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**Guide to Training Opportunities  
for Industrial Development** (Fifteenth issue)

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**Aperçu des moyens de formation  
pour le développement industriel** (Quinzième édition)

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**Repertorio de Oportunidades de Capacitación  
para el Desarrollo Industrial** (Décimoquinta edición)

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Industrial Training Branch—Department of Industrial Operations  
UNIDO  
P.O. Box 300, A-1400 Vienna, Austria

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**Please read preface carefully**

**Veillez lire la préface attentivement**

**Por favor, leáse el prefacio detenidamente**

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## PREFACE

This compilation of industrial training opportunities for personnel from developing countries is the fifteenth 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 without a specific request by the organizer to do so. 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 420 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, and 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; (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 duration; 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 offered by other institutions. Readers desiring 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 direct 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, 1987.

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 in 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 sixteenth edition of the Guide is scheduled to appear in late 1987 and will cover courses to be offered in 1988 and, to the extent possible, 1989.

## PREFACE

Le présent répertoire des possibilités de formation industrielle offertes aux cadres de pays en développement est la quinzième 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 420 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, ce qui témoigne des avantages que présente, pour leurs ressortissants, une formation dans des conditions proches de celles de leur pays d'origine. En outre, le recours accru aux moyens dont disposent les pays en développement contribue à atténuer les difficultés que soulève parfois l'organisation de stages de formation appropriés dans les pays industrialisés, où les services compétents ne sont souvent plus en mesure d'accepter un surcroît de travail dans ce domaine.

Le présent répertoire comprend trois chapitres : 1) possibilités de formation offertes par l'ONUDI elle-même; 2) possibilités de formation offertes par des institutions autres que l'ONUDI, classées par A. secteurs industriels et B. fonctions industrielles, 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 premier, on a adopté l'ordre chronologique, tandis que dans les chapitres II et III, les possibilités de formation énumérées sont classées dans l'ordre alphabétique anglais des pays hôtes.

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

Les moyens de formation indiqués ne sont pas réservés exclusivement aux titulaires de bourses de l'ONUDI. S'il remplit les conditions requises, tout ressortissant d'un pays en développement peut demander à participer à l'un de ces stages ou à être désigné pour y participer. Dans le cas des personnes n'ayant pas sollicité ou obtenu une bourse des Nations Unies, les demandes ou les candidatures peuvent être présentées directement à l'organisateur du stage considéré. Les candidats à des bourses de l'ONUDI doivent être désignés par leurs gouvernements et leurs dossiers doivent être soumis à l'Organisation par l'intermédiaire du Programme des Nations Unies pour le développement (PNUD). Pour tous renseignements complémentaires sur les activités de formation de l'ONUDI, prière de consulter la brochure intitulée "Programme de formation industrielle proposé par l'ONUDI pour 1987".

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 quinzième édition du répertoire, qu'il est prévu de publier à la fin de 1987, indiquera les possibilités de formation offertes pour l'année 1988 et, dans la mesure du possible, pour l'année 1989.

#### PREFACIO

La presente compilación de oportunidades de capacitación industrial para personal de los países en desarrollo constituye la decimoquinta 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 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 sin 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 420 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.

Como resultado 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, lo que denota también el atractivo y los beneficios que presenta para personal de países en desarrollo el recibir capacitación en condiciones similares a las del propio país. Además, el recurrir en mayor medida a los servicios de esta índole existentes en los países en desarrollo contribuye a aliviar las dificultades que a veces entraña la organización de cursos de capacitación adecuados en los países industrializados, cuyos servicios están ya excesivamente recargados.

El Repertorio está dividido en tres capítulos: 1) oportunidades de capacitación organizada y ofrecida por la ONUDI; 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 que ofrecen otras instituciones. Se ruega a los lectores que deseen información adicional al respecto que se dirijan directamente a esas instituciones, cuyas direcciones figuran junto a cada entrada.

Las oportunidades de capacitación compiladas 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 1987, se ofrece más información sobre las actividades de capacitación de la ONUDI.

