alternate years in English and French. *Last date for receipt of applications:* -. *Fee:* Approx. BF 40,000.

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

Industrial pollution control

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: environmental pollution in Japan; policy and regulations concerning environmental protection in Japan; overview of water and air pollution; waste water treatment techniques; water pollution control techniques for small industry; sewage disposal systems; grey (domestic wastes) water treatment; water quality measurement. *Commencing date:* -. *Duration:* 4 weeks. *Qualifications:* Technical consultants of national productivity organizations or similar institutes, engineers at the government level and senior plant and production engineers concerned with industrial pollution control in APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* US 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Programa de ingeniería ambiental

Descripción general: Mód. I: Contaminación atmosférica; Mód. II: Contaminación de las aguas; Mód. V.: Gestión ambiental. *Fecha de iniciación:* Enero. *Duración:* 5 meses. *Calificaciones:* Título universitario de ingeniero superior o técnico o licenciado en ciencias. Español. *Fecha límite para la recepción de las solicitudes:* 9 enero. (Módulo suelto 10 días antes de su comienzo.) *Derechos de inscripción:* Ptas. 200.000.

Institución huésped: Escuela de Organización Industrial
Gregorio del Amo 6
28040 Madrid, España

Water and environmental management for developing countries

General description: A programme for scientists, geologists and others working on programmes concerned with water supply and protection of the environment in the third world. Part 1A covers water supply, health and waste, community and management. Part 1B consists of four subjects selected from a range that includes ground water, laboratory management and design, industrialization problems, solid waste, water treatment, waste water. Part 2 covers individual and group projects. *Commencing date:* 3 October 1988, 2 October 1989. *Duration:* 12 months. *Qualifications:* Good honours degree in engineering. English. *Last date for receipt of applications:* 31 July 1988, 1989. *Fee:* £6,000 (provisional).

Host institution: Water, Engineering and Development Centre
Loughborough University of Technology
Loughborough LE11 3TU, United Kingdom

Water treatment

General description: Training and industrial experience in water treatment technology for processing, chemical fertilizer industries. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Proficiency in a relevant discipline. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* To be arranged.

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

International training course on occupational toxicology

General description: Lectures on the basic principles of occupational and environmental toxicology. Training in simple laboratory and field methods for the determination of toxic substances (heavy metals, gases, organic solvents and pesticides) at the work place and elsewhere in the environment. *Commencing date:* 15 May 1988. *Duration:* 1 month. *Qualifications:* B.Sc. in chemistry, medicine, health sciences. *Last date for receipt of applications:* 15 December 1987. *Fee:* To be arranged.

Host institution: Institute of Occupational and Radiological Health
Deligradska 29
Belgrade, Yugoslavia

Industrial design / Design industriel / Diseño industrial

Design of cutting tools

General description: Design of single point tools, broach, special milling cutters, form tools. *Commencing date:* 3 August 1988. *Duration:* 7 weeks. *Qualifications:* Degree or

diploma in mechanical engineering with experience in tool design. *Last date for receipt of applications:* 30 June 1988. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Design of die-casting dies

General description: Design of single and double cavity dies for die-casting dies. *Commencing date:* 1 June 1988. *Duration:* 6 weeks. *Qualifications:* Degree or diploma in mechanical engineering with experience in the relevant field of tool design. English. *Last date for receipt of applications:* 30 April 1988. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Design of gauges

General description: Design of plain and thread gauges, taper gauges. *Commencing date:* 3 May 1988. *Duration:* 4 weeks. *Qualifications:* Degree or diploma in mechanical engineering with experience in the relevant field of tool design. *Last date for receipt of applications:* 31 March 1988. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Design of jigs and fixtures

General description: Design of drill jigs, turning fixtures, milling fixtures, grinding fixtures. *Commencing date:* 6 January 1988. *Duration:* 11 weeks. *Qualifications:* Degree or diploma in mechanical engineering with experience in the relevant field of tool design. English. *Last date for receipt of applications:* 30 November 1987. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Design of press tools

General description: Design of blanking, piercing, compound, progressive tools. *Commencing date:* 5 October 1988. *Duration:* 11 weeks. *Qualifications:* Diploma in mechanical engineering with experience in the relevant field of tool design. English. *Last date for receipt of applications:* 31 August 1988. *Fee:* SUS 150 a week.

Host institution: Central Institute of Tool Design
Balanagar
Hyderabad 500 037, India

Design

General description: Core courses: design culture and history; socio-economic forecasting; design economics; industrial technologies; expressive tendencies; product design; domestic ritual and work; interior design of the automobile. *Commencing date:* January 1988. *Duration:* 10 months. *Qualifications:* Relevant degree. Italian, English. *Last date for receipt of applications:* October 1987. *Fee:* SUS 14,000 (includes all fees).

Host institution: Domus Academy
Edificio 1/C
Milanofori
20090 Assago (Milan), Italy

Industrial design

General description: The course aims at developing industrial design in developing countries and at improving mutual understanding and co-operation. *Commencing date:* To be arranged. *Duration:* 2 months. *Qualifications:* English. *Last date for receipt of applications:* June 1988. *Fee:* -.

Organizer: Japan International Cooperation Agency (JICA)
Shinjuku Mitsui Bldg., 48th Floor
2-1-1, Nishishinjuku
Shinjuku-ku
Tokyo 160, Japan
Given by:
Japan Industrial Design Promotion Organization (JIDPC)
World Trade Center Bldg., Annex 4th Floor
2-4-1, Hamamatsucho
Minato-ku
Tokyo 105, Japan

Specialized course on product design

General description: Design of furniture made of wood, bamboo and rattan; design of cottage products that generally highlight the traditional and artistic features of the country; utilization of the indigenous materials including the use of upholstery material. Includes design trends, material selection, processing and treatment, latest design techniques. *Commencing date:* 18 January 1988. *Duration:* 4 weeks. *Qualifications:* Fine arts graduate with a knowledge of product design and between 25 and 45 years of age. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Philippine Human Resource Development Center (PHRDC) Building
UL - Complex, Meralco Avenue, Pasig
Metro Manila, Philippines

CAD advanced computer aided design

General description: CAD course structured to give good theoretical/practical balance. *Commencing date:* To be arranged. *Duration:* 6 months. *Qualifications:* Architects, engineers. Good English. *Last date for receipt of applications:* First week of the month for commencing date during the following month. *Fee:* To be arranged.

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

Design engineering

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

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

Materials selection for design engineers

General description: Evaluation of component requirements, properties of materials, materials selection, production methods, selection of optimum material/production method com-

bination. *Commencing date:* To be arranged. *Duration:* 3-6 months. *Qualifications:* Degree or equivalent in metallurgy, engineering or a related field. English. *Last date for receipt of applications:* -. *Fee:* £2,500-£4,000 per month.

Host institution: Fulmer Research Laboratories Ltd.
Stoke Poges
Slough SL2 4QD, United Kingdom

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

Filière : informatique industrielle

Description générale : 11 stages : introduction aux microprocesseurs; circuits intégrés numériques; structure et fonctionnement des microprocesseurs; périphérie des microprocesseurs; introduction à la programmation en basic; introduction à la programmation en fortran; algorithmes de commande par ordinateur; identification et régulation par ordinateur numérique; optimisation des procédés multivariés; régulation sur S.N.C.C.; régulation sur systèmes numériques modulaires. *Début du cours :* Une ou plusieurs sessions sont programmées au cours de l'année. *Durée :* -. *Qualifications :* Sur dossier. Français. *Dernier délai pour la soumission des candidatures :* 3 mois avant le début du stage. *Droit d'inscription :* Environ FF 5 000 net la semaine (repas et hébergement en sus).

Organisme hôte : IRA
Chemin des Moines
13644 Arles Cedex, France

Formation intensive à l'informatique industrielle

Description générale : Formation à la conception et au développement d'applications informatiques. Le stage comporte trois parties de poids égal : informatique système, système d'information, informatique industrielle. *Début du cours :* septembre, janvier. *Durée :* 1 000 heures et 6 semaines de stage en entreprise. *Qualifications :* Ingénieurs, maîtrise scientifique, techniciens supérieurs. *Dernier délai pour la soumission des candidatures :* -. *Droit d'inscription :* -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Maîtrise spécialisée en informatique

Description générale : Le but est de familiariser les étudiants aux méthodes et aux techniques permettant le développement de projets et de produits informatiques les préparant ainsi à occuper des fonctions de chef de projet. *Début du cours :* septembre, janvier. *Durée :* 1 000 heures et 26 semaines de stage en entreprise. *Qualifications :* Diplômés des grandes écoles d'ingénieurs, des grandes écoles de commerce et aux titulaires d'un DEA. *Dernier délai pour la soumission des candidatures :* -. *Droit d'inscription :* -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Informatics for management

General description: Rational utilization of informatics in managing small and medium-size enterprises; methods of analysis and design of management information systems; selection of areas of informatics application in managing a modern enterprise; applications and case-studies based on examples from developing countries. *Commencing date:* June, October 1988. *Duration:* 8-10 weeks. *Qualifications:* Professional qualifications. English

or French. *Last date for receipt of applications*: 1 month before commencing date. *Fee*: \$US 540 a week (including accommodation and meals).

Host institution: International Centre for Management Development (CEPECA)
Otopeni
Soseaua Odai 20
Bucharest, Romania

Aplicación de la informática en las organizaciones

Descripción general: Informática para directivos y gerentes. *Fecha de iniciación*: Junio. *Duración*: 1 mes. *Calificaciones*: Título universitario de nivel superior o experiencia profesional equivalente. Español. *Fecha límite para la recepción de las solicitudes*: 15 abril. *Derechos de inscripción*: Ptas 100.000.

Institución huésped: Escuela de Organización Industrial
Gregorio del Amo 6
28040 Madrid, España

Management of information technology for business users

General description: Principles and practices of information technology (IT) today; managing effectively with IT; people and the new technology; computer awareness; using computers in business; communication in the late 1980s; systems development for users; introduction to programming; information management. Intended for personnel working with the new technology, but not computer staff. *Commencing date*: 1 February, 30 May, 26 September. *Duration*: -. *Qualifications*: Good general education and recent experience. English. *Last date for receipt of applications*: 2 months before commencing date. *Fee*: £11,841 (fully residential).

Host institution: Rayfield Consultancy and Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

New technology

General description: A special development programme for key managers and specialist leaders concerned with the implementation of technological change, particularly information technology and management information systems, within organizations. *Commencing date*: May 1988, 1989. *Duration*: 10 weeks. *Qualifications*: Members of senior management responsible for the development of managerial strategies concerning the use of new technology or management information systems and specialist project managers responsible for implementing new technology. English. *Last date for receipt of applications*: 6 weeks before commencing date. *Fee*: £4,775.

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

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

Planification Industrielle

Description générale: Planification; prévisions et réalisations en matière de développement; relation entre la micro et la macro-économie; l'appareil conceptuel de la prévision économique et de la planification; les comptes et statistiques; le calcul de la rentabilité interne des projets; l'analyse critique des postes du bilan; les prix de revient, méthodes

de calcul; analyse des coûts. *Début du cours* : Toute l'année sauf juillet et août. *Durée* : Variable (selon chaque cas). *Qualifications* : Qualifications professionnelles. Français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : FB 15 000-FB 40 000 par mois.

Organisme hôte : Société coopérative MISIFA
67, rue Tenbosch
1050 Bruxelles, Belgique

Projets industriels

Description générale : Séminaire comprenant des exposés et des études de cas en relation avec la genèse, la sélection et la décision de réalisation de projets industriels : les marchés en amont et en aval; les plans de développement; la faisabilité; le financement; les interventions du secteur public; les techniques d'organisation et de gestion des entreprises. Le séminaire peut être complété par des séjours guidés dans des organismes belges publics et privés. Les participants sont assistés dans la constitution de leur documentation personnelle. Le programme du séminaire est réglé en fonction de la formation, de l'expérience et du plan de carrière des participants. *Début du cours* : A arranger. *Durée* : -. *Qualifications* : Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de 2 ans. Français. *Dernier délais pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : Bureau d'ingénieurs-conseils Gombert Cadic-Gombert S.A.
123a, chaussée de Charleroi, boîte 7
1060 Bruxelles, Belgique

Industrial location

General description: Postgraduate degree course in general principle of industrial location; critical factor analysis; the weighing of factors in locational decision-making. *Commencing date*: Second week of October. *Duration*: 90 hours. *Qualifications*: University degree. English. *Last date for receipt of applications*: October. *Fee*: BF 11,500 for one academic year.

Host institution: Research Centre for Industrial Location
Vrije Universiteit Brussel
Building M, Room 229
Pleinlaan 2
1050 Brussels, Belgium

Industrial development programme

General description: Courses in marketing, finance, technology and organization analysis. Specialist courses in small industry, overseas promotion, joint ventures, project appraisal, industrial training, project management, industrial estates. *Commencing date*: June and September. *Duration*: 6 weeks. *Qualifications*: Professional qualifications. English. *Last date for receipt of applications*: 31 May, 31 August. *Fee*: £1r 5,400 (including accommodation).

Host institution: Development Co-operation Division
Industrial Development Authority - Ireland
Wilton Park House
Wilton Place
Dublin 2, Ireland

Industrial free zones/ export processing zones

General description: The programme has been devised to provide participants with first-hand insight into the development and operation of an industrial free zone. *Commencing date*: 12 September, 7 October 1988. *Duration*: 4 weeks. *Qualifications*: Relevant experience

and knowledge. English. *Last date for receipt of applications:* 30 June 1988. *Fee:* £Ir 4,250 (including accommodation).

Host institution: Shannon Development Company
Town Centre
Shannon
Co. Clare, Ireland

Industrial planning and development

General description: Macro-planning and strategy-oriented course: long-term development issues of industrialization, industrial strategies and planning, industrial incentives and promotional policies, technology transfer, employment, financing industrial development, project preparation, project appraisal, field trip and workshop. *Commencing date:* September 1988. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: International Development Center of Japan
Shuwa Daini
Toranomon Building
21-19, Toranomon, 1-chome, Minato-ku
Tokyo, Japan

Project feasibility

General description: Lectures, discussions and case-studies on the project management cycle; project identification and definition; study of project feasibility; project appraisal, selection, negotiation and approval; project activation and organization. *Commencing date:* January/February 1988. *Duration:* 4 weeks. *Qualifications:* Officers of development banks, small industries advisory agencies, water supply agencies and other similar institutes of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Industrial planning

General description: Industry and industrial planning concepts and their relation to national planning; industrial statistics and national accounts (industrial project level); patterns and policies of industrialization; industrialization in the Arab countries; small- and large-scale industries; input-output techniques; linear programming techniques; financial analysis; social analysis. *Commencing date:* 19 March 1988. *Duration:* 4 weeks. *Qualifications:* University degree, official nominee, two years' experience. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* Free for nominees of Arab Governments.

Host institution: Arab Planning Institute (API)
Safat P.O. Box 5834
Safat 13059, Kuwait

Industrial project cycle management programme

General description: National, regional and sectoral planning; industrialization policies; stages of the project development cycle; market analysis and plant capacity; technical analysis; financial analysis; social and economic analysis; elements of industrial promotion; project implementation; project management, control and evaluation; computer simulation model (COMFAR); practical assignments. *Commencing date:* 18 January 1988, 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration,

economics, engineering or a related subject from a recognized university; 3-5 years of considerable practical experience in a related field. English. *Last date for receipt of applications:* 15 October 1987, 1988. *Fee:* f 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Project feasibility study

General description: Practice in project feasibility study through field-work and case-studies. *Commencing date:* 4 April 1988. *Duration:* 4 weeks. *Qualifications:* Project evaluators and promoters from financial institutions, industrial extension officers. English. *Last date for receipt of applications:* March 1988. *Fee:* N 2,220.

Host institution: Centre for Management Development
Management Village, Shangisha
P.M.B. 21578
Ikeja, Nigeria

Como crear una empresa

Descripción general: Sectores de futuro; test de la idea; cualidades del empresario; formas de acceso a la actividad empresarial; plan de negocio; plan de producción; definición de producto; plan de operaciones; plan de inversiones; estructura financiera de la empresa; fuentes de financiación; organismos de ayuda; elección de forma jurídica; consecuencias legales; consecuencias fiscales; diseño de la estructura de la empresa; elección del modelo de relaciones laborales; sistemas de protección social y relaciones con la seguridad social; diseño de los sistemas de control; comienzo de las actividades de la empresa; mesa redonda con representantes empresariales de distintos sectores. *Fecha de iniciación:* -. *Duración:* Dos semanas. *Calificaciones:* Dirigido a jóvenes con vocación empresarial. Español. *Fecha límite para la recepción de las solicitudes:* 24 horas antes del comienzo de la actividad. *Derechos de inscripción:* Ptas. 20.000.

Institución huésped: Departamento de Formación de la CEOE
C/Alcántara 20
Madrid, España

Project preparation appraisal and implementation

General description: Preparation, appraisal and implementation of industrial projects from technical, economic and financial points of view. The seminar consists of three parts: 1. Basic introductory subjects, 2. Principles of project preparation, and 3. Principles of project appraisal and implementation. *Commencing date:* January and September. *Duration:* 10 weeks. *Qualifications:* Professional qualifications. English, Turkish. *Last date for receipt of applications:* -. *Fee:* LT 300,000.

Host institution: State Investment Bank
Müdafa Cad. No. 20
Bakanliklar
Ankara, Turkey

Industrial development planning: strategic and local policy

General description: The course aims to equip local authorities of the least developed countries and appropriate national ministries and agencies to formulate and implement more effective policies to raise employment levels and to increase national output. The first part will consider options for industrial development, within the international framework. The second part will examine local policy choices. *Commencing date:* 4 January 1988, 1989. *Duration:* 12 weeks or 6 weeks for each of the two parts. *Qualifications:* Degree

or substantial practical experience. English. *Last date for receipt of applications:* 4 January 1988. *Fee:* £2,850 (plus £160 for field trips for 12 weeks).

Host institution: Development Planning Unit
Bartlett School of Architecture and Planning
9 Endsleigh Gardens
London WC1H 0ED, United Kingdom

Investment planning and appraisal for development finance institutions

General description: The principles and practice of project identification, promotion, appraisal and implementation from the viewpoint of the private and public sectors; social cost/benefit analysis; investment analysis, portfolio management, project financing; management of financial institutions and contacts with manufacturing industry and agriculture. *Commencing date:* 18 April 1988. *Duration:* 12 weeks. *Qualifications:* University degree and several years of relevant experience. English. *Last date for receipt of applications:* -. *Fee:* £4,200 (including accommodation).

Host institution: The Project Planning Centre
University of Bradford
Bradford, Yorkshire BD7 1DP, United Kingdom

The planning and appraisal of industrial projects

General description: The principles and practice of project identification and appraisal; the role of finance, markets, technology and management in establishing industrial projects; the techniques of social cost/benefit analysis; wider issues and problems of industrial strategy, planning and development. *Commencing date:* 11 January 1988. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent in any relevant subject and several years of relevant experience. English. *Last date for receipt of applications:* -. *Fee:* £4,200 (including accommodation).

Host institution: The Project Planning Centre
University of Bradford
Bradford, Yorkshire BD7 1DP, United Kingdom

Production engineering

General description: A training course for new production engineers, which includes training in work-study techniques, employee motivation, payment systems; multi-machine allocations and the problems of machine interference. A feature of the course is the inclusion of training in MTM-X, a self-contained predetermined motion time system for independent application. *Commencing date:* Throughout the year. *Duration:* 7 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury, Manchester M20 8QA, United Kingdom

Project management

General description: Changing face of management managing people; introduction to project management; management information for decisions; project appraisal and evaluation; project planning and control systems; resource management; project implementation; value of management services; structured visits; case-study project. *Commencing date:* 9 April 1988. *Duration:* 3 months. *Qualifications:* Officers responsible for planning,

management and control of operations. English. *Last date for receipt of applications:* Early February 1988. *Fee:* Approx. £3,200.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Regional development and project planning

General description: The relationship between national and regional development; the regional planning process (objectives, problems and potentials); sources and methods of data collection; the methodology of project planning and appraisal; co-ordination of sectoral programmes and projects; alternative organizational structures and administrative systems. *Commencing date:* 11 January 1988. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent in relevant subject and several years of relevant experience. English. *Last date for receipt of applications:* -. *Fee:* £4,200 (including accommodation).

Host institution: The Project Planning Centre
University of Bradford
Bradford, Yorkshire BD7 1DP, United Kingdom

Project evaluation, appraisal and management

General description: Core lectures, discussion groups, case-studies, computer-based exercises and guest lectures. Case-studies will be examined, using microcomputers to analyse investment projects, presentations by other participants discussed. *Commencing date:* June/July. *Duration:* 10 weeks. *Qualifications:* University degree (B.A., preferably M.A. in economics, finance, accounting, public administration with economics). English. *Last date for receipt of applications:* 1 April. *Fee:* 3US 7,750 (including tuition, fees and accommodation).

Host institution: Harvard Institute for International Development
Harvard University
One Eliot Street
Cambridge, MA 02138, United States

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

Promotion des investissements et financement industriel

Description générale: Organisation de séminaires destinés aux cadres du secteur privé ou public sur: l'analyse financière et technique des projets d'investissement; les éléments et principes de la comptabilité; la comptabilité commun outil de gestion budgétaire; les aspects juridiques liés à l'investissement (e.a. propriété industrielle); la stratégie industrielle; la pratique des conseils d'administration. *Début du cours:* A arranger. *Durée:* 2-8 semaines. *Qualifications:* Qualifications professionnelles. Français, anglais. *Dernier délai pour la soumission des candidatures:* -. *Droit d'inscription:* A arranger.

Organisme hôte: Institut belge de formation, d'assistance technique et de transfert de technologie (IBF)
63, rue Montoyer
1040 Bruxelles, Belgique

Zones franches et développement industriel

Description générale: 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 semaine-2 mois. *Qualifications*: Niveau universitaire. Français, anglais. *Dernier délai pour la soumission des candidatures*: -. *Droit d'inscription*: -.

Organisme hôte: Havenbedrijf van de Stad Antwerpen
Stadhuis
2000 Antwerpen,
Belgique

International promotion and foreign investment

General 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*: About 4 months. *Qualifications*: University degree. English, French. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: International Trade Investment Institute
2, avenue de Broqueville, Boite 7
1150 Brussels
Belgium

Management of development finance institutions programme

General description: Financial management and control at the enterprise level; strategic management, sector profiling, priorities, specialization; policies and management: finance institutions, banks, services; government guaranteed schemes; term lending and (concessional) rates; integrated account management; client development; management information and (computerized) data processing; visits to financial institutions; special topics; practical assignments. *Commencing date*: 27 June 1988, 28 June 1989. *Duration*: 3 months. *Qualifications*: Degree in business administration, economics, accounting or a related subject from a recognized university and 3-5 years of creditable practical experience in a relevant field. English. *Last date for receipt of applications*: 1 April 1988, 1989. *Fee*: f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft
Netherlands

Investment planning and appraisal

General description: Principles and practice of project identification, promotion, appraisal and implementation from the viewpoint of the private sector; financial analysis, project financing and the development of financial systems; contacts with private companies to discuss operational problems. *Commencing date*: 23 May 1988, 22 May 1989. *Duration*: 5 weeks. *Qualifications*: Professional staff in industrial development corporations and finance institutions, banks and finance companies and industrial promotion agencies. English. *Last date for receipt of applications*: 19 February 1988, 17 February 1989. *Fee*: To be arranged.

Host institution: DESIYAB
State Industry and Labourer Investment Bank Inc.
Training Department
Izmir Cad. 43
Ankara, Turkey

Maintenance and repair / Entretien et réparation / Mantenimiento y reparación

Maintenance of electrical equipment and installation

General description: Maintenance and repair of electrical equipment; preventive maintenance; field maintenance system; trouble shooting; spare parts system. *Commencing date:* Throughout the year except in July and August. *Duration:* 6-10 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Maintenance of instrumentation

General description: Organization of instrument department; the pneumatic transmitter; pressure/temperature measurement and calibration systems; pneumatic computers; trouble-shooting, repair and calibration of all pneumatic, electropneumatic and fine mechanical instruments in workshop; and of all electric and electronic measuring devices. *Commencing date:* Throughout the year except in July and August. *Duration:* 6-10 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Maintenance of production facilities

General description: Starting up and shutting down systems; overhaul procedures; spare parts—stock lists; specific maintenance programmes (on request) for ammonia plants, urea plants or complex fertilizer plants. *Commencing date:* Throughout the year except in July and August. *Duration:* 6-10 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Maintenance planning

General description: Staff organization; work order processing; arrangement of working place and logistics; scheduling; material and tool administration; capacity and term planning; preventive maintenance; code; cost; operation manual for electronic data processing systems. *Commencing date:* Throughout the year except in July and August. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* To be arranged. *Fee:* S 20,000 a week.

Host institution: Chemserv Consulting GmbH
St. Peterstrasse 25
4021 Linz, Austria

Maintenance Industrielle

Description générale: Séminaire sur les systèmes de gestion de maintenance adaptés aux conditions d'exploitation dans les pays en développement, en particulier la problématique des pièces de rechange, la documentation technique, l'organisation et la planification de la maintenance ainsi que les mesures à prendre lors de l'achat d'équipement. Atelier de maintenance. Stage pratique complété par des visites d'usines. *Début du cours :* Toute l'année, sauf juillet et août. *Durée:* 1-3 mois.

Qualifications : Technicien supérieur ou ingénieur. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : DGS international SA
Jüsilämlaan 75
9000 Gand, Belgique

Repair and maintenance

General description: Repair and maintenance of laboratory equipment, modern instrumentation, and microcomputers (atomic absorption, spectrophotometers, arc spark and ICP spectrometers, monochromators, spectrum analysers etc.). *Commencing date*: To be arranged. *Duration*: 1-8 weeks. *Qualifications*: Professional qualifications. English (possibly Arabic). *Last date for receipt of applications*: -. *Fee*: SwF 2,000-SwF 5,600.

Host institution: P & R Techconsult Ltd.
Association of Advanced Technical Services GmbH
P.O. Box 3885
Nicosia, Cyprus

Computerized maintenance management systems in metallurgy

General description: Interregional workshop consisting of a preparatory course on organization and management of maintenance, systems analysis, design and technology, principles of computer hardware and software; core programme on planning of preventive maintenance and repair, including spare parts and material requirements, capacity planning and scheduling. Pilot demonstrations of on-line integrated maintenance management system at East Slovakian Steelworks; computerized maintenance management on personal computers. *Commencing date*: June 1988, 1989. *Duration*: 3 weeks. *Qualifications*: Managers/planners/engineers with a university degree in metallurgical, mechanical, industrial, management engineering with general experience in maintenance application of computers. English. *Last date for receipt of applications*: 15 April 1988, 1989. *Fee*: Governments/IPF projects are expected to provide only travel of participants.

Host institution: UNIDO/CSSR Joint Programme
P.O. Box 211
Pilsen, Czechoslovakia

Operation and maintenance of natural gas transmission systems

General description: Basic introduction to the design, construction, commissioning, operation and maintenance of high pressure natural gas transmission systems, followed by specific thematic course modules dealing with various subjects. *Commencing date*: To be decided. *Duration*: 4-6 weeks. *Qualifications*: Experienced and junior engineers with a university degree. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: To be arranged.

Host institution: Dansk Olie og Naturgas A/S
(The National Oil and Gas Company of Denmark)
Auern Alle 24-26
2970 Horsholm, Denmark

Formation supérieure de cadres de maintenance industrielle

Description générale : Permettre à des cadres ou responsables possédant une expérience industrielle d'acquérir une formation complémentaire ou une nouvelle formation en maintenance. Répondre à un besoin national ou international en plein développement. *Début du cours* : 2 novembre 1987. *Durée* : 6 mois et demi. *Qualifications* : Ingénieurs ou assimilés du secteur technique; adjoints techniques de maintenance; responsable de

maintenance. *Dernier délai pour la soumission des candidatures*: 2 mois avant le début du stage. *Droit d'inscription*: -.

Organisme hôte: INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Operation and maintenance of hydraulic power stations

General description: The seminar covers: optimizing operations of the generation facilities; operating constraints and procedures; prevention and safety; operating facilities; centralized control rooms; information for operators: statistics; inspection and maintenance of equipment and structures; automation: use of data processing; maintenance of heavy mechanical and electrical equipment; maintenance of civil works; plants renewals and overequipping. *Commencing date*: 2 June 1988. *Duration*: 10 days. *Qualifications*: Top-level management. French, English. *Last date for receipt of applications*: 22 May 1988. *Fee*: FF 8,000.

Host institution: EDF International
68, rue Faubourg Saint-Honoré
75008 Paris, France

Industrial maintenance

General description: Maintenance management systems, organization and computerized procedures; operational maintenance: equipment design factors; industrial control system: types, checks and test routines; maintenance applied to industrial programmable equipment. *Commencing date*: 1 October 1988. *Duration*: 7 months. *Qualifications*: Certificate in mechanical, electronic or electrical engineering or equivalent. English, Cantonese. *Last date for receipt of applications*: 1 May 1988. *Fee*: Approximately SHK 1,525.

Host institution: Industrial Centre
Hong Kong Polytechnic
Hung Hom
Kowloon, Hong Kong

Operation and maintenance of agricultural machinery (Irrigation)

General description: Different ways of irrigation and their machinery; expert operation of different sprinklers; elimination of errors; maintenance. *Commencing date*: -. *Duration*: 1 month. *Qualifications*: Basic English, French, Spanish, German or Arabic. *Last date for receipt of applications*: -. *Fee*: -.

Host institution: Organization for International Technical and
Scientific Co-operation (TESCO)
Nagy Lajos Kir Ut 202-204
1149 Budapest XIV, Hungary

Systematic plant maintenance

General description: Importance and objectives of maintenance, planning and scheduling of maintenance activities, preventive maintenance, maintenance analysis. *Commencing date*: 28 March, 5 December 1988. *Duration*: 2 weeks. *Qualifications*: Maintenance managers, works managers, production managers, industrial engineers and other executives involved in engineering, manufacturing and production. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: \$US 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Design and production of spare parts for maintenance

General description: Manufacturing of spare parts; improvement of spare parts; reclamation of damaged parts; inspection method. *Commencing date:* 7 January 1988. *Duration:* 11½ weeks. *Qualifications:* University degree or equivalent; at least 5 years of experience; under 40 years of age. English. *Last date for receipt of applications:* 7 November 1987. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Plant maintenance engineering

General description: Maintenance in Japan; maintenance at a steel plant, electrical machinery plant, chemical plant and machine assembly plant. *Commencing date:* 8 May 1988. *Duration:* 3 months. *Qualifications:* University degree or equivalent; between 30 and 45 years of age. English. *Last date for receipt of applications:* 11 March 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Productive maintenance

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: present state of and future outlook for productive maintenance; productive maintenance and management; design of productive maintenance systems; collection and analysis of maintenance data; maintenance of machinery, electrical installations and chemical plant; lubrication and wear; monitoring equipment; spare part management; economics of productive maintenance; training of maintenance engineers. *Commencing date:* -. *Duration:* 2 weeks. *Qualifications:* Managers/engineers engaged in maintenance activities in industry and consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 50 for participants from profit-making organizations.

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

Venue: India

Maintenance organization and management

General description: The course aims at providing maintenance engineers with a comprehensive coverage of the concepts and procedures of maintenance management. *Commencing date:* 22 February 1988. *Duration:* 5 days. *Qualifications:* Maintenance engineers. Portuguese. *Last date for receipt of applications:* 18 January 1988. *Fee:* Esc 150,000

Host institution: PARTEX - Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Applied practical maintenance

General description: The syllabus covers economic and organizational, as well as practical aspects of maintenance, including special repair methods: hydraulic, pneumatic and

electrical maintenance. *Commencing date:* 28 March, 26 September 1988. *Duration:* 9 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 31 January, 31 July 1988. *Fee:* \$US 11,475.

Host institution: SWEDEC
International AB
Riddargatan 37
S-114 57 Stockholm, Sweden

Management and maintenance of physical assets

General description: The course is designed to enable participants to identify organizational and operational problems and to suggest practical and economic solutions. Participants will also be able to develop maintenance policies relating to their own sector, ensuring that plant and equipment is available and operating to agreed standards at an economic cost. There is also a mid-course, a 2-week attachment tailored to suit the needs of individual participants built into the programme. *Commencing date:* January and July. *Duration:* 12 weeks. *Qualifications:* Middle grade engineers who have responsibility for maintenance procedures. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £6,020 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Mechanical and electrical maintenance

General description: Practical training in the maintenance of both electrical and mechanical machines and equipment. *Commencing date:* February, August. *Duration:* 13 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Oil and gas plant service engineers

General description: Servicing; commissioning; repair and maintenance of domestic and industrial boilers, burners and domestic appliances for natural gas, liquid petroleum gas, gas and kerosene oils; electrical controls of boilers and heating systems, including energy conservation. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* A background in heating and ventilating, fitting, plumbing or electrical work within the building industry. *Last date for receipt of applications:* -. *Fee:* £195 a week.

Organizer: Skills Training Agency
Overseas Training Unit
Skills House
Holy Green
Sheffield S1 4PQ, United Kingdom

Venue: Nottingham Skill Centre
Lilac Grove
Nottingham, United Kingdom

Planned maintenance management

General description: Maintenance principles and methods; choosing the most effective method; documentation and method installation; work time standards; equipment selection and implementation; controls; mobile maintenance; specialist areas; financial aspects; layout and design; computerization; safety. *Commencing date:* 18 January, 7 March, 6 June, 12 September, 31 October. *Duration:* 4 weeks. *Qualifications:* Good

general education with some practical experience. English. *Last day for receipt of applications*: 1 month before commencing date. *Fee*: £3,372 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

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

Conseiller opérationnel en gestion d'entreprises

Description générale : Modulaire : modules introductifs (60 heures); séminaire sur le développement (18 heures); économie (36 heures); comptabilité générale (60 heures); comptabilité analytique (48 heures); organisation commerciale (48 heures); gestion technique (42 heures); gestion financière (30 heures); relations personnelles dans l'entreprise (30 heures); milieux et technologies (18 heures); management (30 heures); application à la création d'une PME (30 heures); stage en entreprise (8 semaines). Les modules de cette formation peuvent être présentés soit à Charleroi, soit dans un pays en développement. *Début du cours* : -. *Durée* : 6 mois. *Qualifications* : Etre titulaire d'un baccalauréat ou équivalent ou justifier d'une expérience professionnelle suffisante. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : Centre interuniversitaire de formation permanente (CIFOP)
1B, avenue Général-Michel
6000 Charleroi, Belgique
en collaboration avec
Institut des affaires publiques (IAP)
1B, avenue Général-Michel
6000 Charleroi, Belgique

Gestion des entreprises

Description générale : Séminaire organisé par des ingénieurs-conseils spécialisés en organisation et gestion des entreprises. Exposés et études de cas suivant un programme réglé d'après les domaines d'intérêt des participants, par exemple : gestion du personnel; comptabilité, recherche opérationnelle, gestion budgétaire; organisation des approvisionnements et gestion des stocks; organisation de la production; étude du travail; entretien des équipements, choix des investissements, organisation des ventes. Le séminaire peut être complété par des séjours guidés dans des entreprises et organismes publics belges. *Début du cours* : A arranger. *Durée* : -. *Qualifications* : Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de 2 ans. Français. *Dernier délai pour la soumission des candidatures* : 3 mois avant le début du séminaire. *Droit d'inscription* : Suivant programme et durée.

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

Gestion des ressources humaines de l'entreprise

Description générale : Séminaire sur les objectifs de la fonction de gestion du personnel de l'entreprise, son organisation, ses méthodes et techniques dans son action sur les relations entre le travailleur et l'entreprise : embauche, accueil, intégration, promotion, rémunération, formation, relations industrielles, etc. Il comprend des exposés et des études de cas adaptés au milieu économique et social familier aux participants. *Début du*

cours : A arranger. *Durée* : -. *Qualifications* : Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de 2 ans. *Dernier délai pour la soumission des candidatures* : 3 mois avant le début du séminaire. *Droit d'inscription* : Suivant programme et durée.

Organisme hôte : Bureau d'ingénieurs-conseils Cadic-Gombert SA
123A, chaussée de Charleroi, boîte 7
Bruxelles, Belgique

Organisation et gestion des entreprises

Description générale : Stage individuel organisé par des ingénieurs-conseils spécialisés en organisation et gestion des entreprises. Comprend des exposés et discussions, des lectures dirigées: d'ouvrages généraux et de rapports d'études, des séjours guidés dans des entreprises et organismes publics belges, la constitution d'une documentation personnelle, la rédaction du rapport de stage. Programme du stage fixé de commun accord en fonction de la formation et de l'expérience du stagiaire ainsi que de son plan de carrière. Sujets pouvant relever des divers domaines de la gestion tels que la direction générale, la direction du personnel, la production, les ventes, la gestion des équipements, la gestion des approvisionnements. *Début du cours* : A arranger. *Durée* : -. *Qualifications* : Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de deux ans. Français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

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

Project management

General description: German executive experts will lecture on types of projects, criteria for judgement of projects, planning and supervision of projects, successful methods, tasks of personnel and real organization, instruments of integrated control of time, costs and efficiency. *Commencing date*: To be arranged. *Duration*: 3-14 days. *Qualifications*: Professional qualifications. English, French, Spanish. *Last day for receipt of applications*: -. *Fee*: To be arranged.

Organizer: Haus der Technik eV
P.O. Box 10 15 43
4300 Essen 1, Federal Republic of Germany

Venue: Various countries

Procurement of industrial and infrastructural projects

General description: National procurement planning; bidding process; role of international financing institutions in projects; and materials management; contractual aspects of projects; relationship and co-operation between buyer, consultants, suppliers and contractors; administration and follow-up of contracts. *Commencing date*: October 1988. *Duration*: 2 1/2 weeks. *Qualifications*: Persons with relevant responsibilities in the public and private sectors in Latin American developing countries. English. *Last date for receipt of applications*: -. *Fee*: -.

Organizer: PRODEC
Latuankatu 4
00100 Helsinki, Finland
in collaboration with the International Trade Centre

Venue: Latin America

Management industriel

Description générale : L'objectif est de lier la technologie et le management. Elle se propose d'apporter aux cadres et ingénieurs une aide pour intégrer les ressources humaines,

techniques, financières et économiques et pour préparer des produits en tenant compte des interfaces technologies/économies. *Début du cours* : -. *Durée* : 500 heures. *Qualifications* : Cadres et ingénieurs ayant une expérience professionnelle. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Manpower management

General description: Personnel management: personnel master plan, recruitment, induction training and vocational redeployment, refresher courses, career orientation; definition and classification of duties: methods, preparation of organization charts, career progress; the daily life of company staff: administrative management, working conditions and safety, payment schemes, changes in work methods, contact with company partners, staff feedback, quality control groups, contacts within the company; Electricité de France International: activities and track record in the field of manpower management. *Commencing date*: 23 September 1988. *Duration*: 10 days. *Qualifications*: Top-level management. French, English. *Last date for receipt of applications*: 11 September 1988. *Fee*: FF 8,000.

Host institution: EDF International
68, rue Faubourg Saint-Honoré
75008 Paris, France

Techniques et gestion de la production pour cadres

Description générale : Permettre à des cadres possédant une expérience en production d'acquies une formation complémentaire en technique de fabrication en organisation et en gestion de la production et en informatique. *Début du cours* : 9 novembre 1987. *Durée* : 800 heures. *Qualifications* : Français. *Dernier délai pour la soumission des candidatures* : 2 mois avant le début du stage. *Droit d'inscription* : -.

Organisme hôte : INSA de Lyon Formation continue
20, avenue Albert-Einstein
69621 Villeurbanne, France

Certificate programme on project management

General description: Project management in planning and control framework: the systems concept; technology for project managers; the arts and politics of project management; behaviour issue in project management. *Commencing date*: April, September 1988. *Duration*: 3 months. *Qualifications*: Project executives. English. *Last date for receipt of applications*: March, August 1988. *Fee*: HKMA member, SHK 1,465. Non-member, SHK 1,565.

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

Management certificate programme for technical professionals

General description: Operational aspects; report writing; management aspects; financial aspects; legal aspects. *Commencing date*: May 1988. *Duration*: 3 months. *Qualifications*: Middle-level technical executives. English. *Last date for receipt of applications*: April 1988. *Fee*: HKMA member, SHK 1,115; non-member, SHK 1,215.