Puede solicitarse información sobre servicios de capacitación, en muchas materias, a las secretarías de la Comisión Económica para África (CEPA), Addis Abeba, la Comisión Económica y Social para Asia y el Pacífico (CESPAP), Bangkok, la Oficina de las Naciones Unidas en Ginebra, la Conferencia de las Naciones Unidas sobre Comercio y Desarrollo (UNCTAD), Ginebra, la Organización Internacional del Trabajo (OIT), Ginebra, el Centro Internacional de Perfeccionamiento Profesional y Técnico, de Turín (Italia), la Organización Marítima Internacional (OMI), Londres, la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO), Roma, la Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), París, la Organización Mundial de la Propiedad Intelectual (OMPI), 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 decimosexta edición de este Repertorio está prevista para finales de 1987; comprenderá los cursos que se ofrecerán en 1988 y, en la medida de lo posible, en 1989.

1  
**CONTENTS**  
(English)

	<i>Page</i>
<b>PREFACE</b> .....	1
<b>CHAPTER 1: TRAINING OPPORTUNITIES OFFERED BY UNIDO</b> .....	4
<b>CHAPTER 2: TRAINING OPPORTUNITIES OFFERED BY INSTITUTIONS OTHER THAN UNIDO</b> .....	20
<b>A. BRANCH ORIENTED</b> .....	20
<b>BUILDING MATERIALS INDUSTRIES</b> .....	20
<b>CHEMICAL INDUSTRIES</b> .....	22
<b>ELECTRICAL AND ELECTRONIC INDUSTRIES</b> .....	27
<b>FOOD-PROCESSING INDUSTRIES</b> .....	28
<b>GLASS AND OPTICAL INDUSTRIES</b> .....	33
<b>LEATHER AND LEATHER PRODUCTS INDUSTRIES</b> .....	38
<b>MECHANICAL AND METALWORKING INDUSTRIES</b> .....	41
<b>METALLURGICAL INDUSTRIES</b> .....	44
<b>PACKAGING INDUSTRIES</b> .....	47
<b>PRINTING INDUSTRIES</b> .....	48
<b>PULP AND PAPER INDUSTRIES</b> .....	49
<b>TEXTILE INDUSTRIES</b> .....	49
<b>WOOD PROCESSING AND WOOD PRODUCTS INDUSTRIES</b> .....	53
<b>B. FUNCTION ORIENTED</b> .....	55
<b>AUTOMATION AND DATA PROCESSING</b> .....	55
<b>ENERGY</b> .....	66
<b>ENVIRONMENT</b> .....	68
<b>INDUSTRIAL DESIGN</b> .....	69
<b>INDUSTRIAL INFORMATION AND DOCUMENTATION</b> .....	70
<b>INDUSTRIAL PLANNING AND PROGRAMMING</b> .....	71
<b>INVESTMENT PROMOTION AND INDUSTRIAL FINANCING</b> .....	76
<b>MAINTENANCE AND REPAIR</b> .....	77
<b>MANAGEMENT AND INDUSTRIAL ADMINISTRATION</b> .....	79
<b>MARKETING AND EXPORT PROMOTION</b> .....	97
<b>QUALITY CONTROL AND STANDARDIZATION</b> .....	98
<b>SMALL-SCALE INDUSTRIES AND ENTREPRENEURSHIP</b> .....	102
<b>TRAINER DEVELOPMENT</b> .....	104
<b>CHAPTER 3: OTHER TRAINING OPPORTUNITIES AND SHORT COURSES</b> .....	109



## TABLE DES MATIÈRES

(Français)