Host institution: The Hong Kong Management Association (HKMA)
14/F Fairmont House
8 Cotton Tree Drive
Central, Hong Kong

Financial management

General description: Analysis of financial statements, ratio analysis, corporate objectives, management of working capital, budgeting and evaluation of capital, choice of capital structure and financial pattern, role of performance budgeting in public-sector undertakings and tax planning. *Commencing date:* 25 July 1988. *Duration:* 2 weeks. *Qualifications:* Senior finance executives. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Introduction to the latest techniques in the field of cost and management accountancy

General description: Modernizing and updating the existing cost and management accountancy function in the public and private sectors with a view to improving the existing system. *Commencing date:* February-March 1988, November-December 1988. *Duration:* 6 weeks. *Qualifications:* Background in accountancy. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* SUS 1,800.

Host institution: International School for Quality Assurance and
Management Accountancy
B-6/102, Safdarjang Enclave
New Delhi-110 029, India

Managerial leadership and team building

General description: Dynamics of organizational functioning; self-awareness; interpersonal communications and conflicts; leadership; motivation; group dynamics; team building. *Commencing date:* 4 April 1988. *Duration:* 2 weeks. *Qualifications:* Senior and middle-level managers; sponsoring organizations may derive more benefit by nominating three or more executives from different functional areas. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Organization and methods

General description: The systems concept; functions of management; defining organizational objectives; structuring the organization; work distribution and human resource planning. *Commencing date:* 8 February 1988. *Duration:* 2 weeks. *Qualifications:* Senior and middle-level managers with at least 3 years of experience in a responsible position. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Production management

General description: Production function as related to organizational goals; strategy-oriented production management systems; hierarchical decisions. *Commencing date:* 8 February, 7 November 1988. *Duration:* 2 weeks. *Qualifications:* Middle- and senior-level executives in production, industrial engineering, project engineering and implementation. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Production planning and control (engineering industries)

General description: Role, scope objectives and concepts of integrated systems; demand forecasting, aggregate planning and scheduling; materials requirements planning; lot sizing for short-term production. *Commencing date:* 29 August 1988. *Duration:* 2 weeks. *Qualifications:* Graduates with at least three years of executive responsibility in production planning and control in the engineering industry. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Chief executive programme

General description: Corporate strategy; marketing; financial management; developing human resources; personal skills; computerization; leadership and organization behaviour. *Commencing date:* 5 April 1988. *Duration:* 10 weeks. *Qualifications:* Chief executives. English. *Last date for receipt of applications:* 26 February 1988. *Fee:* £IR 8,500.

Host institution: Irish Management Institute
Sandyford Road
Dublin 16, Ireland

IMI management development programme

General description: General management: theory and practice; finance and accounting; marketing; operations and production control; managing people at work; developing personal skills. *Commencing date:* 8 September 1988. *Duration:* 8 weeks. *Qualifications:* Senior or middle management experience. English. *Last date for receipt of applications:* 29 July 1988. *Fee:* £IR 7,500.

Host institution: Irish Management Institute
Sandyford Road
Dublin 16, Ireland

Management services

General description: Gives participants a wider knowledge and understanding of management service techniques, an opportunity of conducting a job evaluation project, analysing work flow and procedures in an office setting, making recommendations for change and of understanding their impact. *Commencing date:* 26 September 1988, 25 September 1989. *Duration:* 10 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 25 July 1989. *Fee:* To be arranged

Host institution: Institute of Public Administration
59 Lansdowne Road
Dublin 4, Ireland

Personnel management in the public sector

General description: Introduction to personnel management; manpower planning development; recruitment and selection; training and career development; job grading and evaluation; industrial relations of pay; role of labour legislation; superannuation and welfare function. *Commencing date:* 5 September 1988, 4 September 1989. *Duration:* 10 weeks. *Qualification:* Managers with responsibility for personnel. *Last date for receipt of applications:* 4 July 1988, 3 July 1989. *Fee:* To be arranged.

Host institution: Institute of Public Administration
59 Lansdowne Road
Dublin 4, Ireland

Public enterprise in-plant management

General description: The objective of this programme is to increase the capacity of each participant to manage effectively a functional or technical unit. The main module will

consist of a four-week assignment specially designed to meet the participants' own particular needs. *Commencing date:* 8 August 1988 (to be repeated in 1989). *Duration:* 7 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 10 June 1988. *Fee:* £IR 7,400 (including accommodation), £IR 5,400 (not including accommodation).

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

Systems development programme

General description: Mandatory courses in practice of project appraisal, economics for development, organization and management, statistics in administration, case exercises, research planning and report writing; elective courses from the areas of economics, accounting, systems, informatics, research methodology, quantitative techniques; in-depth study related to a development project relevant to the employing of organization's needs. *Commencing date:* October. *Duration:* 12 months. *Qualifications:* University degree/professional qualifications; experience. English. *Last date for receipt of applications:* 1 September. *Fee:* SUS 7,000.

Host institution: Systems Development Programme
Trinity College
Dublin 2, Ireland

Design management

General description: Core courses: socio-economic forecasting; design economics; expressive tendencies; innovative marketing and communications; design management; communications and images; the post-industrial market-place; computerized systems. *Commencing date:* January 1988. *Duration:* 10 months. *Qualifications:* Graduates. Italian, English. *Last date for receipt of applications:* October 1987. *Fee:* SUS 14,000 (includes all fees).

Host institution: Domus Academy
Edificio 1/C
Milanofiori
20090 Assago (Milan), Italy

Business feasibility study and management practice

General description: Methods and techniques of planning; necessary functions for business feasibility examination and techniques of study in preconstruction; techniques of project execution in construction; operation and improvement for better performance in post-construction. *Commencing date:* 24 September 1988. *Duration:* 6 months. *Qualifications:* University degree or equivalent; at least 3 years of experience in the field; under 45 years of age. English. *Last date for receipt of applications:* 24 July 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Executive programme on corporate management

General description: Participants will review the basic strategies in corporate management, such as organization production, marketing, financing, personnel management. Through the exposure to the Japanese experiences, they will also study the human aspect of corporate management, such as motivation, leadership, education and training. *Commencing date:* October 1988, 1989. *Duration:* 2 weeks. *Qualifications:* Senior executives/directors responsible for overall management of an organization in a developing

country. English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* Y327,000.

Host institution: The Association for Overseas Technical Scholarship, Japan
30-1, Senju-azuma, 1-chome, Adachi-Ku
Tokyo, Japan

Motivation for productivity

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: theoretical motivation framework; Japanese industrial relations system as related to worker motivation; management organization with reference to decision-making; wage and salary systems; fringe benefits and welfare systems; voluntary group activities within an enterprise; labour practices in Japanese joint ventures overseas; overall evaluation of Japanese practices by foreign industrial managers stationed in Japan. *Commencing date:* -. *Duration:* 4 weeks. *Qualifications:* Senior managers, labour union officials, government officials directly dealing with industrial relations and senior consultants of national productivity organizations or similar institutions of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APC)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Production management

General description: Participants will review the whole process of production from planning to delivery, through production simulation exercises and in-plant practices and study how to increase total production efficiency in a factory. *Commencing date:* February 1988, 1989. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff in charge of production control or factory management in industries in developing countries. English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* Y550,000.

Host institution: The Association for Overseas Technical Scholarship, Japan
30-1, Senju-azuma, 1-chome, Adachi-Ku
Tokyo, Japan

Production planning and control

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: production planning and control (overview); the material requirements planning system; the just-in-time/Kanba. system; current trends in production planning and control systems in Japanese industry. *Commencing date:* -. *Duration:* 3 weeks. *Qualifications:* Production engineers and managers in manufacturing industry and technical consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Productivity measurement, monitoring and analysis at the subsectoral level

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: state of the art of productivity measurement in selected industrial sectors of member countries; concept and methodology of productivity measurement at the subsectoral level; case-studies on productivity measurement in India; productivity measure-

ment at the enterprise level; productivity measurement for service departments of manufacturing units; study of selected industrial sectors; productivity measurement model building for an enterprise; inter-firm comparison; productivity audit. *Commencing date*: -. *Duration*: 2 weeks. *Qualifications*: Senior and middle executives from the manufacturing industry and senior consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 50 for participants from profit-making organizations.

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

Venue: India

Programme for cross-cultural management

General description: Participants with different cultural backgrounds can get new ideas to develop management styles of their own through a comparison between the Japanese management system and theirs, observation tours and discussions with lecturers and Japanese managers. *Commencing date*: February, May, October 1988, 1989. *Duration*: 3 weeks. *Qualifications*: Junior and senior managers from developing countries with at least 5 years of practical experience in transnational business activities. English. *Last date for receipt of applications*: 5 months before commencing date. *Fee*: Y327,000.

Host institution: The Association for Overseas Technical Scholarship, Japan
30-1, Senju-azuma, 1-chome, Adachi-Ku
Tokyo, Japan

Senior management consultants

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: management consultancy in the participants' countries; overview of industry and management in Japan; review of analytical techniques in consultancy; review of industrial engineering practices; professional management consultancy practices; integrated business diagnosis. *Commencing date*: -. *Duration*: 8 weeks. *Qualifications*: Senior management consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 200 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Strategic management

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: strategic management in the perspective of the 1990s—concepts and realities; business and society in Japan; business management in leading Japanese corporations; corporate strategy and planning systems in the 1990s. *Commencing date*: -. *Duration*: 2 weeks. *Qualifications*: Senior consultants of national productivity organizations or similar institutions, and senior managers of public or private enterprises of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 50 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Systematic problem-solving in production management

General description: Lectures, discussions, exercises, case-studies and plant visits related to: identification, detection and definition of problems; total productivity measurement; profitability analysis; problem-solving in the area of systems and procedures and of business strategy; application of ergonomics, behaviour modelling for productivity, small group activities. *Commencing date:* -. *Duration:* 6 weeks. *Qualifications:* Senior production managers in manufacturing plants, senior production/industrial engineers and consultants of national productivity organizations or similar institutes of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 200 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japar

Technology management

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: the role of Governments in technology transfer and adaptation; the role and promotion of R&D institutes; licensing agreements for technology; reverse engineering; institution building for technology dissemination. *Commencing date:* -. *Duration:* 2 weeks. *Qualifications:* Technological consultants of national productivity organizations or similar institutes and government officials concerned with technology development and management of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 50 for participants from profit-making organizations.

Organizer: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japar

Venue: To be decided

Tools for managerial decision-making

General description: Lectures, discussions, exercises, case-studies, business games, and visits related to: computer programming; principles and techniques in the analysis and design of information systems; application of quantitative methods in industrial management; decision-making in industrial management. *Commencing date:* -. *Duration:* 6 weeks. *Qualifications:* Senior systems/industrial engineering trainers and consultants of national productivity organizations or similar institutes, university teachers in production engineering and management and senior managers in industry of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 200 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japar

Financial management programme

General description: The accounting function: financial accounting and reporting cost accounting, accounting information systems; the finance function: financial ratios, working capital management, investment appraisal and capital budgeting, capital markets in developing countries, financial planning; related topics: managerial skill development, computers in small- and medium-size organizations, small industry promotion; practical assignments. *Commencing date:* 15 August 1988, 18 August 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, accounting or a related

subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Last date for receipt of applications:* 15 May 1988, 1989. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

General management for state enterprises programme

General description: Analysis of the socio-economic environment with a view to socio-economic objectives; pricing; marketing management, financial management, sources of finance, public investment analysis; human resource management; strategic planning and design; management guidance and control; alternative methods of public ownership; practical assignments. *Commencing date:* 15 August 1988, 18 August 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Last date for receipt of applications:* 15 May 1988, 1989. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Industrial estates and complexes

General description: Management and planning aspects of industrial estates and complex development. The training programme provides for a series of personalized introductions on development planning of industry and infrastructure, physical planning, location aspects, environmental planning, investment and costs, layout development, optimization. The programme will include further study of selected literature and field observations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University degree in engineering, economics or business administration, preferably with experience in industry. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Centre for Management and Industrial Development (CBO)
Exchange Building
Coolingsingel/Meent
P.O. Box 30042
3001 DA Rotterdam, Netherlands

Industrial extension officers training programme

General description: Small industry; small industry management; consultancy; training; technological assistance; entrepreneurship development; organization of institutional support systems; practical assignments. *Commencing date:* 15 August 1988, 18 August 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Last date for receipt of applications:* 15 May 1988, 1989. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Management and industrial development

General description: Principles of operational management in industry. The training programme provides for a series of personalized introductions on the development of the product programme and market potentials, production management, technology development, investment planning and costing, operations research, licencing and international industrial collaboration. The programme will further include study of selected literature and field observations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University graduates in engineering, economics or business administration, preferably with experience in industry. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Centre for Management and Industrial Development (CBO)
Exchange Building
Coolingsel/Meent
P.O. Box 30042
3001 DA Rotterdam, Netherlands

Management for general managers

General description: Defining and analysing managerial problems; quantitative tools for decision making; business conditions analysis; environmental scanning; the management of organizations; introduction to business policy and strategic management; functional areas of policy formulation, i.e. marketing policies, finance policies, manpower policies, production policies, r & d policies; integrated policy and strategy formulation; communication; organization; development; managerial control; practical assignments. *Commencing date:* 18 January 1988, 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Last date for receipt of applications:* 15 October 1987, 1988. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Managerial control and management information systems programme

General description: Managerial control systems: cost accounting, managerial control systems, financial reporting standards and practice, internal control systems, behavioural aspects of control; management information systems: organization and information, techniques of information processing, information systems analysis and design, internal control in computer-based systems, financial modelling and decision support, implementation of computerized information systems, workshop micro-computer; practical assignments. *Commencing date:* 27 June 1988, 28 June 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, accounting or a related subject from a recognized university; 3-5 years of creditable practical experience in a relevant field. English. *Last date for receipt of applications:* 1 April 1988, 1989. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Sector technology and management programme; light metal (1988); electro/mechanical (1989)

General description: General and production management technology of the sector concerned, including factory visits; technology: light metal processing, environmental aspects, supply and use of energy; management: applied production management, choice of technology, technology transfer implementation; in-plant application; plan of action. *Com-*

commencing date: 18 January 1988, 1989. *Duration:* 3 months. *Qualifications:* Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Last date for receipt of applications:* 15 October 1987, 1988. *Fee:* f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Advanced production management

General description: Intensive course enabling participants: to identify organizational problems that affect performance at all levels; to plan short- and long-term activities and avoid bottle-necks; to set up and apply production targets; to make optimum use of machine materials and labour; to maintain expected stock-levels. *Commencing date:* 10 November 1988. *Duration:* 2 weeks. *Qualifications:* Senior production and plant managers in the manufacturing, processing, extraction or agro-allied industries. English. *Last date for receipt of applications:* August 1988. *Fee:* N 1,320.

Host institution: Centre for Management Development
Management Village, Shangisha
P.M.B. 21578
Ikeja, Nigeria

Management consultancy

General description: Essential principles of management consultancy to upgrade participants' skills in the areas of production, finance, personnel and marketing; trains participants in the scientific diagnosis of managerial problems and the design of effective solutions. *Commencing date:* August 1988. *Duration:* 7 weeks. *Qualifications:* Senior and middle managers, practising and aspiring consultants with a master's degree. *Last date for receipt of applications:* 30 April 1988. *Fee:* N 2,100.

Host institution: Centre for Management Development
Management Village
Shangisha
P.M.B. 21578
Ikeja, Nigeria

Plant training of engineers in chemical, electrical, mechanical and instrument disciplines

General description: This course is for middle- and lower-level executives. Training is conducted at one of the large nitrogenous or phosphatic fertilizer plants of NFC. Basic aim is to improve managerial skills of executives in order to manage capital and human resources more efficiently. Class-room training includes lectures and discussions on particular processes while on-the-job training is carried out at plant where trainees are actively involved and share experience of their counterparts. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* SUS 500 per month (including boarding and lodging).

Host institution: National Fertilizer Corporation of Pakistan (Pvt.) Ltd.
Alfalah Building
Shahrah-e-Quaid-e-Azam
Lahore, Pakistan

Cours Intégré de gestion

Description générale: L'entreprise considérée comme un système (organisation interne et liaison au milieu environnant); méthodologie de la prise de décision; systèmes d'information dans le cadre des divers domaines fonctionnels; planification stratégique;

simulation de la gestion d'une entreprise à travers un modèle informatique. *Début du cours* : A arranger. *Durée* : 21 jours. *Qualifications* : Portugais. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Développement en gestion générale

Description générale : Le "système-entreprise"; l'efficacité personnelle du dirigeant; la formulation et mise sur pied de la stratégie pour une entreprise; les stratégies fonctionnelles; les systèmes d'information ou l'informatique au service de la gestion; la gestion comme un processus de décision ou la dynamique de la gestion. *Début du cours* : A arranger. *Durée* : 20 jours. *Qualifications* : Ingénieur civil. Portugais, français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Direction de production et logistique Industrielle

Description générale : Conception des systèmes productifs et logistiques; planification, programmation et renouvellement d'équipements industriels; prévision, gestion de stocks planification et programmation de la production; distribution physique, approvisionnement et sous-traiter; effets externes et internes de la mise sur pied et du fonctionnement des systèmes productifs. *Début du cours* : A arranger. *Durée* : 16 jours. *Qualifications* : Portugais, espagnol. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Diploma course in management

General description: Labour jurisprudence; commercial law; quality, production, finance, commercial and personnel management; new technologies; standardization; statistics; computing research; operational research. *Commencing date*: -. *Duration*: 9 months. *Qualifications*: B.Sc. in engineering and management. Portuguese. *Last date for receipt of applications*: July. *Fee*: -.

Host institution: Instituto de Soldadura e Qualidade
Universidade Nova de Lisboa
Faculdade de Ciências e Tecnologia
Lisbon, Portugal

Gestion des ressources humaines

Description générale : Le binôme (système de travail-personnes) dans la gestion des ressources humaines; amélioration organisationnelle et développement des ressources humaines; négociation et gestion des conflits; problèmes de la reconversion et politique de personnel. *Début du cours* : A arranger. *Durée* : 16 jours. *Qualifications* : Portugais, français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Gestion financière

Description générale : La fonction financière dans l'entreprise; comptabilité générale; comptabilité des coûts; planification des investissements; gestion des ressources financières à court terme; l'entreprise et la bourse; mécanismes de prise de la décision financière; contrôle de gestion; négociation avec la banque. *Début du cours* : 6 juin 1988. *Durée* : 3 semaines. *Qualifications* : Qualifications professionnelles. Portugais. *Dernier délai pour la soumission des candidatures* : 2 mai 1988. *Droit d'inscription* : A arranger.

Organisme hôte : PARTEX-CPS
Rua António Pereira Carrilho 5
1000 Lisbonne, Portugal

Gestion financière et le développement de l'entreprise

Description générale : Analyse financière; décisions d'investissement et de financement; stratégies de croissance externe. *Début du cours* : A arranger. *Durée* : 15 jours. *Qualifications* : Portugais, anglais. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Operation of industrial plants

General description: The course is intended for young engineers at the start of their professional career. It includes technical visits to factories and plants and the development of practical activities at a plant where trainees will participate in the daily operations. *Commencing date*: 5 September 1988. *Duration*: 15 days. *Qualifications*: B.Sc. in chemical engineering or mechanical engineering. Portuguese. *Last date for receipt of applications*: 30 July 1988. *Fee*: Esc 350,000.

Host institution: PARTEX - Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Introduction to management

General description: Management theories; supervisory techniques; leadership styles; theories of organizational behaviour; role of personnel department in QGPC; training and development at QGPC; financial planning, accounting and budgeting techniques with specific reference to QGPC. *Commencing date*: 4 June 1988. *Duration*: 15 days. *Qualifications*: Newly hired university graduates. English. *Last date for receipt of applications*: 8 weeks before commencing date. *Fee*: -.

Host institution: Qatar General Petroleum Corporation (QGPC)
P.O. Box 3212
Doha, Qatar
in collaboration with MEIRC

Modern management of industrial enterprises

General description: Modern management methods and techniques applicable to small- and medium-size enterprises in developing countries, includes practical exercises and case-studies. *Commencing date*: May, September 1988. *Duration*: 8-10 weeks. *Qualifications*: Professional qualifications. English or French. *Last date for receipt of applications*: 1 month before commencing date. *Fee*: \$US 540 a week (including accommodation and meals).

Host institution: International Centre for Management Development (CEPECA)
Otopeni
Soseaua Orlai 20
Bucharest, Romania

Management

General description: IMI organizes short and long courses: effectiveness of main and subsidiary boards, international programme for senior executives, international executive programmes, international advanced management programme, Master of Business Administration programme. It also runs two-week programmes in the field of technology, finance, marketing and management development. *Commencing date:* Throughout the year. *Duration:* 3 days-9 months. *Qualifications:* All programmes are for middle to senior managers, executives and board members, working for an international organization. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* SwF 5,000-SwF 34,000.