	<i>Page</i>
<b>PRÉFACE</b> .....	ii
<b>CHAPITRE 1: POSSIBILITÉS DE FORMATION OFFERTES PAR L'ONUDI</b> .....	5
<b>CHAPITRE 2: POSSIBILITÉS DE FORMATION OFFERTES PAR DES INSTITUTIONS AUTRES QUE L'ONUDI</b> .....	20
<b>A. SECTEURS INDUSTRIELS</b> .....	20
INDUSTRIE ALIMENTAIRE .....	28
INDUSTRIE DU BOIS ET DES ARTICLES EN BOIS .....	53
INDUSTRIE CHIMIQUE .....	22
INDUSTRIE DES MATÉRIAUX DE CONSTRUCTION .....	20
INDUSTRIE DE CONSTRUCTION MÉCANIQUE ET DE TRANSFORMATION DE MÉTAUX .....	41
INDUSTRIE DU CUIR ET DES ARTICLES EN CUIR .....	38
INDUSTRIES ÉLECTRIQUES ET ÉLECTRONIQUES .....	27
INDUSTRIE DE L'EMBALLAGE .....	47
INDUSTRIES GRAPHIQUES .....	48
INDUSTRIE MÉTALLURGIQUE .....	44
INDUSTRIE DE LA PÂTE À PAPIER ET DU PAPIER .....	49
INDUSTRIE TEXTILE .....	49
INDUSTRIE DE LA VERRERIE ET DE L'OPTIQUE .....	38
<b>B. FONCTIONS DANS L'INDUSTRIE</b> .....	55
AUTOMATISATION ET TRAITEMENT DES DONNÉES .....	55
CONTROLE DE LA QUALITÉ ET NORMALISATION .....	98
DESIGN INDUSTRIEL .....	69
ÉNERGIE .....	66
ENTRETIEN ET RÉPARATION .....	77
ENVIRONNEMENT .....	68
GESTION ET ADMINISTRATION INDUSTRIELLE .....	79
INFORMATION ET DOCUMENTATION INDUSTRIELLES .....	70
MARKETING ET PROMOTION DES EXPORTATIONS .....	97
PERFECTIONNEMENT DU PERSONNEL ENSEIGNANT .....	104
PETITES INDUSTRIES ET ENTREPRENEURS .....	102
PLANIFICATION ET PROGRAMMATION INDUSTRIELLES .....	71
PROMOTION DES INVESTISSEMENTS ET FINANCEMENT INDUSTRIEL .....	76
<b>CHAPITRE 3: AUTRES POSSIBILITÉS DE FORMATION ET SESSIONS D'ÉTUDE DE BRÈVE DURÉE</b> .....	109

**ÍNDICE**  
**(Español)**

	<i>Página</i>
<b>PREFACIO</b> .....	III
<b>CAPÍTULO 1: OPORTUNIDADES DE CAPACITACIÓN OFRECIDAS POR LA ONUDI</b> .....	6
<b>CAPÍTULO 2: OPORTUNIDADES DE CAPACITACIÓN OFRECIDAS POR INSTITUCIONES DISTINTAS DE LA ONUDI</b> .....	20
<b>A. RAMAS INDUSTRIALES</b> .....	20
INDUSTRIAS ALIMENTARIAS .....	28
INDUSTRIAS DE LA CELULOSA Y EL PAPEL .....	49
INDUSTRIAS DE LOS MATERIALES DE CONSTRUCCIÓN .....	20
INDUSTRIAS DEL CUERO Y DE LOS PRODUCTOS DE CUERO .....	38
INDUSTRIAS ELÉCTRICAS Y ELECTRÓNICAS .....	27
INDUSTRIAS RELACIONADAS CON EL EMBALAJE .....	47
INDUSTRIAS GRÁFICAS .....	48
INDUSTRIAS DE ELABORACIÓN DE LA MADERA Y DE PRODUCTOS DE MADERA .....	53
INDUSTRIAS MECÁNICAS Y DE TRANSFORMACIÓN DE METALES .....	41
INDUSTRIAS METALÚRGICAS .....	44
INDUSTRIAS QUÍMICAS .....	22
INDUSTRIAS TEXTILES .....	49
INDUSTRIAS DEL VIDRIO Y ÓPTICAS .....	38
<b>B. FUNCIONES INDUSTRIALES</b> .....	55
AUTOMATIZACIÓN Y PROCESAMIENTO DE DATOS .....	55
DESARROLLO DE PROFESIONALES DE CAPACITACIÓN .....	104
COMERCIALIZACIÓN Y PROMOCIÓN DE LAS EXPORTACIONES .....	97
CONTROL DE CALIDAD Y NORMALIZACIÓN .....	98
DISEÑO INDUSTRIAL .....	69
ENERGÍA .....	66
GESTIÓN Y ADMINISTRACIÓN INDUSTRIAL .....	79
INFORMACIÓN Y DOCUMENTACIÓN INDUSTRIALES .....	70
MANTENIMIENTO Y REPARACIÓN .....	77
MEDIO AMBIENTE .....	68
PEQUEÑAS INDUSTRIAS Y LOS EMPRESARIOS .....	102
PLANEAMIENTO Y PROGRAMACIÓN INDUSTRIAL .....	71
PROMOCIÓN DE LAS INVERSIONES Y FINANCIACIÓN INDUSTRIAL .....	76
<b>CAPÍTULO 3: OTRAS OPORTUNIDADES DE CAPACITACIÓN Y CURSOS CORTOS</b> .....	109

## 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, actual 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 1987. 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 master 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 sufficiently in advance to allow time for the channelling of communications.