Host institution: International Management Institute (IMI)
4, chemin de Conches
1231 Conches-Geneva, Switzerland

General management and extension techniques for consultancy

General description: General management for small-scale industries; integrated management; the consultant-client relationship; data collection and problem-solving techniques; communication and report writing; field work; consulting in various areas of management. *Commencing date:* 22 May 1989. *Duration:* 6 weeks. *Qualifications:* Candidates should be nominated by their Governments and be either a current or a potential industrial extension officer possessing a degree in business administration or its equivalent and have credible extension work experience. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* Free for government nominees.

Organizer: Thai Aid Sub-Division
Department of Technical and Economic Cooperation (DTEC)
962 Krung Kasem Road
Bangkok 10100, Thailand

Executing agency:
The SITE Project
Research Institute for Management Science (RVB)
P.O. Box 143
2600 Delft, Netherlands
and
Department of Industrial Promotion
Ministry of Industry
Rama 6 Road
Bangkok 10400, Thailand

Marketing and financial management

General description: Marketing research and information; industrial marketing; work visits; financial analysis, managerial and cost accounting, planning and control and management of working capital. *Commencing date:* 13 June 1988. *Duration:* 8 weeks. *Qualifications:* Candidates should be nominated by their Governments and be either a current or a potential industrial extension officer possessing a degree in business administration or its equivalent and familiar with basic quantitative methods and analysis. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* Free for government nominees.

Organizer: Thai Aid Sub-Division
Department of Technical and Economic Cooperation (DTEC)
962 Krung Kasem Road
Bangkok 10100, Thailand

Executing agency:
The SITE Project
Research Institute for Management Science (RVB)
P.O. Box 143
2600 Delft, Netherlands
and
Department of Industrial Promotion
Ministry of Industry
Rama 6 Road
Bangkok 10400, Thailand

Production management

General description: Production planning and control, recording techniques, plant location and layout, material handling, inventory control, quality control, maintenance. *Commencing date:* 21 November 1988. *Duration:* 4 weeks. *Qualifications:* Candidates should be nominated by their Governments and be either a current or a potential industrial extension officer possessing a degree in business administration or its equivalent and be familiar with basic quantitative methods and analysis. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* Free for government nominees.

Organizer: Thai Aid Sub-Division
Department of Technical and Economic Cooperation (DTEC)
962 Krung Kasem Road
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Executing agency:
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P.O. Box 143
2600 Delft, Netherlands
and
Department of Industrial Promotion
Ministry of Industry
Rama 6 Road
Bangkok 10400, Thailand

Advanced logistics management

General description: The aim of the course is to give senior managers the skills and knowledge required to control effectively each of the logistics activities and to ensure that each activity is properly co-ordinated and integrated in the overall interests of organizational efficiency. The programme consists of the following ten modules: 1. The nature of management and the role of the manager. 2. Corporate strategies and materials management. 3. The management of capital equipment procurement. 4. International purchasing and contracting. 5. Negotiation planning, strategies and techniques. 6. Inventory management and control systems. 7. The role of information technology. 8. Staff appraisal, development and training. 9. Physical distribution systems and management. 10. Contemporary issues in logistics and materials management. *Commencing date:* March. *Duration:* 12 weeks. *Qualifications:* Senior managers holding leading positions in the purchasing, supply or materials management fields. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £6,775 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Effective management in the agricultural industry

General description: The programme comprises 3 four-week modules, entitled: "Getting results through people"; "Getting results through training"; and "Effective presentation".

Commencing date: -. *Duration:* 12 weeks. *Qualifications:* Some experience in a relevant field. English. required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee (approximate figures):* 1988, member £2,600, non-member £3,060; 1989, member £2,730, non-member £3,213.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Effective supervision

General description: Principles and practice; communications and communication skills; industrial relations; economic aspects; technical aspects; human relations; personnel aspects; problem identification and analysis of problems; psychology of change; project work. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* Approximately £280 a week. (Accommodation, half-board, teaching materials included.)

Host institution: Eaton Hall International
Nottinghamshire County Council
Retford, Nottinghamshire DN22 OPR, United Kingdom

Financial management

General description: Systems of financial administration in Government; planning and budgeting systems; commercial accounting; management accounting and management information; project planning, evaluation and implementation; use of computers in Government; financial statistics; international financial issues; project assignments and study visits. *Commencing date:* 7 June 1988. *Duration:* 3 months. *Qualifications:* Relevant work experience. English. *Last date for receipt of applications:* Early April 1988. *Fee:* Approx. £2,800.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Financial management

General description: "Finance for the Non-Financial Executive" is for those senior and middle managers who need to acquire an understanding of the basic elements of financial management. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

General management

General description: Becoming a better manager; management planning and control; human relationships; management and leadership; varieties of management; personnel functions; finance. *Commencing date:* -. *Duration:* 10-12 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* Approximately £280 a week based on 8 participants plus VAT, if applicable. (Accommodation, half-board, teaching materials included.)

Host institution: Eaton Hall International
Nottinghamshire County Council
Retford, Nottinghamshire DN22 OPR, United Kingdom

Industrial management

General description: Industrial administration production planning and control; planned maintenance; production control; production and materials management; production and materials control; modern materials management; industrial management. *Commencing date:* Throughout the year. *Duration:* 4 to 16 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £2,200-£8,800.

Host institution: Institute of Production Control
National Westminster House
Wood Street
Stratford-upon-Avon, Warwickshire, United Kingdom

Management

General description: Short courses on management, multicultural effectiveness, communication, supervisory skills, personal effectiveness, managing change. *Commencing date:* Throughout the year. *Duration:* 2-14 days. *Qualifications:* Professional qualifications or special interest. Mainly English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Cargill Attwood International
8 Teddington Park
Teddington TW11 8DA, United Kingdom

Management

General description: Special management programme for technical graduates. *Commencing date:* July, October 1988, 1989. *Duration:* 3 weeks. *Qualifications:* Post graduates, scientists and technologists with managerial responsibilities. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £1,050.

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

Management

General description: For managers with little formal management training. Aimed at giving participants a clear understanding of their role and responsibilities as managers, at introducing them to the tools and techniques that will enable them to manage more effectively, at providing a clear framework for their current job and a plan for improving their own performance. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Management

General description: The course is aimed at giving a greater understanding of the interdependence of all the functions within the business, developing an awareness of how to anticipate problems rather than reacting to them and at developing interpersonal skills. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Middle, senior managers. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Management (training and internal consultancy)

General description: A project-based intensive course for pairs of participants designed to achieve tangible, beneficial change in their home organization. Participants apply to a real problem the management, training, consultancy knowledge and skills they learn. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £3,500.

Host institution: University of Leeds
Department of Management Studies
Leeds LS2 9JT, United Kingdom

Management analysis and consultancy skills

General description: Eight-week core programme of management skills followed by 3 four-week options: A. field assignments in essential skills; B. job descriptions and job evaluation; C. management consultancy. *Commencing date:* 21 June 1988. *Duration:* 3 months. *Qualifications:* Graduates with several years of administrative experience. English. *Last date for receipt of applications:* Mid April 1988. *Fee:* Approx. £3,000.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Management and maintenance of agricultural plant and machinery

General description: The course is designed to enable participants to identify organizational and operational problems and to suggest practical and economic solutions. Participants will also be able to develop maintenance policies relating to their own sector, ensuring that plant and equipment are available and operating to agreed standards at an economic cost. *Commencing date:* January and July. *Duration:* 12 weeks. *Qualifications:* Middle grade engineers who have responsibility for maintenance procedures within an agricultural environment. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £6,020 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Management and national development

General description: Changing requirements of public sector management; finance and management; people and management; management information; long-term plans and projects. *Commencing date:* 12 September 1988. *Duration:* 4 weeks. *Qualifications:* Permanent secretaries and their deputies and directors or their equivalents. English. *Last date for receipt of applications:* Mid July 1988. *Fee:* Approx. £2,800.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Management and supervisory development

General description: Intensive courses in human resource management; management of time; management accounts; effective management teams; developing appraisal and interviewing skills; presentation of techniques workshop; negotiation skills; work counselling skills; management of stress; interpersonal skills; the supervisor's course; leadership. *Commencing date:* Throughout the year. *Duration:* 1-6 weeks. *Qualifications:*

Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Management development

General description: An opportunity for managers to learn and practise the skills required for managing and understanding people at work. *Commencing date:* To be arranged. *Duration:* 12 weeks. *Qualifications:* English. *Last date for receipt of applications:* To be arranged. *Fee:* -.

Host institution: Teesside Transport Training Association
Hamilton House
Cargo Fleet Lane
Middlesbrough, Cleveland TS3 8DJ, United Kingdom

Management for engineers and scientists

General description: Introduction and orientation; learning methodology; learning studies; planning and organizing (project work); resource management; management services; finance management; adult learning; communication skills; leadership. *Commencing date:* -. *Duration:* 3 weeks. *Qualifications:* Some experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee (approximate figures):* 1988, member £945, non-member £50; 1989, member £995, non-member £1,010.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Management of industrial relations

General description: Introduction and orientation; background comparative study of industrial relations; collective bargaining internationally; communication in industrial relations; effective industrial relations. *Commencing date:* 18 January, 16 May, 19 September 1988; 23 January, 15 May, 2 October 1989. *Duration:* 3 weeks. *Qualifications:* Some experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee (approximate figures):* 1988, member £955, non-member £1,110; 1989, member £1,000, non-member £1,165.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Management of negotiation

General description: Industrial relations (IR) framework; theory and practice of collective bargaining (CB); skills of the negotiator; constructive IR practices; visits to relevant organizations. *Commencing date:* -. *Duration:* 2 weeks. *Qualifications:* Some experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee:*

(approximate figures): 1988, member £1,870, non-member £1,960; 1989, member £2,185, non-member £2,290.

Organizer: The Industrial Society International
48 Bryanston Square
London W1H 7LN, United Kingdom

Venue: Midlands, United Kingdom

Management of public enterprises

General description: Policy and strategy are emphasized with the overall objective of increasing effectiveness. The specific nature of public enterprises is analysed and the relationship with government and the public explored. Participants will study specific experiences of public enterprise management, update their appreciation of a range of management techniques and develop personal management skills. **Commencing date:** April. **Duration:** 12 weeks. **Qualifications:** Professional qualifications. English. **Last date for receipt of applications:** -. **Fee:** £3,500.

Host institution: University of Leeds
Department of Management Studies
Leeds LS2 9JT, United Kingdom

Management of technology

General description: Use of 3-D graphics; skills of presentation; introduction to finite elements; economics for technologists; computer applications; project management; management of CAD/CAM. **Commencing date:** January 1988. **Duration:** -. **Qualifications:** Professional qualifications. English. **Last date for receipt of applications:** -. **Fee:** To be arranged.

Host institution: Brunel University
Continuing Education
Oxbridge, Middlesex UB8 3PH, United Kingdom

Management today programme

General description: Introduction and orientation; job planning, rewarding and staffing; the manager's responsibility for training visits to commercial and industrial organizations; the manager and industrial relations; managing the organization's image and customer relations; organizational communication and communication skills; the manager as a leader; planning and management services techniques; financial considerations and new technology. **Commencing date:** 5 January, 19 April, 5 September 1988; 9 January, 2 May, 18 September 1989. **Duration:** 12 weeks. **Qualifications:** Experience in a relevant field. English required at a good business and conversational level. **Last date for receipt of applications:** 1 month before commencing date. **Fee (approximate figures):** 1988, member £2,600, non-member £3,060; 1989, member £2,730, non-member £3,213.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Managing economic development

General description: Core units of the course are: economic development strategies; plan formulation and evaluation; project planning and programming; performance management; manpower planning; management of human resources; implementation, monitoring and management information systems; financial management. Specialist options are: industrial planning and economic development and public enterprise management.

Commencing date: September 1988. *Duration:* 3½ months. *Qualifications:* Practical experience. English. *Last date for receipt of applications:* -. *Fee:* £6,250.

Host institution: Aston University Management Centre
Aston Triangle
Birmingham B4 7ET, United Kingdom

Materials and supply management

General description: General management principles; materials management skills; materials handling methods and practices; materials requirements planning; stock/inventory control, methods and application; financial aspects of materials supply; computer applications; safety. *Commencing date:* 11 January, 11 April, 16 June, 26 September. *Duration:* 10 weeks. *Qualifications:* Good general education and some practical experience. English. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* £10,515 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

Personnel management

General description: General management principles; staff recruitment, interviewing, manpower development; management services, job analysis, evaluation and inspection and manpower budgeting; health and safety; industrial relations, negotiations, the law and industrial tribunals; project presentation, consultation and evaluation. *Commencing date:* 15 February, 16 August 1988. *Duration:* 3 months. *Qualifications:* Graduates with several years of public service experience. English. *Last date for receipt of applications:* Mid December 1987, June 1988. *Fee:* Approx. £2,900.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Personnel management and industrial relations

General description: Orientation and introduction, the enterprise as an employer; industrial relations—industrial relations provisions in employment, statutory facilities in industrial relations in the United Kingdom; personnel management—team building, maintenance and development, controls in personnel management; industrial and commercial visits; preparation of future action plans. *Commencing date:* 5 January, 19 April, 5 September 1988; 9 January, 2 May, 18 September 1989. *Duration:* 12 weeks. *Qualifications:* Experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee (approximate figures):* 1988, member £2,600, non-member £3,060; 1989, member £2,730, non-member £3,213.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Procurement for development projects

General description: The objective of the course is: to examine in relation to aid agency funded projects, the donor agency requirements and relate these to the procedures existing in the recipient country; to equip purchasing management and project senior staff with the skills necessary to manage the procurement of the capital equipment, material

and supplies required by a major project; to provide a basis for recognized and acceptable procedures to be followed in international competitive bidding tender evaluation and award of contract to supply. *Commencing date:* February and October *Duration:* 4 weeks. *Qualifications:* Officials concerned with the management of the procurement aspects of major projects. English. *Last date for receipt of applications:* 3 weeks before commencing date. *Fee:* £3,385 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Production management

General description: A programme for production and industrial engineering specialists from overseas. *Commencing date:* September 1988, 1989. *Duration:* 3 months. *Qualifications:* Senior production managers and industrial engineering specialists. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £4,962.

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

Programme planning and management in the public sector

General description: Social planning and its context; approaches to social planning; making plans; techniques of resource management; managing people. Project administration; project evaluation; and delegates action plans. *Commencing date:* March/April 1988. *Duration:* 12 weeks. *Qualifications:* Some experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* member approx. £2,600, non-member approx. £3,060.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Project management

General description: Participants are helped to identify the differences between general and project management and the success factors involved, to increase their awareness of the more important techniques available to assist in their decision-making, and to improve communication and leadership skills. *Commencing date:* To be arranged. *Duration:* 1-10 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Purchasing and materials management

General description: Purchasing practice and techniques; purchasing and supply management; stores management and stock control; contract procedures and techniques; the concept of materials management; international purchasing. *Commencing date:* 7 March, 6 June,

12 September 1988. *Duration:* 12 weeks. *Qualifications:* Middle management and senior personnel. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Organizer: Institute of Purchasing and Supply
Easton House
Easton on the Hill
Stamford, Lincolnshire, United Kingdom

Venue: East Sussex, United Kingdom

Purchasing management

General description: General management practice; purchasing skills; financial aspects of purchasing; measuring and improving purchasing performance; negotiating and expediting; developing buying skills; computer applications in purchasing; visits to relevant operating situations/companies within this specialist field. *Commencing date:* 1 February, 30 May, 5 September, 10 October. *Duration:* 9 weeks. *Qualifications:* Good general education and some recent practical experience. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £9,500 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

Purchasing supply and materials management

General description: Materials management; procurement; computerization; human aspects; latest techniques. *Commencing date:* 11 April 1988, 5 September 1988. *Duration:* 4 weeks. *Qualifications:* Officers and executives overseas with supply responsibilities. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Organizer: Institute of Purchasing and Supply
Easton House
Easton on the Hill
Stamford, Lincolnshire, United Kingdom

Venue: South-east England, United Kingdom

Public sector administration

General description: Management and government principles of management personnel administration; staff training; development and management; decision-making techniques; planning for achievement; special problems of public administration; field assignment; study visits. *Commencing date:* 10 May 1988. *Duration:* 3 months. *Qualifications:* Degree or equivalent. English. *Last date for receipt of applications:* Mid March 1988. *Fee:* Approx. £2,800.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Senior management in the construction industry

General description: Course aims at developing the participants' skills in understanding how to penetrate and sell in certain markets and manage companies profitably within them; lectures, discussions, exercises and case-studies. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Supervisory management training

General description: Principles and practices of supervision; technical aspects of supervisors; communication; economic and financial aspects; industrial relations. *Commencing date:* January 1988. *Duration:* 1-4 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £270 per week.

Host institution: Skills Training Agency College
Overseas Training Unit,
Level 3,
Skills House
Holy Green
Moorfoot
Sheffield S1 4PQ, United Kingdom

Supply and materials management

General description: The aim of this course is to enable middle and senior management to develop existing supply procedures, plan new supply systems and integrate existing but diversified supply activities. The course programme includes: supply and materials management, contracting and purchasing, distribution, storage methods, financial aspects of supply management, stock control and inventory management, storage planning and operation. *Commencing date:* January, April, June, September. *Duration:* 12 weeks. *Qualifications:* Middle and senior managers. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £6,020 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Vehicle, plant and equipment management

General description: Corporate planning and provision of capital equipment; organization and control; budgeting and financial controls; modern techniques; manpower selection, utilization, training and development; managing people in a technical environment; stores/spares provision and control. There is also a longer version of the course including a presentation. *Commencing date:* 25 January, 6 June, 12 September, 19 September, 31 October. *Duration:* 6-10 weeks. *Qualifications:* Good general education and some practical experience. English. *Last date for receipt of applications:* 1-2 months before commencing date. *Fee:* £5,060-£10,247 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

Workshop organization and administration

General description: Workshop design and layout; equipping; specialist repair areas; maintenance systems; documentation; manpower provision; scheduling and control; standards of performance; analysis and improvement; safety. *Commencing date:* 18 January, 7 March, 6 June, 12 September, 31 October. *Duration:* 4 weeks. *Qualifications:* Good general education with some practical experience. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £3,372 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

Agribusiness management

General description: Technological developments that have an impact on agribusiness, marketing and international trade, planning finance and management, and computer analysis. A programme designed for managers of agribusiness, commodity trading, public and private financial institutions and research facilities. *Commencing date:* 14 April 1988. *Duration:* 6 weeks. *Qualifications:* Undergraduate degree, significant experience in agribusiness or an agribusiness-related activity; working knowledge of accounting and finance desirable. English. *Last date for receipt of applications:* 1 March 1988. *Fee:* SUS 5,000.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Agribusiness management.—tutorial

General description: A special accounting/finance tutorial, available prior to the start of the above agribusiness management programme, for those participants who need to acquire a basic understanding of accounting and finance. *Commencing date:* 5 April 1988. *Duration:* 2 weeks. *Qualifications:* Acceptance into the agribusiness management programme. *Last date for receipt of applications:* —. *Fee:* SUS 1,350.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Human resources/personnel management

General description: A programme focusing on the acquisition, development, utilization and management of human resources. Participants learn how to link human resource management to an organization's strategic objectives and how to apply computers to personnel management. *Commencing date:* 8 September 1988. *Duration:* —. *Qualifications:* Undergraduate degree, significant experience in human resource/personnel management. English. *Last date for receipt of applications:* 1 July 1988. *Fee:* SUS 5,000.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Master of Science in management program

General description: An intensive graduate programme where participants learn the latest management techniques in rigorous courses and simulations that combine theory and practice. Courses include finance, marketing and business planning. *Commencing date:* 22 August 1988. *Duration:* 1 year. *Qualifications:* Undergraduate degree ("B" average or equivalent); relevant work experience, proficiency in English, minimum 500 TOEFL, strong recommendations, motivation and a potential for growth. *Last date for receipt of applications:* 15 May 1988. *Fee:* SUS 16,000.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Master of Science in management tutorial

General description: Five-week tutorial in quantitative methods in preparation for the above Master of Science in Management Program. Attendance at the tutorial may be made a

condition of acceptance to the masters programme if deemed necessary by the Admissions Committee. Preparatory sessions in accounting, economics, and finance may be added, if necessary. *Commencing date:* 18 July 1988. *Duration:* 5 weeks. *Qualifications:* Acceptance or conditional acceptance into the Master of Science in Management Program. *Last date for receipt of applications:* -. *Fee:* \$US 1,900.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Petroleum management

General description: A programme focusing on the concepts, skills and technologies necessary for administering petrochemical and hydrocarbon resources and implementing an energy policy. Courses cover risk analysis, marketing of hydrocarbons, technical and economical aspects of oil exploration and production, marine transportation and refinery processes; operational features of crude oil, product valuations and oil trading; and related hydrocarbon activities, such as natural gas, liquefied natural gas and liquefied petroleum gas. *Commencing date:* 19 January 1989. *Duration:* 12 weeks. *Qualifications:* Undergraduate degree; significant experience in the hydrocarbon sector; working knowledge of accounting and finance. English. *Last date for receipt of applications:* 1 December 1988. *Fee:* \$US 10,000.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Petroleum management—tutorial

General description: A special accounting/finance tutorial, available prior to the start of the above petroleum management programme, for those participants who need to acquire a basic understanding of accounting and finance. *Commencing date:* 10 January 1989. *Duration:* 2 weeks. *Qualifications:* Acceptance into the petroleum management programme. *Last date for receipt of applications:* -. *Fee:* \$US 1,350.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Project analysis and project and programme management

General description: Two programmes, which can be taken separately or together, providing training in the skills needed to assess the feasibility of projects in the public and the private sectors and to implement them. Participants learn the latest techniques in computer-aided financial analysis and scheduling, financial risk management, technology assessment and practical methods of managing medium- to large-scale projects. *Commencing date:* 2 June 1988 (project analysis programme) and 7 July 1988 (project and programme management). *Duration:* 6 weeks. *Qualifications:* Undergraduate degree, experience in project analysis and/or project and programme management. For the project analysis programme, a basic knowledge of accounting and finance is necessary. *Last date for receipt of applications:* 1 April 1988 (project analysis) and 1 May 1988 (project and programme management). *Fee:* \$US 5,000 for each programme.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

Project analysis—tutorial

General description: A special accounting/finance tutorial, available prior to the start of the above project analysis programme, is recommended for those participants who need to acquire a basic understanding of accounting and finance. *Commencing date:* 23 May 1988. *Duration:* 2 weeks. *Qualifications:* Acceptance into the project analysis programme. *Last date for receipt of applications:* -. *Fee:* \$US 1,350.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

R & D Management

General description: Philosophy of management; planning; organizing; staffing and staff development; directing and leading and controlling. *Commencing date:* 1 August 1988. *Duration:* 3 weeks. *Qualifications:* English. *Last date for receipt of applications:* 1 July. *Fee:* \$US 2,750 (including all course materials, lunches and group activities).

Host institution: Battelle Memorial Institute
505 King Avenue
Columbus, Ohio, United States

Strategic management of information systems

General description: Participants learn how to identify specific opportunities, how to assess their strategic value within the context of their organizations and how to implement management information systems. *Commencing date:* 24 October 1988. *Duration:* 4 weeks. *Qualifications:* Undergraduate degree, significant experience in information systems and data processing. *Last date for receipt of applications:* 1 September 1988. *Fee:* \$US 5,000.

Host institution: Arthur D. Little
Management Education Institute
35 Acorn Park
Cambridge, MA 02140, United States

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

Export promotion of silk products

General description: Demand and market factors in potential buying countries; opportunities in the producing countries for developing silk products suitable for buyers' markets; visit to the International Silk Products Fair. *Commencing date:* September 1988. *Duration:* 2 weeks. *Qualifications:* Persons in charge of the development of silk exports. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: PRODEC
Latvankatu 4
00100 Helsinki, Finland
in collaboration with the International Trade Centre and
the Economic and Social Commission for Asia and the Pacific

Trade promotion and export marketing research

General description: The main emphasis will be on the market research project: each participant will make a supply and a demand study of a selected product that has export potential in European markets. Research findings will be presented in market research reports. *Commencing date:* February-June 1988. *Duration:* 12-13 weeks. *Qualifications:*

Persons with relevant responsibilities in the public and private sectors in African developing countries. English. *Last date for receipt of applications:* -. *Fee:* -.

Organizer: PRODEC
Latvankatu 4
00100 Helsinki, Finland

Venue: Various parts of the world

International export marketing

General description: A programme providing practical approaches to many of the situations and problems facing the exporter and examining the vital supporting role of export promotion and assistance in the public sector. *Commencing date:* June, August 1988. *Duration:* 5 weeks. *Qualifications:* Public sector officials and businessmen. English. *Last date for receipt of applications:* May 1988. *Fee:* £IR 5,250.

Host institution: Irish Export Board
Merrion Hall
Strand Road
Sandymount
Dublin 4, Ireland

Marketing

General description: Marketing function; scope and tasks; economic analysis and marketing research; study of the demand and offer; sales: terms, organization assistance and budget; practical simulations with computer. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Technical or professional qualifications. Italian, English. *Last day for receipt of applications:* To be arranged. *Fee:* To be arranged.

Host institution: CERIT S.p.A. (Regional Centre for Technical Innovation)
Via Villanova di Sotto
33170 Pordenone
Italy

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

General description: Principles and basic concepts; strategic decisions in international marketing; international marketing research; international product decisions; international distribution decisions; international pricing decisions; international communications; organization for international marketing, successful exporting; case-studies and work visits. *Commencing date:* 2 May, 24 October 1988, 1 May, 23 October 1989. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent and experience in a relevant field. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* f. 8,500.

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

Marketing and export trade development

General description: The development of the marketing function, with special emphasis on export trade development. The training provides for a series of personalized introductions on market analysis, international trade relations, quality assurance, marketing, pricing and costing. The programme will further include study of selected literature and market documentations. An experienced CBO associate will provide guidance as tutor and programme co-ordinator. *Commencing date:* To be arranged. *Duration:* 8-13 weeks. *Qualifications:* University graduates in engineering, economics or business administration.

preferably with experience in industry. English. *Last date for receipt of applications*: -. *Fee*: To be arranged.

Host institution: Centre for Management and Industrial Development (CBO)
Exchange Building
Coolsingel/Meent
P.O. Box 30042
3001 DA Rotterdam, Netherlands

Marketing management and physical distribution

General description: Marketing concept; marketing management; marketing research; finance for marketing; physical distribution; practical assignments. *Commencing date*: 18 January 1988, 1989. *Duration*: 3 months. *Qualifications*: Degree in business administration, economics, engineering or a related subject from a recognized university; 3-5 years of creditable practical experience in a related field. English. *Last date for receipt of applications*: 15 October 1987, 1988. *Fee*: f. 15,500.

Host institution: Research Institute for Management Science (RVB)
P.O. Box 143
Mijnbouwplein 11
2600 AC Delft, Netherlands

Marketing

Description générale : La fonction marketing et la gestion; étude du marché, du produit et des réseaux de distribution; marketing international; organisation du réseau des ventes; liaison entre les ventes et les services financiers; assistance technique après les ventes. *Début du cours*: 29 février 1988. *Durée* : 2 semaines. *Qualifications* : Portugais. *Dernier délai pour la soumission des candidatures* : 1^{er} février 1988. *Droit d'inscription* : A arranger.

Organisme hôte : PARTEX-CPS
Rua António Pereira Carrilho 5
1000 Lisbonne, Portugal

Marketing management

Description générale : Concept de marketing; instruments d'analyse économique et financière en marketing; processus de prise de décision; contexte de marketing; marché et comportement du consommateur; politiques de produit, prix et distribution; politique de communication et gestion de la force de ventes; organisation de la fonction commerciale; plan et contrôle de marketing. *Début du cours* : A arranger. *Durée* : 16 jours. *Qualifications* : Portugais, français. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : CIFAG
Avenida Júlio Dinis 11
1000 Lisbonne, Portugal

Marketing and economic development

General description: Marketing concepts policies, methods and techniques for small- and medium-size enterprises in developing countries. Trainees will work out a marketing project for their own enterprises. *Commencing date*: June, October 1988. *Duration*: 8-10 weeks. *Qualifications*: Professional qualifications. English or French. *Last date for receipt of applications*: 1 month before commencing date *Fee*: \$US 540 a week (including accommodation and meals).

Host institution: International Centre for Management Development (CEPECA)
Otopeni
Soscaua Odai 20
Bucharest, Romania

Agricultural marketing in developing countries

General description: The first 8 weeks devoted to planning, implementing, monitoring and controlling are followed by 2 weeks of attachment to relevant organizations and 2 weeks of project preparation. *Commencing date:* April. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £3,500.

Host institution: University of Leeds
Department of Management Studies
Leeds LS2 9JT, United Kingdom

International trade

General description: A modular course, enabling delegates to select their priority needs. Contributors and participating organizations come from an international forum of expertise and include: the International Law Institute, Washington, the Irish Export Board, S.G.S. Geneva, Commonwealth Secretariat, Crown Agents. The complete programme consists of 9 modules, which can be taken separately, in any combination or as a fully integrated 13-week training course. The modules comprise: 1. Trade principles, international and national regulations, control and agreements. 2. Trade finance. 3. Legal aspects of international trade. 4. International supply. 5. International distribution, transport and documentation. 6. Customs procedures and controls. 7. Trade supervision and control. 8. Economic crime—trade fraud. 9. Trade promotion and development. 10. Development of skills for training in international trade. Module 10 is optional (4 weeks). *Commencing date:* March 1988. *Duration:* Up to 17 weeks. *Qualifications:* Officers in trade-related government departments and those sectors involved in trade promotion. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* (Non residential): module 1, £625; module 2, £625; module 3, £625; module 4, £1,250; module 5, £500; module 6, £1,000; module 7, £750; module 8, £625; module 9, £1,050; special price, 13 weeks, £6,000; optional module 10 an additional £1,500.

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Marketing

General description: The role of marketing as a tool of management; the total marketing mix; selection of appropriate elements of the mix market research, desk and field; preparation of long- and short-term marketing plans, budgeting; targeting, advertising techniques; sales management and administration, marketing aids and customer contact; public relations. *Commencing date:* To be arranged. *Duration:* 3 months. *Qualifications:* Relevant experience. Good English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* To be arranged.

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

Marketing and export promotion: international selling

General description: This practical course deals with developing business internationally. It covers opportunities and difficulties in international selling. The emphasis is on negotiating effectively with those of other cultures or nationalities. *Commencing date:* Throughout the year. *Duration:* 1-2 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Cargill Attwood International
8 Teddington Park
Teddington TW11 8DA, United Kingdom

Marketing management

General description: The Marketing Management Program (MMP) is designed for international executives from the public and private sectors. It includes the Corporate Visitation Program (CVP), a series of visits to major United States corporations, where participants can observe marketing at firsthand. *Commencing date:* 13 June 1988, 12 June 1989. *Duration:* 6 weeks. *Qualifications:* Minimum work experience of 2-3 years in marketing management. English. *Last date for receipt of applications:* -. *Fee:* Approx. \$US 7,790; tuition only, \$US 4,495.

Host institution: International Marketing Institute (IMI)
29 Garden Street
Cambridge, MA 02138, United States

Marketing and the organization of marketing departments

General description: Methods of marketing. Managing the marketing departments of small- and medium-scale enterprises. *Commencing date:* 15 July, 1 August, 1 September. *Duration:* 15 days. *Qualifications:* University-level education. English. *Last date for receipt of applications:* 1 May. *Fee:* \$US 1,200.

Host institution: Institute for Economics
University of Banja Luka
Banja Luka, Yugoslavia

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

Normalisation

Description générale: 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. *Dernier délai pour la soumission des candidatures:* -. *Droit d'inscription:* A arranger.

Organisme hôte: Institut belge de normalisation (IBN)
29, avenue de la Brabançonne
1040 Bruxelles, Belgique

Quality control

General description: Introduction; role of the quality function in industry with specific emphasis on the Indian context. Basic statistical concepts for production and quality control; product design considerations. Various process control techniques. *Commencing date:* 5 December 1988. *Duration:* 2 weeks. *Qualifications:* Executives in design, production, quality control, sales, marketing, general management and other functional areas. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Quality control concepts

General description: The primary objective is to improve the quality assurance function in industry as well as to modify systems for quality assurance for plant machinery and equipment etc. Purchases in public and private sectors. *Commencing date:* January-February 1988, October-November 1988. *Duration:* 6 months. *Qualifications:* Science background. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* SUS 1,800.

Host institution: International School for Quality Assurance and Management Accountancy
B-6/102, Safdarjang Enclave
New Delhi-110 029, India

Quality assurance

General description: Diploma course in quality assurance covering managerial and technical aspects of subject including SPC, computers in quality assurance, reliability engineering, measurement technology and management of quality function. *Commencing date:* September 1988. *Duration:* 1 year. *Qualifications:* Second or third level university degree or equivalent experience. English. *Last date for receipt of applications:* 30 May 1988. *Fee:* £1r 1,400 approximately.

Host institution: Department of Industrial Engineering
University College
Galway, Ireland

Certification systems

General description: Introduction of various certification systems in Japan; summary of JIS certification mark system; summary of export inspection system; review of basic knowledge on standardization and quality control. *Commencing date:* 7 January 1988. *Duration:* 3 months. *Qualifications:* University degree or equivalent. English. *Last date for receipt of applications:* 7 November 1987. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Industrial standardization and quality control

General description: Industrial standardization: outline of industrial standardization, present aspect of industrial standardization; quality control: outline of quality control, improvements and advancements in quality control, statistical methods, quality control circle activities. *Commencing date:* 25 June 1988. *Duration:* 10 weeks. *Qualifications:* University degree or equivalent; presently engaged in standardization or quality control work; at least 3 years of experience; under 40 years of age. English. *Last date for receipt of applications:* 25 April 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Industrial standardization and quality control (seminar)

General description: Certification and inspection system; development of Japanese industries: industrial standardization activities based on industrial policy; international and national standardization; prospective standardization tactics; introduction and promotion of total quality control; mutual exchange of opinions with quality control promoters from

companies. *Commencing date:* 2 November 1988. *Duration:* 4 weeks. *Qualifications:* Senior class officials; university degree or equivalent; over 40 years of age. English. *Last date for receipt of applications:* 2 September 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Metrology and measurement standards

General description: Essentials of metrology and measurement standards; regulations related to metrology; standardization related to metrology; export inspection system; fundamental theory of measurement; maintenance of measurement standards. *Commencing date:* 1 June 1988. *Duration:* 5½ months. *Qualifications:* University degree or equivalent; presently engaged in measurement or inspection of measuring instruments; under 40 years of age. English. *Last date for receipt of applications:* 1 April 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Quality control

General description: Participants will study various fundamental quality control techniques through lectures, classroom discussions and in-plant exercises and learn how to apply statistical quality control techniques on an actual production site. *Commencing date:* July 1988, 1989. *Duration:* 6 weeks. *Qualifications:* Engineers and managerial staff of developing countries supervising quality control, production control or factory management. English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* ¥550,000.

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

Quality management

General description: The Japanese approach for company-wide quality control through lectures, plant visits, simulation exercises and discussions to develop suitable measures for participants' organizations to promote quality and productivity improvement. *Commencing date:* June, November 1988, 1989. *Duration:* 3 weeks. *Qualifications:* Senior managers from developing countries responsible for quality and productivity in their organizations. English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* ¥327,000.

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

Total quality control

General description: Lectures, discussions, case-studies and in-plant observations related to: the concept and principles of top quality control (TQC); characteristic features, rules and pitfalls; TQC activities in different industries. *Commencing date:* -. *Duration:* 4 weeks. *Qualifications:* Quality control managers/engineers in industry, and technical consultants of national productivity organizations or similar institutes of APO member countries.

English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 100 for participants from profit-making organizations.

Host institution: Asian Productivity Organization (APO)
4-14 Akasaka 8-chome
Minato-ku
Tokyo, 107 Japan

Quality systems: installation, auditing and improvement

General description: Quality control functions; types of quality control systems, organization for quality assurance; introducing a quality control system; setting up for inspection; sampling plans and their use; analysing a quality system; quality auditing; quality motivation and improvement programmes and quality requirements for export to developed countries. *Commencing date:* 11 January, 25 July 1988, 9 January, 24 July 1989. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent and experience in quality control or a related field. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* f. 8,500.

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

Statistical quality control: a computer-oriented approach

General description: The nature and impact of the computer; flow diagrams for statistical analysis; probability and probability distributions; sampling theory and techniques; tests of significance; control charts; experimental design and regression and correlation analysis. *Commencing date:* 15 February, 29 August 1988, 13 February, 28 August 1989. *Duration:* 2 months. *Qualifications:* Bachelor's degree or equivalent and experience in quality control or a related field. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* f. 8,500.

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

Total quality control

General description: Basic concepts; quality specifications; organization; policy, planning and motivation; economics of quality; customer service; inspection and sampling, process capability; auditing; reliability and quality improvement; statistical tools; standardization. Practical part is conducted in factories, offices or institutes concerned with quality control. General part includes studying topics of special interest and visits to industrial plants. *Commencing date:* 11 January, 25 July 1988, 9 January, 24 July 1989. *Duration:* 3 months. *Qualifications:* Bachelor's degree or equivalent and experience in quality control or a related field. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* f. 13,500.

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

Normas internacionales del dibujo mecánico — ISO

Descripción general: Familiarizar a los pequeños y medianos empresarios, jefes de planta y personal relacionado con la producción de piezas y herramientas con las nuevas normas internacionales. Contenido: acotados; acabados superficiales; elementos de máquina. *Fecha de iniciación:* Octubre. *Duración:* 15 días. *Requisitos de admisión:* Ser pequeño

o mediano industrial del ramo o trabajador con buena experiencia. Español. *Fecha límite de inscripción:* 1 septiembre. *Costo de matrícula:* Para ser acordado.

Institución huésped: SENATI-Programa de Apoyo a la Pequeña y Mediana Empresa Industrial (IDAMPEI)
Casilla 1769
Lima, Perú

Diploma course in quality engineering

General description: Applied statistics; metrology; applied computing management; statistical quality control; value analysis; reliability; quality inspection. *Commencing date:* -. *Duration:* 9 months. *Qualifications:* B.Sc. in engineering. Portuguese. *Last date for receipt of applications:* July. *Fee:* -.

Host institution: Instituto de Soldadura e Qualidade
Universidade Nova de Lisboa
Faculdade de Ciências e Tecnologia
Lisbon, Portugal

Applied practical quality control, inspection and metrology for mechanical engineering

General description: Theoretical and practical aspects of quality control, inspection and dimensional metrology. *Commencing date:* 28 March, 26 September 1988. *Duration:* 6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 31 January, 31 July 1988. *Fee:* SUS 7,950 (includes accommodation and meals).

Host institution: SWEDEC
International AB
Riddargatan 37
S-114 57 Stockholm, Sweden
(can also be conducted at customer's site)

Computer aided non-destructive testing

General description: A high technology course designed to bring to the attention of NDT personnel state-of-the-art developments in computer applications of NDT. Particular emphasis will be placed on the ultrasonic aspects of critical flaw sizing. *Commencing date:* 1 course in 1988 and 1 course in 1989. *Duration:* -. *Qualifications:* Experience in NDT, higher certificate, diploma or degree. *Last date for receipt of applications:* 1 September 1988, 1989. *Fee:* £250.

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

Non-destructive testing

General description: Theoretical and practical training in ultrasonics, radiographic, penetrant and magnetic particle testing methods and welding inspection. (All subjects or any individual subjects may be taken.) *Commencing date:* To be arranged. *Duration:* 2-12 months. *Qualifications:* Equivalent to GCE 'O' level in mathematics and physics/general science. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £160 per man/week of training.

Host institution: Inspectorate
P.O. Box 45
Portrack Lane
Stockton-on-Tees, Cleveland TS18 2PP, United Kingdom

Quality assurance, control and inspection

General description: The objective of the course is: to examine how quality control policies and systems are applied to public sector organizations buying in international markets; to develop the idea of quality assurance and reliability in organizations manufacturing and producing for markets at home and overseas; to promote the establishment and maintenance of standards for products and services that meet the requirements of organizations involved in supplying, purchasing or receiving; to equip delegates with the skills to assess, select, manage and carry out quality control, quality assurance and inspection policies and procedures suitable for their home situation. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Middle- to senior-level managers who have the responsibility for checking appropriateness of specifications, tender evaluations, matching orders to specifications/tenders, matching of goods to order. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £6,020 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Quality control procedures

General description: Theoretical and practical training in quality assurance, quality evaluation and quality control statutory inspection, non-destructive testing and welding inspection. *Commencing date:* To be arranged. *Duration:* 2-12 months. *Qualifications:* Equivalent to GCE 'O' level in mathematics and physics/general science. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £160 per man/week of training.