## CHAPITRE 1 : POSSIBILITES 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 pratique dans des entreprises et des visites d'établissements. Tous les stages se terminent par une session d'évaluation au cours de laquelle les participants évaluent 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 1987. 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 maîtrisent 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 l'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 afin de donner un laps de temps suffisant pour permettre l'échange de communication.

## CAPITULO 1: OPORTUNIDADES DE CAPACITACION 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 misma 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 1987. 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 indicado en cada programa. Es esencial que los participantes dominen 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 suficiente anticipación a fin de permitir elaborar su adecuada respuesta.

<u>Field of study</u> <u>Sujet d'étude</u> <u>Materia de estudio</u>	<u>General description</u> <u>Description générale</u> <u>Descripción general</u>	<u>Venue and host institution</u> <u>Lieu et organisme hôte</u> <u>Lugar e institución huésped</u>	<u>Duration</u> <u>Durée</u> <u>Duración</u>	<u>Invited countries</u> <u>Pays invités</u> <u>Países invitados</u>	<u>Qualifications</u> <u>Qualifications</u> <u>Cualificaciones</u>
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FEBRUARY - FEVRIER - FEBRERO					
Iron and steel industry technology	Theory in technological process of equipment, economic planning, management, maintenance. In-plant training in foundry, blast furnace, sintering plant, open hearth plant, rolling mills, refractory maintenance.	Zaporoz Steel Zaporozhe Ukrainian Soviet Socialist Republic	09/02-23/05	Interregional programme  English	Metallurgical, chemical, electrical or mechanical engineering degree and directly engaged in one of the production activities. Technical fields of iron and steel industry. Practical experience should not exceed three years.
Metalworking industry	Planning, executing and supervizing of the manufacturing processes of machine parts; design of jigs and mixtures, design and use of cutting tools; operation and maintenance, quality control and economics of metalworking operations, etc. Practical studies in laboratories and in-plant training in metalworking. (13 to 15 big machine-producing factories.)	Lumumba University Moscow Union of Soviet Socialist Republics	16/02-12/06	Interregional programme  English	A degree in mechanical engineering (or equivalent) with at least three years of practical experience in a supervisory or managerial capacity in metalworking, particularly machine tool operations, planning, manufacture and maintenance and repair.
Engineering and industrial design	Theoretical introduction on product design, tool design, production engineering and manufacturing of prototype products and tools. Practical study assignments in design offices and laboratories for metallurgical testing and/or workshops.	Engineering and Industrial Design Development Centre Cairo Egypt	February/March	Interregional programme  English	Degree in mechanical engineering or engineering degree with at least three years of experience.

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MARCH - MARS - MARZO					
Follow-up and Evaluation Seminar for Former Participants in the IPGTP in Quality Improvement of Industrial Products held regularly in Japan between 1974 and 1985	Former participants in the IPGPT in Quality Improvement of Industrial Products held in Japan between 1974 and 1985 will re-design and adapt the curriculum of the seminar for use in future programmes on basis of their assessment of the impact of the previous programmes and in line with present and foreseeable needs and requirements in developing countries; at the same time, participants' knowledge and skill in the subject field will be enhanced and updated.	Office of the Association for Overseas Technical Scholarship (AOTS) in Kuala Lumpur, Malaysia	3/03 - 17/03/87	Interregional seminar  English	Former participants in the In-plant Group Training Programme in the Field of Quality Improvement of Industrial Products held regularly in Tokyo, Japan between 1974 and 1985
Financement et évaluation des projets de développement	Ce séminaire de perfectionnement s'adresse à des responsables du ministère du Plan, ou du développement rural, ingénieurs économistes chargés de projets. Il a pour objectifs de leur faire acquérir une meilleure vision globale des différentes étapes du développement d'un projet d'investissement depuis l'identification jusqu'à sa réalisation et d'améliorer leur capacité à l'issue de ce séminaire, de participer effectivement à des études de projet dans le cadre de leur spécialité.	Agence de coopération culturelle et technique Ecole internationale de Bordeaux Bordeaux France	04/03- 05/04	Programme interrégional  Français	Candidat disposant d'une expérience de plusieurs années et ayant un emploi
Technology and equipment in electric welding	Technology and equipment for electric fusion, resistance, welding processes, modern welding, arc power resources, welding material and structures, constructive technological designing of welded material etc. In-plant training in plants manufacturing electric welding equipment, metalworking industry as well as laboratories.	E.O. Paton Electric Welding Institute Kiev Ukrainian Soviet Socialist Republic	19/03- 03/07	Interregional programme  English	A university degree (or equivalent) in electrical or mechanical engineering with at least three years of practical experience related to electric welding.