Host institution: Inspectorate
P. O. Box 45
Portrack Lane
Stockton-on-Tees, Cleveland TS18 2PP, United Kingdom

Quality engineering

General description: A diploma course aimed at enhancing students' skills and knowledge related to quality practices. Considers the technical and management factors involved in prescribing realistic quality programmes, quality systems and quality levels and the assurance of the product; instills in the student the principles and practice of non-destructive testing methods; and acquaints the student with those aspects of electronics and instrumentation that are relevant to quality engineering with non-destructive testing. *Commencing date:* 26 September 1988, 25 September 1989. *Duration:* 6 months full-time. *Qualifications:* Degree in science or engineering, or equivalent professional qualifications, and several years of experience in industry. *Last date for receipt of applications:* 1 September 1988, 1989. *Fee:* £1,650.

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

Quality practice

General description: The course is designed to acquaint engineers, managers and supervisors with current quality practice requirements as defined in British Standard BS5750. The course combines the management of quality with the utilization of information technology; the interpretation and use of international standards and the criteria for acceptance levels. *Commencing date:* May 1988, May 1989. *Qualifications:* Experience, higher

certificate or diploma. *Last date for receipt of applications:* 3 May 1988, 2 May 1989.
Fee: £525.

Host institution: Scottish School of Non-Destructive Test
Paisley College
High Street
Paisley PA1 2BE, Scotland, United Kingdom

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

Entrepreneur development training

General description: The training course comprises both classroom sessions covering essential business concepts for effective management as well as practical exposure through industrial attachments at relevant firms, on-site observation, visits to trade fairs and exhibitions, business meetings with relevant business collaborators and discussions with trade associations and chambers of commerce. *Commencing date:* September. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* May. *Fee:* To be arranged.

Host institution: International Training and Contact (ITC)
Velodroomstraat 68
2600 Antwerp, Belgium

Promotion of small industries

General description: Develop the required analytical skills for identifying industrial opportunities and in making project analysis; share the Indian experience in the field of small industry development and promotion, and in other sub-areas of decentralized sector; impart promotional techniques for the accelerated development of small industries. *Commencing date:* September. *Duration:* 12 weeks. *Qualifications:* Personnel associated with policy formulation, promotion and development of cottage and small industries. English. *Last date for receipt of applications:* 15 July. *Fee:* To be arranged.

Host institution: National Institute of Small Industry Extension Training
Yousufguda
Hyderabad 500045, India

Business/enterprise courses for industry

General description: Development of entrepreneurial skills, agency development patents and copyrights, product development, communications in business, export marketing, selling skills, sales planning and reporting, customer services. *Commencing date:* Throughout the year. *Duration:* -. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Promotion of income-generating projects for rural women

General description: Principles and methods of community development; basic economics; working with groups; organization of co-operatives; production management; marketing and sales promotion; administration of income-generating projects; visits; practical work. *Commencing date:* 17 April 1988. *Duration:* 3½ months. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* \$US 1,200 a month.

Host institution: The Golda Meir Mount Carmel International Training Centre
12 David Pinsky St.
Haifa 34351, Israel

Consultancy service for the promotion of small industries

General description: System and measures for small industries promotion in Japan; basic understanding of business management; techniques and methods of business diagnosis; programme implementation and training; observation tours. *Commencing date:* 9 April 1988. *Duration:* 6 months. *Qualifications:* Personnel assigned to business diagnosis services, management consultancy and extension services; university degree or equivalent; at least 3 years of experience; between 30 and 45 years of age. English. *Last date for receipt of applications:* 9 February 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Measures for small industry

General description: Measures pertaining to the promotion of small business in Japan, especially particulars of development of smaller business and practices in financing, grouping, structural improvement and managerial technical guidance. *Commencing date:* 7 January 1988. *Duration:* 12 weeks. *Qualifications:* University degree or equivalent; at least 5 years of experience; under 40 years of age. English. *Last date for receipt of applications:* 7 November 1987. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Smaller enterprise development

General description: Economic development and smaller enterprise; smaller enterprise development in Japan; position of smaller enterprises in developing countries and the government measures taken for their development; management consultation and business diagnosis for smaller industries; international and domestic trade of smaller enterprises and their marketing; transfer of technology; subcontracting system; technology and human resources development; local traditional industries. *Commencing date:* 25 June 1988. *Duration:* 6 weeks. *Qualifications:* University degree or equivalent; senior administrative officials in development works for smaller enterprises; 7 years of experience; between 30 and 55 years of age. English. *Last date for receipt of applications:* 25 April 1988. *Fee:* -.

Host institution: Japan International Cooperation Agency (JICA)
Training Affairs Department
Shinjuku-Mitsui-Bldg., 48th floor
1, 2-chome, Nishi Shinjuku, Shinjuku-ku
Tokyo 160, Japan

Small industry development

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: major constraints and challenges facing small industries; policy measures and programmes for promoting small enterprises; relationship between large and small industries; role of small industries in technology development and innovation; community-based industries; linkages between users and suppliers of assistance programmes; strengthening capabilities of field personnel in promotional agencies and related institutes; export promotion by small industries. *Commencing date:* -. *Duration:* 1 week. *Qualifications:* Senior officers of small industry promotion agencies or development banks and senior consultants of national productivity organizations or similar institutes

of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 50 for participants from profit-making organizations.

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

Venue: Malaysia

Work and organization of production for small- and medium-size enterprises

General description: Organization of production flows, calculation of production capacities, use of work-study and ergonomics for rational organization of work places, quality control methods, modern organization of internal transport, handling and storing, consideration of specific problems presented by trainees. *Commencing date:* May, September 1988. *Duration:* 8 weeks. *Qualifications:* Professional qualifications. English or French. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* SUS 540 a week (including accommodation and meals).

Host institution: International Centre for Management Development (CEPECA)
Otopeni
Soseaua Odai 20
Bucharest, Romania

Promotion and development of small and medium enterprises in newly industrialized countries and the developing world

General description: Development of 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:* 9 May 1988, 8 May 1989. *Duration:* 10 weeks. *Qualifications:* Experience of working in an agency supporting and promoting the development of small businesses. English. *Last date for receipt of applications:* January 1988, 1989. *Fee:* £4,400 (includes accommodation).

Host institution: Small Business Centre
Durham University Business School
Durham DH1 3LB, United Kingdom

Promotion of small-scale enterprises in developing countries

General description: This programme is designed for people with responsibility for small business development. Its objective is to enable them to design and implement integrated assistance programmes, including finance, training, the provision of infrastructure and the framing and monitoring of overall government policy. *Commencing date:* 17 July 1988, 1989. *Duration:* 8 weeks. *Qualifications:* At least one year of involvement in some aspect of small business development and intention to continue being involved. English. *Last date for receipt of applications:* May 1988, 1989. *Fee:* £4,250-£4,450 (including accommodation).

Host institution: Enterprise Development Centre
Cranfield School of Management
Cranfield
Bedford MK43 0AL, United Kingdom

Training for enterprise

General description: This programme is designed for teachers, educators and trainers who work with existing and potential entrepreneurs. The objective is to enhance participants' ability to design and conduct effective training at any level, to produce training material for use by others and by themselves and to manage and evaluate self-sustaining training activities. *Commencing date:* 18 August 1988, September 1989. *Duration:* 4 weeks. *Qualifications:* Participants must be currently or intend to be primarily involved in

designing, conducting and/or managing training or education for enterprise. English. *Last date for receipt of applications*: July 1988, 1989. *Fee*: £2,250-2,350 (including accommodation).

Host institution: Enterprise Development Centre
Cranfield School of Management
Cranfield
Bedford MK43 0AL, United Kingdom

Evaluation of investment projects

General description: Methods of economic and financial evaluation of investment projects in small- and medium-scale enterprises. *Commencing date*: 15 July, 1 August, 1 September. *Duration*: 15 days. *Qualifications*: University-level education. English. *Last date for receipt of applications*: 1 May. *Fee*: SUS 1,200.

Host institution: Institute for Economics
University of Banja Luka
Banja Luka, Yugoslavia

Financial operations

General description: Methods of managing current assets and financing the optimization of reproduction processes in small- and medium-scale enterprises. *Commencing date*: 15 July, 1 August, 1 September. *Duration*: 15 days. *Qualifications*: University-level education. English. *Last date for receipt of applications*: 1 May. *Fee*: SUS 1,200.

Host institution: Institute for Economics
University of Banja Luka
Banja Luka, Yugoslavia

Trainer development / Perfectionnement du personnel enseignant / Perfeccionamiento de profesionales de capacitación

Training of trainers

General description: NTTS provides a series of modular, practical programmes for the full range of skills required by professional trainers. Short courses in training skills for supervisors and managers are also offered. *Commencing date*: Throughout the year. *Duration*: 4-10 days. *Qualifications*: English. *Last date for receipt of applications*: -. *Fee*: SUS 150.

Organizer: National Trainer Training Service (NTTS)
Department of Employment and Industrial Relations
P.O. Box 9880
Canberra City ACT 2601, Australia

Venue: Throughout Australia

Perfectionnement de professeurs de l'enseignement technique

Description générale: Cours de perfectionnement destinés aux professeurs de l'enseignement technique sur les matières suivantes: définition des besoins de l'industrie; sélection et orientation des étudiants; définition des programmes; relations usine-école; psychologie des étudiants adultes; choix et utilisation des méthodes pédagogiques de formation des jeunes adultes. *Début du cours*: Toute l'année sauf juillet et août. *Durée*: 4 à 8 semaines (éventuellement quelques mois). *Qualifications*: Qualifications professionnelles. Français, anglais. *Dernier délai pour la soumission des candidatures*: -. *Droit d'inscription*: A arranger.

Organisme hôte: Institut belge de formation, d'assistance technique et de transfert
de technologie (IBF)
63, rue Montoyer
1040 Bruxelles, Belgique

Sélection et formation d'instructeurs

Description générale : Préparation des techniciens au rôle d'instructeurs en leur enseignant les connaissances et techniques didactiques voulues afin qu'ils puissent assurer à leur tour cette formation à d'autres techniciens de la même branche, et ce, valablement et de la manière la plus efficace. *Début du cours* : Toute l'année sauf de juillet au 15 septembre. *Durée* : -. *Qualifications* : Technicien apte à remplir le rôle de formateur et ayant au moins le niveau de contremaître dans son secteur d'activité ou sa profession et possédant une expérience professionnelle ou plusieurs années dans sa spécialisation. Français, anglais. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : International Executives Benelux SA "INTEX"
5, rue de la Science
1040 Bruxelles, Belgique

Organization and training techniques

General description: Role and function of training; lecture method, case-study, role playing, programmed instruction, evaluation, audio-visual aids, experimental learning. *Commencing date*: 18 January 1988. *Duration*: 2 weeks. *Qualifications*: Training staff. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: \$US 800.

Host institution: National Institute for Training in Industrial Engineering
Vihar Lake
Bombay 400 087, India

Design and development of training material

General description: The course will cover attitudes of adults to change, factors affecting their motivation, skills of effective discussion-leading in senior training courses, preparation and use of a variety of training aids, preparation and use of a training package, action-learning and project-based training. *Commencing date*: 2 May 1988, 1 May 1989. *Duration*: 10 weeks. *Qualifications*: 2 years of training experience. English. *Last date for receipt of applications*: 2 March 1988, 1 March 1989. *Fee*: To be arranged.

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

Management of industrial and vocational training

General description: Enables the participants to assess training needs on an organizational or regional basis, evaluate the effectiveness of a wide range of training approaches and methods, outline the role of training in the development of the national economy, deploy newly acquired skills in training at the operative, supervisory and management levels. *Commencing date*: Summer 1988. *Duration*: 10 weeks. *Qualifications*: Professional qualifications. English. *Last date for receipt of applications*: May 1988. *Fee*: £IR 6,900 (including accommodation).

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Training and instructional techniques

General description: The course will cover the training function and its role in the organization, approaches to the identification of training needs, setting course objectives and design of training programmes, approach to the evaluation of training, communication skills, training and instructional techniques. *Commencing date*: 5 September 1988, 4 September 1989. *Duration*: 10 weeks. *Qualifications*: Recently appointed personnel in

the training function. English. *Last date for receipt of applications:* 5 June 1988, 4 June 1989. *Fee:* To be arranged.

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

Training of trainers in developing countries

General description: Courses in instructional techniques, job analysis, programme planning, supervision, on-the-job training. *Commencing date:* Throughout the year. *Duration:* 2 weeks-1 year according to requirements. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: AnCO
The Industrial Training Authority
27-33 Upper Baggot Street
Dublin 4, Ireland

Training techniques

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: basic management training concepts; principles of effective learning; current techniques and methodologies of management training; design of management training programmes; simulation of management training; in-house management training. *Commencing date:* -. *Duration:* 2 weeks. *Qualifications:* Senior trainers from industrial enterprises, national productivity organizations and similar institutes, of APO-member countries. English. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* SUS 50 for participants from profit-making organizations.

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

Venue: Philippines

Formación de instructores

Descripción general: La capacitación en la organización, su administración; técnicas para el diagnóstico de necesidades de capacitación; convirtiendo el diagnóstico en planes de capacitación; desarrollo de material didáctico; apoyos audiovisuales, manejo de grupos, el proceso enseñanza-aprendizaje; evolución de la capacitación. *Fecha de iniciación:* 7 marzo, 18 julio 1988. *Duración:* 4 días. *Calificaciones:* Español. (Se podría impartir en inglés y portugués.) *Fecha límite para la recepción de las solicitudes:* 15 días antes. *Derechos de inscripción:* SUS 385.

Institución huésped: Dantus y Asociados, S.C.
Séneca 429, 5o. piso
Col. Polanco
México, D.F., C.P. 11560, México

Advanced management

General description: Specially designed to meet the needs of senior management educators and trainers responsible for human resource development activities. *Commencing date:* To be arranged. *Duration:* 4 weeks. *Qualifications:* Top and senior management educators and trainers trained in basic management. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* N 2,585.

Host institution: Centre for Management Development (CMD)
Management Village
Shangisha
P.M.B. 21578
Ikeja, Nigeria

Trainers' development

General description: It enables participants to: determine the trainers' major roles; identify training needs at individual and/or organizational levels; develop training objectives on the basis of identified training needs; use a wide variety of training methods; design curricula to meet specific training/learning objectives; articulate the problems of adult learning in a training situation; conduct a formal course in their various organizations and evaluate training effectiveness. *Commencing date:* 11 April 1988. *Duration:* 5 weeks. *Qualifications:* Executives responsible for management and supervisory training in public and private organizations, management educators and trainers in institutions of higher learning. *Last date for receipt of applications:* 28 February 1988. *Fee:* N 1,960.

Host institution: Centre for Management Development (CMD)
Management Village
Shangisha, P.M.B. 21578
Ikeja, Nigeria

Training needs analysis and assessment

General description: The programme is aimed at enabling participants to recognize the importance of the training function, to apply different methods analysing training needs and to differentiate between individual needs and organizational needs. *Commencing date:* 1 February 1988. *Duration:* 5 days. *Qualifications:* Managers, especially those responsible for assessing the needs of the organization and the employee. *Last date for receipt of applications:* December 1987. *Fee:* N 660.

Host institution: Centre for Management Development (CMD)
Management Village
Shangisha, P.M.B. 21578
Ikeja, Nigeria

Training the trainers

General description: A two-part seminar held in Nigeria and France covering the identification of training needs and curriculum development, training techniques, knowledge and practice of group animation, industrial visits to company training centres and individual projects; promotion of cross-cultural management. *Commencing date:* To be arranged. *Duration:* 5 weeks. *Qualifications:* Management educators and trainers in company training centres, business schools, banks, universities, institutes and colleges of higher education. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* N 3,000.

Host institution: Centre for Management Development (CMD)
Management Village
Shangisha, P.M.B. 21578
Ikeja, Nigeria

In-plant training

General description: Training trainers on how to organize on-the-job training. *Commencing date:* 1 May, 1 October. *Duration:* 5 weeks. *Qualifications:* Engineers or technicians. Arabic, English. *Last date for receipt of applications:* 1 January, 1 August. *Fee:* To be arranged.

Host institution: Vocational Training Department
Ministry of Industry
Damascus, Syrian Arab Republic

Instructor training

General description: Training instructors in instruction skills (part I); technical skills (part II). *Commencing date:* 15 June, 15 November. *Duration:* 3 weeks for part I; according to

requirements for part II. *Qualifications:* Technicians. Arabic, English. *Last date for receipt of applications:* 1 January, 1 August. *Fee:* To be arranged.

Host institution: Vocational Training Department
Ministry of Industry
Damascus, Syrian Arab Republic

Use and design of visual aids

General description: How to use and design the necessary visual aids to back up the training work. *Commencing date:* 1 March, 1 August. *Duration:* 8-12 weeks. *Qualifications:* Technicians. Arabic, English. *Last date for receipt of applications:* 1 January, 1 August. *Fee:* To be arranged.

Host institution: Vocational Training Department
Ministry of Industry
Damascus, Syrian Arab Republic

Craft instructor training

General description: A full initial training programme for craft instructors. The programme is offered in a three-week block or in two separate units. *Commencing date:* 11 January, 29 February 1988. *Duration:* 14 days each. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* £1,350

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, United Kingdom

Development of technical and operative instructors

General description: Identification of technical and operative skills; assessment of training needs; skills testing; course design; learning processes; methods and techniques of instruction; the recruitment selection, placing and development of staff; teaching aids, and their production-practical instructional experience. *Commencing date:* 1 February, 6 June, 5 September, 7 November. *Duration:* 5 weeks. *Qualifications:* Good general education and some experience. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* £4,109 (fully residential).

Host institution: Rayfield Consultancy & Training (OSG) Ltd.
Melrose House
Broadlayings
Woolton Hill
Newbury, Berkshire, RG15 9TT, United Kingdom

Industrial and commercial training

General description: A programme for training and development specialists from overseas. *Commencing date:* July 1988. *Duration:* 13 weeks. *Qualifications:* Practising training/development/personnel; managers and advisers. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £4,520.

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

Instructional skills (full-time instructors)

General description: Instructor styles; measuring effectiveness of instruction; organization of instruction; communication in instruction; instructional analysis; writing training objectives; designing methods of assessment; design and use of training aids; motivation at

work; development of interpersonal skills; preparation of instructor notes; three practice instructions using CCTV. *Commencing date:* 11 January 1988. *Duration:* 10 days. *Qualifications:* English. *Last date for receipt of application:* -. *Fee:* £900.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, United Kingdom

Instructional skills

General description: Instructor styles; measuring effectiveness of instruction; organization of instruction; communication in instruction; task analysis; writing training objectives; designing methods of assessment; the design and use of training aids; motivation at work; practice instructions using CCTV. *Commencing date:* 29 February, 21 March 1988. *Duration:* 10 days. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £900.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, United Kingdom

Instructional techniques

General description: Objectives; communications; practical training; the psychology of training. *Commencing date:* To be arranged. *Duration:* 4-6 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* Approximately £280 a week based on 8 participants plus VAT, if applicable (Accommodation, half-board, teaching materials included.)

Host institution: Eaton Hall International
Nottinghamshire County Council
Retford, Nottinghamshire DN22 0PR, United Kingdom

Instructional techniques

General description: Systematic analytical training, acquiring skills and knowledge, planned instruction, task analysis preparation, questioning, visual aids, faults analysis, standards and evaluations. *Commencing date:* Throughout the year. *Duration:* 3, 5 or 10 days. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Instructional techniques

General description: Intended for anyone with a direct training or instructing role. Eight members per course, leads to a joint STA/City and Guilds of London Institute award in Instructional Techniques (subject no. 7331). The objectives of the course are to enable members to identify the needs of learners, determine training objectives, prepare training session plans, present relevant instruction, coach individual learners, assess review and report learners progress. Topics covered include the learning process, use of objectives in training, identifying learner's needs, selecting and analysing subject matter, training strategies, presentation skills, use of questions in training, coaching individual learners, preparing and using visual aids, assessing, reviewing and reporting, interpersonal skills. *Commencing date:* Throughout the year. *Duration:* 10 days. *Qualifications:* English.

Last date for receipt of applications: 3 weeks before commencing date. *Fee:* £550 (including C & G fee).

Host institution: STA College
Skills Training Agency
Dunhams Lane
Leitchworth, Hertfordshire SG6 1YA, United Kingdom

Management and methods of training

General description: Personal skills in communication; preparation and production of training aids; visits to industrial and commercial organizations; design of training programmes; leadership skills in training; case-study work; role play. *Commencing date:* 5 January, 19 April, 5 September 1988; 9 January, 2 May, 18 September 1989. *Duration:* 12 weeks. *Qualifications:* Experience in a relevant field. English required at a good business and conversational level. *Last date for receipt of applications:* 1 month before commencing date. *Fee (approximate figures):* 1988, member £2,600, non-member £3,060; 1989, member £2,730, non-member £3,213.

Host institution: The Industrial Society International
Robert Hyde House
48 Bryanston Square
London W1H 7LN, United Kingdom

Management of training

General description: Basic knowledge and skills for trainers; management and personnel management; systems approach to training; management of training; training methods; visits and projects. *Commencing date:* 22 March, 19 July 1988. *Duration:* 3 months. *Qualifications:* Experience in senior training posts. English. *Last date for receipt of applications:* January, May 1988. *Fee:* Approx. £3,100.

Host institution: Royal Institute of Public Administration (RIPA)
Hamilton House
Mabledon Place
London WC1H 9BD, United Kingdom

Overseas training officers programme

General description: For those who have to carry out all, or some of the following duties: the management of a training function, the development of human resources within an organization, the identification of training needs, the design and evaluation of training programmes, the implementation and running of training, the preparation of training materials, the provision of training/development advice to management. Candidates successfully completing this course and submitting a satisfactory project assignment report will be eligible for the Certification in Training and Development issued by the Institute of Training and Development. *Commencing date:* -. *Duration:* 12 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* -.

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

Technician instructor training

General description: Role of the technician in industry; principles of programme design; use of technician guides; task analysis; preparation and presentation of a model training programme; role of the technician coach; coaching and counselling skills. *Commencing date:* 4 January 1988. *Duration:* 14 days. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* -. *Fee:* £1,350.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds, Yorkshire LS7 4ND, United Kingdom

Trainer development programme

General description: The programme consists of two courses: (a) the certificate course, which caters for the training needs of recently appointed trainers who require a basic foundation of practical core-competency training skills; as well as for experienced trainers who want to develop their basic skills; (b) the diploma course, which caters for the training needs of trainers with present or future responsibility for managing training in their organizations; a prerequisite to the course is the certificate course or a similar course covering core-competency training skills. *Commencing date:* 4 January, 25 April, 5 September 1988. *Duration:* Certificate, 8 weeks. Diploma, 7 weeks. Complete programme, 15 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 1 month before commencing date. *Fee:* Certificate, £2,000. Diploma, £1,800. Complete programme, £3,800.

Host institution: The Management Centre
Slough College of Higher Education
Wellington Street
Slough, Berkshire SL1 1YG, United Kingdom

Training: its design and management

General description: The aim of this course is to enable delegates to: learn how to manage the training function, link training to organization goals and manpower plans, promote and enhance the role of training in personal and organizational development, develop managerial skills and training skills, promote the importance of management training and development, identify systematically training needs, understand the learning process, plan, design, cost and monitor training programmes, run training sessions using appropriate methods and visual aids to meet set objectives, evaluate training. *Commencing date:* June. *Duration:* 12 weeks. *Qualifications:* Managers who have a central role in starting off or developing training activities in their organization or staff who are responsible for the design and implementation of training programmes, including trainers who require a broader more up-to-date approach. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £6,725 (fully residential).

Host institution: Crown Agents
Training Services
St. Nicholas House
Sutton, Surrey SM1 1EL, United Kingdom

Training of overseas training officers

General description: The management of a training function; the development of human resources within an organization; the identification of training needs; the design and evaluation of training programmes; the implementation and running of training; the preparation of training materials; the provision of training/development advice to management. *Commencing date:* August 1988. *Duration:* 12 weeks. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £5,700 plus VAT (accommodation, £2,950 plus VAT).

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

Training of trainers

General description: A course for newly appointed training officers, or those who need to update or develop their skills and knowledge. Its objective is to enable participants to carry out their companies' training function for all operative, clerical, technical, supervisory and management categories of personnel. *Commencing date:* Throughout the

year: Duration: -. Qualifications: Professional qualifications. English. Last date for receipt of applications: -. Fee: To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury, Manchester M20 8QA, United Kingdom

Training of trainers

General description: Instructional techniques at a basic and an advanced level to help new and established trainers develop skills to provide a learner-centred approach. *Commencing date:* Throughout the year. *Duration:* 1-2 weeks. *Qualifications:* Vocational or professional qualifications. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* £400 a week (including full board and accommodation).

Organizer: Skills Training Agency
Overseas Training Unit
Level 3
Skills House
Holy Green, Moorfoot
Sheffield S1 3PQ, United Kingdom

Venue: STA College
Dunhams Lane
Letchworth, Hertfordshire, United Kingdom

Chapter 3. Other training opportunities and short courses

Chapitre 3. Autres possibilités de formation et sessions d'étude de brève durée

Capítulo 3. Otras oportunidades de capacitación y cursos cortos

Iron and steel industry

General description: Short courses on: technology of iron- and steelmaking (levels I, II and III); production and maintenance in iron- and steelmaking shops, including continuous casting; maintenance management; quality control in steelmaking and rolling; material management; electro-mechanical maintenance in rolling mills; computer applications; financial management; energy conservation concepts. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* Professional qualifications. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* S 23,630-S 25,250 (including lunch and in-plant transport).

Host institution: Voest-Alpine Industrial Services Corp. Ltd.
P.O. Box 2
Kremlstrasse 5
4020 Linz, Austria

Formation à la gestion de la qualité

Description générale: Introduction générale à la qualité; concepts d'assurance et de gestion de la qualité; cercles de qualité; analyse de la valeur; coût de la qualité; approches statistiques. *Début du cours:* -. *Durée:* 2 jours. *Qualifications:* Français. *Dernier délai pour la soumission des candidatures:* A déterminer. *Droit d'inscription:* FB 10 000.

Organisme hôte: Centre universitaire de Charleroi (CUNIC)
1B, avenue G. Michel
6000 Charleroi, Belgique

Formation d'ingénieurs

Description générale: Cet enseignement est conçu dans une vue très large dépassant le sens restreint de "formation" classique. Il vise plus spécialement le transfert de méthodes, le transfert de technologies et aussi de savoir-faire. *Début du cours:* Toute l'année sauf de juillet au 15 septembre. *Durée:* -. *Qualifications:* Ingénieurs possédant une certaine expérience dans leur spécialisation. Français. *Dernier délai pour la soumission des candidatures:* -. *Droit d'inscription:* A arranger.

Organisme hôte: International Executives Benelux SA (INTEX)
5, rue de la Science
1040 Bruxelles, Belgique

Gestion de production

Description générale: 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. *Dernier délai pour la soumission des candidatures* : -. *Droit d'inscription* : A arranger.

Organisme hôte : Helping SA
38, avenue Montjoie
1180 Bruxelles, Belgique

Management training

General description: Short courses on: general management; planning; project management; sales and marketing; information systems/use of PC's; human resources; finance and accounting; office services and administration; purchasing; quality assurance and control; materials; operations and maintenance management; construction management. *Commencing date*: Throughout the year. *Duration*: 2-5 days. *Qualifications*: English for United States and Canada and most European countries. Spanish for Mexico, Portuguese for Brazil, though some courses are given in English. *Last date for receipt of applications*: -. *Fee*: SUS 165-SUS 400 a day.

Organizers: Management Centre Europe
15, rue Carolv
B-1040 Brussels, Belgium
Management Centro do Brasil
Ave. Paulista 1765, 8th floor
01311 Sao Paulo, Brazil
Canadian Management Centre
100 University Avenue, Suite 300
Toronto M5J 1V6, Canada
Management Centro de Mexico
Paseo de la Reforma 199, 9th floor
Mexico 5 D.F., Mexico
American Management Association
135 West 50th Street
New York, NY 10020, United States

Venue: Belgium, Brazil, Canada, Mexico, United States

Condition-based maintenance applied to rotating equipment

General description: Centrifugal pumps and compressors; vibration parameters and measuring loops; data recording and processing applied to rotating equipment; failure prediction; study of real cases; typical procedures. *Commencing date*: April 1988. *Duration*: 5 days. *Qualifications*: Maintenance engineers. English. *Last date for receipt of applications*: 1 month before commencing date. *Fee*: FF 5,800.

Host institution: ENSPM - Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison, France

Contrôle industriel et qualité, normalisation et analyse de la valeur

Description générale : Cours sur : l'analyse de la valeur; la normalisation d'entreprise; comment améliorer l'efficacité de la maintenance; la gestion des rechanges; le contrat de maintenance; concepts de qualité; la qualité à la production; la qualité aux études et au marketing; la micro-informatique au service du contrôle qualité; la qualité du logiciel; comprendre la normalisation OSI; méthodes pour établir la documentation technique d'exploitation et de maintenance, comment maîtriser la disponibilité des équipements dès la conception; la conception pour un coût objectif — CCO; apprendre à maîtriser les coûts de la qualité; manuel qualité et procédures. *Début du cours* : Toute l'année.

Durée : 2 jours-1 semaine. *Qualifications* : Qualifications professionnelles. Français.
Dernier délai pour la soumission des candidatures : -. *Droit d'inscription* : A arranger.

Organisme hôte : Association française de normalisation (AFNOR)
Tour Europe Cedex 7
92080 Paris La Défense, France
en collaboration avec AFCIQ, ACANOR et AFAV

L'organisation et la conduite des projets : contrats, plannings, approvisionnements, chantiers

Description générale : Les contrats; les phases de réalisation d'un projet; la planification; conception et suivi d'un projet côté client; les approvisionnements; le management des travaux, les réalisations à terre, les réalisations offshore. *Début du cours* : Mars 1988. *Durée* : 5 jours. *Qualifications* : Directeurs, ingénieurs et coordinateurs de projets, ingénieurs de contrats, chargés d'affaires. Français (peut être organisé en anglais). *Dernier délai pour la soumission des candidatures* : 1 mois avant le début du séminaire. *Droit d'inscription* : FF 5 800.

Organisme hôte : ENSPM — Institut français du pétrole
4, avenue de Bois-Préau
B.P. 311
92506 Rueil-Malmaison
France

Advanced process technology through training plant practice

General description: The following will be instructed on site using training plant remodelled from actual plant: operation control and management; operation analysis; emergency handling; case-studies of refining process improvement; observation of refineries and instrumentation factory. *Commencing date*: 20 January 1988. *Duration*: 4 weeks. *Qualifications*: Participants from oil-producing countries. English. *Last date for receipt of applications*: 10 December 1987. *Fee*: Y178,000 (plus half of the round trip airfare to be borne by participant).

Host institution: Japan Cooperation Center for Petroleum Industry Development (JCCP)
P.O. Box 1180
Sunshine 60 Bldg. 3-1-1, Higashi Ikebukuro, Toshima-ku
Tokyo 170, Japan

Supervisory development

General description: Full-day classes consisting of lectures, discussions, exercises and visits related to: training needs of supervisory personnel in the industrial enterprises of developing countries; role of the supervisor in organizational development; a systematic approach to supervisory training, case-study and training package; current trends, and adoption of the International Labour Organisation module; management development and structuring of training programmes, and effective participation. *Commencing date*: -. *Duration*: 3 weeks. *Qualifications*: Trainers of supervisors at the shop-floor level in national productivity organizations or similar institutions and enterprises of APO-member countries. English. *Last date for receipt of applications*: 3 months before commencing date. *Fee*: SUS 100 for participants from profit-making organizations.

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

Venue: To be decided

Top management seminar on Japanese business

General description: The seminar will consist of lectures and case-studies on Japanese management system, corporate strategy, technological innovation. Case-studies will be conducted through group discussion by participants. Plant visits will also be included to offer the participants opportunities to observe actual factory operations and managerial activities. *Commencing date:* September 1988, 1989. *Duration:* 1 week. *Qualifications:* Top businessmen or top managers of public corporations in developing countries responsible for final decision-making for at least 5 years. English. *Last date for receipt of applications:* 5 months before commencing date. *Fee:* ¥180,000.

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

Applied statistics techniques in industry and commerce

General description: Basic concepts of applied statistics, tabulation of data, calculation of basic indicators, time series analysis, use of computers in statistical analysis, sample survey. *Commencing date:* 16 April 1988. *Duration:* 3 weeks. *Qualifications:* University degree, official nominee, two years' experience. *Last date for receipt of applications:* 3 months before commencing date. *Fee:* Free for nominees of Arab Governments.

Host institution: Arab Planning Institute (API)
Safat P.O. Box 5834
Safat 13059, Kuwait

Proceso gerencial de desempeño

Descripción general: Grupos; riesgo; participación; fijación de objetivos comunes; compromiso; responsabilidad; motivación y su relación con la conducta; acción orientada hacia los fines comunes; logro; confianza; el papel del liderazgo en este proceso; creatividad. *Fecha de iniciación:* 18 abril, 10 octubre 1988. *Duración:* 4 días. *Calificaciones:* Alta dirección y nivel gerencial. Español. (Se podría impartir en inglés y portugués.) *Fecha límite para la recepción de las solicitudes:* 15 días antes. *Derechos de inscripción:* SUS 385.

Institución huésped: Dantus y Asociados, S.C.
Séneca 429, 5o. piso
Col. Polanco
México, D.F., C.P. 11560, México

Seventh and eighth international course on process metallurgy of aluminium

General description: The principles of aluminium electrolysis; structure and properties of bath; cell voltage, electrode reactions, electrical resistance; start-up and early operation of cells; alumina: properties and dissolution mechanisms; current efficiency; pot-line operation and control; energy balance, non-stationary thermal effects; cathodes: construction, start-up and operation, chemical and physical changes, characterization, failure scenarios, new developments; improved Soderberg technology: dry anodes, reduced emission, increased productivity, retrofitting; anodes: formulation, baking and testing, operational characterization of anodes, mechanisms of consumption; design features of high amperage cells, automatic equipment, point feeders; emission control; cell operation, group discussion: common failures and remedies, ways of increasing productivity. *Commencing date:* 30 May 1988, 29 May 1989. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 10 April 1988, 1989. *Fee:* Nkr 11,000.

Host institution: Institute of Inorganic Chemistry
Norwegian Institute of Technology
7034 Trondheim-N7H, Norway

Corrosion

General description: Uniform attack, pitting, erosion, stress corrosion, cracking, hydrogen embrittlement, corrosion monitoring, corrosion inhibitors, painting, cathodic protection.

Commencing date: 11 April 1988. *Duration:* 5 days. *Qualifications:* Mechanical, metallurgical or chemical engineers. Portuguese. *Last date for receipt of applications:* 15 February 1988. *Fee:* Esc 150,000.

Host institution: PARTEX – Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Design and construction codes

General description: The course aims at refreshing and upgrading the skills of inspection and maintenance engineers in the use of design and construction codes for process equipment. *Commencing date:* 2 August 1988. *Duration:* 5 days. *Qualifications:* Mechanical, metallurgical or chemical engineers. Portuguese. *Last date for receipt of applications:* 4 January 1988. *Fee:* To be arranged.

Host institution: PARTEX – Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Engineering materials for process plants

General description: The course aims at refreshing and upgrading the skills of inspection engineers working in process plants in different aspects of processing engineering materials. *Commencing date:* 21 March 1988. *Duration:* 5 days. *Qualifications:* Mechanical, metallurgical or chemical engineers. Portuguese. *Last date for receipt of applications:* 22 February 1988. *Fee:* To be arranged.

Host institution: PARTEX – Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Laser technologies in industry

General description: Valorization and dissemination of Laser technologies in three aspects: metrology, detection, control and non-destructive testing; processing of materials: metallic and non-metallic; robotics and automatization. (Supported by the Commission of the European Communities.) *Commencing date:* 24 May 1988. *Duration:* 3 days. *Qualifications:* English. *Last date for receipt of applications:* 1 April 1988. *Fee:* Esc 25,000.

Host institution: Laboratório de Física
Faculdade Ciências
Universidade do Porto
4000 Porto, Portugal

Welding

General description: Welding procedures; welding and welders' qualification; welding metallurgy; welding inspection; non-destructive testing. *Commencing date:* 3 July 1988. *Duration:* 5 days. *Qualifications:* Mechanical or metallurgical engineers. Portuguese. *Last date for receipt of applications:* 15 January 1988. *Fee:* Esc 150,000.

Host institution: PARTEX – Companhia Portuguesa de Serviços
Avenida 5 de Outubro 160
1000 Lisbon, Portugal

Middle management

General description: The role of middle management in QGPC and subsidiaries; approaches to managerial leadership concentrating on the concepts and practice of functional leadership; sources of motivation leading to better work performance; group dynamics and team building. *Commencing date:* 23 April 1988. *Duration:* 6 days. *Qualifications:* For

middle level section/division heads. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* -.

Host institution: Qatar General Petroleum Corporation (QGPC)
P.O. Box 3212
Doha, Qatar
(in collaboration with MEIRC)

Project management

General description: Role of a project leader; effective project teams; planning the project; budgeting; scheduling the project; project implementation and control; project termination and reporting; computer-based project management information systems; contract management (practical application). *Commencing date:* 9 April 1988. *Duration:* 5 days. *Qualifications:* Junior management. English. *Last date for receipt of applications:* 6 weeks before commencing date. *Fee:* -.

Host institution: Qatar General Petroleum Corporation (QGPC)
P.O. Box 3212
Doha, Qatar

Advanced web forming technologies

General description: Raw materials, relationship between fibre structure and web structure; web forming technologies; melt blown; air forming technologies; coform concepts; product development programmes (design and implementation); products (markets and properties). *Commencing date:* 17 May 1988. *Duration:* 3 days. *Qualifications:* Senior technical and marketing personnel concerned with state-of-the-art technologies and high added-value speciality papers, non-wovens and fibre structures. English. *Last date for receipt of applications:* 11 May 1988. *Fee:* -.

Host institution: Research Association for the Paper and Board,
Printing and Packaging Industries (PIRA)
Paper and Board Division
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

Aqueous coating

General description: The programme will cover the following: why coat paper; the coated paper market; base paper requirements; basic coating constituents; coating preparation; types of coaters; finishing coated papers; testing coated papers; mill visit. For paper mill and allied trade personnel with little or no experience in the coating of paper. *Commencing date:* 22-24 March 1988. *Duration:* -. *Qualifications:* English. *Last date for receipt of applications:* 22 February 1988. *Fee:* Members of PIRA/PITA, £600 plus VAT. Non-members, £750 plus VAT.

Host institution: Research Association for the Paper and Board,
Printing and Packaging Industries (PIRA)
Paper and Board Division
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

Basic supervisory skills

General description: Role of the supervisor, communications, cost control, motivation, group behaviour, team building, leadership, staff training, discipline, safety, quality. *Com-*

commencing date: Throughout the year. *Duration:* 3 to 6 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Boatbuilding

General description: Modular course consisting of: basic craft skills, basic glass-reinforced plastics, unit furniture construction, fitting interior units, fitting interior hardwood trim, traditional joinery, deck, skin fitting and engine installation lofting, plug making, traditional boat construction and repair, electrics and plumbing, glass-reinforced plastics repair techniques. *Commencing date:* January, April, September. *Duration:* 47 weeks exclusive of holidays. *Qualifications:* Interview and aptitude tests required for prospective students based in the United Kingdom. References required from students overseas. English. *Last date for receipt of applications:* 2 months before commencing date. *Fee:* £3,239.13 plus VAT.

Host institution: International Boatbuilding Training Centre
Marine Training House
Harbour Road
Oulton Broad
Lowestoft, Suffolk NR32 3LZ, United Kingdom

Boatbuilding technology

General description: Marine craft skills and use of tools; advanced joinery techniques; small boatbuilding techniques and practice; G.R.P. production techniques; large boatbuilding techniques and practice; machinery and ancillary fitting. *Commencing date:* September 1988, 1989. *Duration:* 36 weeks. *Qualifications:* English. *Last date for receipt of applications:* 8 weeks before commencing date. *Fee:* £5,000.

Host institution: Marine Builders
Training Trust
Hazel Road
Woolston, Southampton SO2 7GB, United Kingdom

Communication skills

General description: Leadership styles; motivation; developing interpersonal skills; problem-solving through consensus; training and development of subordinates; effective presentation; report writing. *Commencing date:* 18 January 1988. *Duration:* 5 days. *Qualifications:* Managers. English. *Last date for receipt of applications:* -. *Fee:* £600.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, Yorkshire, United Kingdom

Control systems design

General description: The objectives of the course are to review the basic procedures of analysis for linear continuous-data systems and to study the design methods available for achieving acceptable dynamic behaviour. It analyses the sampled-data system and demonstrates how the ideas of the early part of the course can be successfully used in digital controller design. *Commencing date:* 18 April 1988. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 2 weeks before commencing date. *Fee:* Approximately £250.

Host institution: Director of Continuing Education
The University of Leeds
Leeds, Yorkshire LS2 9JT, United Kingdom

Corrosion monitoring

General description: Corrosion management with emphasis to internal corrosion in process streams. Industries covered: oil/gas (production, refining, transport), chemical/petrochemical production, cooling water systems/potable water (distribution, multistage flash distillation), civil engineering (buildings, bridges), marine vessels/marine pilings and jetties/utilities (water, electricity, gas), assessment of cathodic protection (marine, concrete, pipelines). Corrosion audits/surveys, methods. (Can also be carried out at client's site or plant.) *Commencing date:* To be arranged. *Duration:* 2-4 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Corrosion Monitoring Consultancy (CMC)
St. Pirans
Γ ichworth Road
W ntage, Oxfordshire OX12 9AU, United Kingdom

Design of sampling programmes and sampling from moving streams

General description: Two courses designed for practitioners concerned with taking and preparing samples for analysis. By providing a variety of practical exercises taken from real situations the courses give the essential information necessary for confident sampling techniques. *Commencing date:* 18 April, 20 April 1988. *Duration:* 2 1/2 days each. *Qualifications:* English. *Last date for receipt of applications:* 2 weeks before commencing date. *Fee:* Approximately £75 for each course (£140 for both).

Host institution: Director of Continuing Education
The University of Leeds
Leeds, Yorkshire LS2 9JT, United Kingdom

Foundation course for trainers

General description: A residential course that develops skills in instructing groups and in leading discussions with appropriate visual aids. *Commencing date:* Throughout the year. *Duration:* 5 days. *Qualifications:* Experience in conducting off-the-job training courses on a part-time or full-time basis. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £700 plus VAT (accommodation, £230 plus VAT).

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

Fundamentals of mechanical and pneumatic instrumentation

General description: The course, which includes laboratory sessions, provides instruction on the following: the principles of pneumatic and mechanical industrial analogue instrumentation; the calibration of motion and force-balance recorders and transmitters; the principles of automatic control, proportional band (gain), integral (reset), derivative (rate), dead time; measurement theory and definition of common terminology and standards, including pressure elements, temperature filled thermal systems, flow transmitters and primary devices and liquid level applications. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Instrument engineers and senior technicians. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £424.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Graduate course in industrial formation

General description: Provides basic training primarily for graduate engineers in engineering practice and design appreciation, in accordance with professional requirements. *Commencing date:* 4 January, 11 April 1988. *Duration:* 12 weeks. *Qualifications:* Company-

sponsored graduates must have completed a short induction course with their company.
Last date for receipt of applications: December 1987, March 1988. *Fee:* £2,200.

Host institution: Department of Professional Engineering Formation
East Warwickshire College
Lower Hillmorton Road
Rugby, Warwickshire CV21 3QS, United Kingdom

Graduate project design and manufacture course

General description: A full-time course involving industrial companies, which specify projects for groups of between two and five graduates who co-operate to provide design and manufacturing experience, combined with training in planning, costing and procurement. At the end of the 12 weeks, a finished project and design drawings are expected to be delivered to the sponsor, as well as a full report, including costing, on all aspects of the project. *Commencing date:* 4 January 1988. *Duration:* 12 weeks. *Qualifications:* Company-sponsored graduates must have completed the above course in industrial formation. *Last date for receipt of applications:* December 1987. *Fee:* £2,200.

Host institution: Department of Professional Engineering Formation
East Warwickshire College
Lower Hillmorton Road
Rugby, Warwickshire CV21 3QS, United Kingdom

Grain, malt and microbial technology

General description: Properties of cereal grains used in brewing; selection of barley for malting process; fungal and microbial infections of grain and throughout the brewing process; methods for the sensory assessment of beer and whisky. The lectures are supported by laboratory work and visits to a malting, brewery and distillery. *Commencing date:* 21 March 1988. *Duration:* 5 days. *Qualifications:* Scientific qualification and preferably at least one year of experience in the brewing or related industry. English. *Last date for receipt of applications:* 5 January 1988. *Fee:* To be finalized, but approximately £400 (includes accommodation and meals).

Organizer: Department of Brewing and Biological Sciences
Heriot-Watt University
Chambers Street
Edinburgh EH1 1HX, Scotland, United Kingdom

Venue: Heriot-Watt University
Riccarton
Edinburgh, Scotland, United Kingdom

Identification of training needs

General description: A non-residential workshop, designed for those responsible for identifying training needs in their organizations, which stresses the idea of using a corporate strategy as a framework within which to identify training needs. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £690 plus VAT.

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

Industrial boiler control systems

General description: The course provides instruction on: how to identify the most suitable control system for various industrial boiler applications; the methods employed to determine process measurement and control requirements; review of application and process characteristics for basic and advance control of steam and water cycle, fuel and air ratio, steam and water temperature, steam drum and header pressure; boiler thermodynamics

and energy management. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Process and instrument engineers. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £371.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Intermediate paper technology

General description: Theoretical and practical aspects of paper and board making for paper machine operators, technical staff, maintenance and production staff etc. The theoretical aspects will include pulps and pulping; wastepaper and stock preparation; wet end chemistry; energy monitoring and control; head box design; problem solving on machines; refining pulps; deinking; maintenance methods; water removal and testing. Practical aspects will include the use of Pira miniature paper machine, refiners, flotation deinking cell, testing equipment. *Commencing date:* 23-26 February 1988. *Duration:* -. *Qualifications:* English. *Last date for receipt of applications:* 29 January 1988. *Fee:* Members of PIRA/PITA, £950 plus VAT. Non-members of PIRA/PITA, £1,375 plus VAT.

Host institution: Research Association for the Paper and Board,
Printing and Packaging Industries (PIRA)
Paper and Board Division
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

Internal consultant development programme

General description: A unique learning experience aimed at equipping internal consultants to fulfil their role of facilitating change within their organizations. Individual coaching supplemented by pre-programme reading, post-attendance reading and the possibility of joining a network of organization development practitioners. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Interpersonal skills for trainers

General description: A residential workshop aimed at developing the trainers' skills to run a behaviourally orientated management course within their own organizations. *Commencing date:* -. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £730 plus VAT (accommodation, £230 plus VAT).

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

Instrumentation appreciation: part one

General description: The course, which includes laboratory sessions, provides instruction on: the principles of common measurements found in the process industry; operating principles of selected pneumatic instruments; basic feedback, closed loop control and a practical appreciation of controller adjustments; routine maintenance of selected items of pneumatic instrumentation. *Commencing date:* To be arranged. *Duration:* 2 weeks.

Qualifications: Technicians, mechanics of other trades. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £424.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Instrumentation appreciation: part two

General description: The course, which includes laboratory sessions, provides instruction on: the principles of basic electronic theory in relation to analogue circuits used in process measurement and control instrumentation; process measurement instruments and understanding of control principles relating to analogue electronic controllers; the basic precautions to be observed when working on electronic instrumentation and familiarity of intrinsic safety requirements; the principles of basic techniques and considerations in controller alignment and loop tuning. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Technicians, mechanics of other trades who have completed part 1. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £424.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Instrumentation appreciation: part three

General description: The course, which includes laboratory sessions, provides instruction on: maintaining pneumatic and analogue electronic instrumentation; developing a better understanding of automatic control and the basic effects of proportional, integral and derivative adjustments upon controller open and closed loop responses; process control techniques, their application to specific control schemes; interpreting P & I drawings; the principles of selecting and sizing control valves. *Commencing date:* To be arranged. *Duration:* 2 weeks. *Qualifications:* Technicians, mechanics of other trades who have completed parts 1 and 2. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £483.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Introduction to paper

General description: Provides an introduction to paper and board grades, their manufacture and use and the basics of papermaking: raw materials used for making paper and board, methods of making paper and board grades, types and properties of paper and board. *Commencing date:* 13 April 1988. *Duration:* 2 days. *Qualifications:* New entrants. English. *Last date for receipt of applications:* 8 April 1988. *Fee:* -.

Host institution: Research Association for the Paper and Board,
Printing and Packaging Industries (PIRA)
Paper and Board Division
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

Leadership

General description: For those who wish to increase their ability to lead people in a work situation and to develop their interpersonal skills. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Maintenance

General description: Two short courses introducing: applied pneumatics, and industrial hydraulics, using a simulator panel to give experience of practical circuits. *Commencing date:* Throughout the year. *Duration:* 6 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Managing the training function

General description: The management process and its relevance to the management of training; the role of the training function; identifying the training needs of trainers; motivation; training costs and budgets; allocation of resources; selling training. *Commencing date:* 1 March 1988. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* £600.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, Yorkshire, United Kingdom

Methods time measurement

General description: The methods-time-measurement (MTM) course is for persons who wish to become MTM-2 practitioners. MTM-2 is a predetermined motion time system, which is easy and quick to apply and relatively easy to learn. The course includes an examination, which will qualify successful candidates to practice MTM-2. *Commencing date:* Throughout the year. *Duration:* 2 weeks. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury, Manchester M20 8QA, United Kingdom

Metallurgical courses

General description: Short courses on: electronics; cupola control; practical metallurgy; casting design; electric melting; casting defects. *Commencing date:* Throughout the year. *Duration:* 3 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Microcomputer programming for production engineers

General description: The course provides a sound training in programming in BASIC language and an appreciation of possible applications of microcomputers in modern industry. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury
Manchester M20 8QA, United Kingdom

Participative methods for trainers

General description: A residential workshop for off-the-job trainers, particularly suited to those with some instructional skills who wish to develop them further. The course

concentrates on developing skills for organizing case-studies, management exercises and role-playing, emphasizing learning through experience. *Commencing date:* To be arranged. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £370 plus VAT (accommodation, £230 plus VAT).

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

Petrochemical training programmes

General description: Short courses on: oilfield operations; oil and gas development; petroleum engineering; oil recovery and developments in enhanced oil recovery techniques; oilfield drilling completions, testing and workover operations; process facilities for handling oil and natural gas; production economics; creative international trading in crude oil and petroleum products; joint interest for offshore operations; subsea oilfield engineering; the economics of marginal oilfield development; offshore project management; structure and development of the international petroleum and petrochemical industries; managing and financing of major capital projects in oil and gas; natural gas; energy forecasting techniques and practices; use of microcomputers in supply and planning of refinery operations; refinery upgrading; refinery non-fuel streams; forecasting world oil demand, supply, trade and prices; control of oil inventories; retail petroleum marketing; liquefied petroleum gases; crude oil; bunkering; oil futures in physical trading; lubricants and functional fluids; petrochemical technology and economics; polymers in the oilfield; drilling fluids; water injection systems; oilfield chemicals; transport fuel additives; process, metalworking and functional fluids; refinery process chemicals; synthetic lubricants. *Commencing date:* March-November. *Duration:* 3-5 days. *Qualifications:* English. *Last date for receipt of application:* 1 month before commencing date. *Fee:* £525-£1,500.

Host institution: The College of Petroleum Studies
Oxford, United Kingdom

Practical skills for job trainers

General description: An introductory course covering the practical elements of training: learning methodology; communication with learners; learning objectives; job analysis and systematic follow-up procedures. *Commencing date:* -. *Duration:* 1 week. *Qualifications:* Vocational or professional qualifications. English. *Last date for receipt of applications:* 10 weeks before commencing date. *Fee:* £400 (including full board and accommodation).

Organizer: Skills Training Agency
Overseas Training Unit
Level 3
Skills House
Holy Green, Moorfoot
Sheffield S1 3PQ, United Kingdom

Venue: STA College
Dunhams Lane
Letchworth, Hertfordshire, United Kingdom

Process computers and distributed control system

General description: The management awareness seminar provides instruction on: the principles and functions of process computers and distributed control systems; the principles of identifying the capabilities of the various types of process computers available; how a distributed control system fits into a process. *Commencing date:* To be arranged.

Duration: 2 days. *Qualifications:* Management, supervisory personnel. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £193.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Process control technology

General description: The course, which includes laboratory sessions, provides instruction on: how to identify and select control components in common process control loops; how to define the correct controller mode and tuning parameters for a given process; how to apply the correct tuning techniques to selected controllers; how to select and size the most suitable control valve for a process application; control terminology, feedback control concepts, process characteristics; advance control concepts, feedforward control, energy-mass balance. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Instrument engineers and senior technicians. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £339.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Process measurement technology

General description: The course, which includes laboratory sessions, provides instruction on: instrument principles and measurement terminology; how to identify and select the most suitable transmitters for a given process; how to scale, range and specify measurement transmitters for a given process; types of measurement, pressure, level, density, flow, primary devices, turbine, vortex, magnetic flow, thermocouples, R.T.D. thermistors, filled thermal systems, pyrometers, humidity, dew points, p.h., PION, ORP; application requirements for special measurement and process requirements. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* Instrument engineers and senior technicians. English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £339.

Host institution: Foxboro Great Britain Limited
Redhill, Surrey RH1 2HL, United Kingdom

Production management, design and marketing for furniture companies

General description: Programme designed to meet the specific needs of overseas factories. Includes the understanding and operation of machines for both cabinet and upholstery production. *Commencing date:* To be arranged. *Duration:* 1-2 weeks. *Qualifications:* English. *Last date for receipt of applications:* Two weeks before commencing date. *Fee:* To be arranged.

Host institution: Furniture Industry Research Association (FIRA)
Maxwell Road
Stevenage, Hertfordshire SG1 2EW, United Kingdom

Production planning and control

General description: The concept of productivity and efficiency; methods of measuring and recording systems; effective use of resources; scheduling and sequencing methods; multi-machine assignments and optimum product mix; the relationship between production, performance, costs and profitability. *Commencing date:* Throughout the year. *Duration:* 1 week. *Qualifications:* For production controllers, but also useful for managers and supervisors. English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: Fielden House Productivity Centre Ltd.
Fielden House
Mersey Road
West Didsbury, Manchester M20 8QA, United Kingdom

Quality assurance

General description: A wide range of quality survey and related training activities, which are designed to meet British Standard BS 5750. *Commencing date:* Continuous throughout the year. *Duration:* Details available on request. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* -.

Host institution: Metcon Training
14 Pall Mall
London, United Kingdom

Report writing for managers

General description: Principles of effective written communication, basic formats for technical, administrative and promotional reports, grammatical review, preparing and drafting a report, critical examination of sample reports, paragraphing, note-taking. Practice includes: case-study and in-tray exercises, preparing, drafting, writing and presentation of reports, on a group basis where feasible. *Commencing date:* As required. *Duration:* 2 weeks. *Qualifications:* English. *Last date for receipt of applications:* Not applicable. *Fee:* Approximately £280 a week based on 8 participants plus VAT, if applicable. (Accommodation, half-board, teaching materials included.)

Host institution: Eaton Hall International
Nottinghamshire County Council
Retford, Nottinghamshire DN22 0PR, United Kingdom

Research and development

General description: The programme aims at providing participants with a greater awareness of the interdependence of research and development with other main business functions; at developing their abilities in managing and organizing R & D teams and at increasing their understanding of the way an R & D team can respond to the needs of the organization and the market. *Commencing date:* To be arranged. *Duration:* 1 week. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* To be arranged.

Host institution: The Urwick Management Centre
Baylis House
Stoke Poges Lane
Slough, Berkshire SL1 3PF, United Kingdom

Resource management in textile industries

General description: Management of energy, water and waste disposal in the context of textile processing; state-of-the-art approaches to the utilization of all such industrial resources. *Commencing date:* June 1988, 1989. *Duration:* 2 days. *Qualifications:* English. *Last date for receipt of applications:* 31 March 1988, 1989. *Fee:* £340.

Host institution: WIRA Technology Group
WIRA House
West Park Ring Road
Leeds LS16 6QL, United Kingdom

Textile laboratory testing

General description: All aspects of quality control testing required in a manufacturing environment: to include both physical, chemical and microbial testing. *Commencing date:* October 1988, 1989. *Duration:* 3 days. *Qualifications:* English. *Last date for receipt of applications:* 31 July 1988, 1989. *Fee:* £510.

Host institution: WIRA Technology Group
WIRA House
West Park Ring Road
Leeds LS16 6QL, United Kingdom

Textile processing and testing

General description: Modular course in textile processing with particular emphasis on wool. To include raw materials preparation, cording, combing, spinning, knitting, weaving, dyeing, finishing, testing. *Commencing date:* September 1988, 1989. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* 30 June 1988, 1989. *Fee:* £850.

Host institution: WIRA Technology Group
WIRA House
West Park Ring Road
Leeds LS16 6QL, United Kingdom

Training design

General description: A non-residential workshop for training specialists in the design of training events using resources either from within their own organization or from outside. Also introduces evaluation and shows how to integrate it into the design of the event. *Commencing date:* To be arranged. *Duration:* 4 days. *Qualifications:* English. *Last date for receipt of applications:* 4 weeks before commencing date. *Fee:* £700 plus VAT.

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

Training skills for supervisors

General description: Styles of instruction; training objectives; instructional notes; training aids; motivation and learning; presentation skills. *Commencing date:* 22 February 1988. *Duration:* 5 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* £450.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, United Kingdom

Training techniques

General description: Short courses on: managing the training function; training planning; communication and presentation skills for managers; developing supervisory skills; instructional techniques; programme design. *Commencing date:* January-February 1988. *Duration:* 3-5 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* £360-£600.

Host institution: Engineering Industry Training Board (EITB)
Webton Court
Allerton Park
Leeds LS7 4ND, United Kingdom

Women in development

General description: The course is primarily concerned with the economic, social and cultural role of women in the process of development planning and implementation. *Commencing date:* 11 January 1988. *Duration:* 12 weeks. *Qualifications:* University degree or several years of relevant experience. English. *Last date for receipt of applications:* 1 November 1987. *Fee:* £2,200.

Host institution: Institute of Planning Studies
University of Nottingham
Nottingham, Nottinghamshire, United Kingdom

International course on industrial production and sterilization

General description: Production of disposable medical devices, industrial sterilization, radiation sterilization as practised in Yugoslavia. *Commencing date:* 1 October. *Duration:*

3 weeks. *Qualifications:* English. *Last date for receipt of applications:* April. *Fee:* To be arranged.

Host institution: Institute of Nuclear Sciences "Boris Kidric"
Laboratory for Solid State Physics and Radiational Chemistry
P.B. 522
11000 Belgrade, Yugoslavia

Analysis and interpretation of financial statements

General description: Corporate forms; balance sheets; income statements; source and application of funds; accounting concepts and standards; analysis of financial statements. *Commencing date:* -. *Duration:* 4 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* SZ. 800.

Host institution: Price Waterhouse
P.O. Box 453
Harare, Zimbabwe

Finance for non-financial managers

General description: Accounting concepts; balance sheets; income statements; source and application of funds; cash flow; budgetary control. *Commencing date:* -. *Duration:* 2 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* SZ. 400.

Host institution: Price Waterhouse
P.O. Box 453
Harare, Zimbabwe

Financial modelling using Lotus 1-2-3

General description: Introduction to the computer; computer concepts; spreadsheet concepts; building computer models; printing modes; spreadsheet control and security issues. *Commencing date:* To be arranged. *Duration:* 2 days. *Qualifications:* English. *Last date for receipt of applications:* -. *Fee:* SZ. 500.

Host institution: Price Waterhouse
P.O. Box 453
Harare, Zimbabwe

Management and motivation

General description: Provides managers with guidelines regarding current effectiveness, their own motivations, the critical human problems they face and how they might go about resolving them. For up to 16 participants. *Commencing date:* -. *Duration:* 2-3 days. *Qualifications:* Recommendation by superior. English. *Last date for receipt of applications:* -. *Fee:* SZ. 200 a day.

Host institution: Price Waterhouse Human Resources Consultancy
P.O. Box 2639
Harare, Zimbabwe

Skills of instruction workshop

General description: The workshop is designed to improve skills in giving instruction, either in on-the-job situations or in formal presentations, by the application of a range of learning methods appropriate to the situation, i.e. the trainees and the environment. For up to 12 participants. *Commencing date:* -. *Duration:* 2-3 days. *Qualifications:* Recommendation by superior. English. *Last date for receipt of applications:* -. *Fee:* SZ. 200 a day.

Host institution: Price Waterhouse Human Resources Consultancy
P.O. Box 2639
Harare, Zimbabwe