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Grain milling and storage (with aspects of training of trainers)	Phase covers technological aspects: technology and equipment of elevators, processing of grain, production of loose and granulated mixed fodders, quality control of grain, flour and mixed fodders, etc. Lecture-type instruction, practical studies in laboratories and in-plant training in selected enterprises. Phase II or (trainers' training): 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 equipment 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.	Institute for Advanced Training of Managers and Specialists of the USSR Ministry of State Purchases Moscow Union of Soviet Socialist Republics	24/03-17/07	Interregional programme  English	Educational background (university degree or equivalent) related to technological science; managerial or supervisory post in a grain milling enterprise or in a governmental or semi-governmental body dealing with grain milling enterprises and at least three years of practical experience. Candidates are expected to carry out training activities in their home countries upon completion of the programme.
Technology and training methodology in diesel engines	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).	TES-Institute Prague Czechoslovakia	26/03-20/06	Interregional programme  English	A university degree in mechanical engineering (or equivalent) and 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.
Management and organization of industrial co-operatives for SADCC countries	Intensive training programme consisting of theoretical and practical training in organization and management of industrial co-operatives in the fields of metalworking, wood processing and garments industry to upgrade skills and knowledge of participants from SADCC countries.	Central Union of Work Co-operatives Poland CECTI Italy	March/May	SADCC countries  English	Senior supervisory and managerial personnel preferably engaged in training.



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APRIL - AVRIL - ABRIL					
Documentation and industrial information	Function of industrial information in industrial development, retrieval systems and their practical application, classification systems, information systems for industry. Practical training in industrial information and documentation and study visits to specialized institutes providing information services to industry.	VIMITI All Union Institute for Scientific and Technical Information Moscow Union of Soviet Socialist Republics	02/04- 10/06	Interregional programme  English	University degree or an equivalent educational background and a few years of practical experience in the field of industrial/technological information and documentation in the operation of existing information documentation centres.
Technology of mineral fertilizer production	Theoretical part covers lectures and discussions on various subjects of 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. It is followed by one month in-plant training at nitrogen fertilizer plants in the USSR.	Institute of Nitrogen Industry USSR Ministry for Mineral Fertilizers Production Moscow Union of Soviet Socialist Republics	05/04- 03/07	Interregional programme  English	A university degree (or equivalent) in chemical engineering or chemistry and at least three years of practical experience in a supervisory or managerial capacity in the fertilizer industry.
Management of middle-size industrial enterprises	The programme will be carried out with active participation of the selected professionals through lectures, guided discussions, group work, project work and visits to selected industrial plants. The structure consists of seven modules with 38 learning units. The modules are: Theory of Management; Managing the Economy; Production Management; Organization of Enterprises Management; Management Planning in Administration; and Human Resources Development Concepts and Training of Trainers.	Center for Professional Development (CPD) Sofia, Bulgaria	20/04- 29/05	English	Participants should have university background preferably oriented to technological or economical science, minimum work experience in industrial management for at least 5 years. The programme is conceived for general managers, deputy general managers, potential general managers who by virtue of their functions are able to influence the formulation of plans.

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Energy management for LDCs	Participants from least developed countries will gain from the experience of another developing country and the advances achieved thus providing participants with more working knowledge on the various aspects of energy management and efficiency and equipping them with various tools and techniques in achieving fuel efficiency and in increasing energy productivity.	Technical Assistance Council (TAC) of the Philippines Bureau of Energy Utilization Productivity and Development Centre Manila Philippines	April/May 4 weeks	Interregional programme  English	University degree in mechanical, electrical or chemical engineering (or equivalent) with at least two 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, provided that such candidates meet the stipulated qualifications.
Cement industry technology	The programme concentrates on technical aspects of cement industry and includes technical subjects such as feasibility studies, raw materials, production management technologies, quality control, maintenance, energy conservation, pollution and pollution control.	Cement Research and Development Centre Ankara Turkey	April/ May	Interregional programme  English	Degree in chemical, mechanical, electrical or relevant branch of engineering; one to five years of practical experience and employed with cement industry.
Maintenance repair and overhaul of textile machinery	Establishment and development of a repair and maintenance capacity for the textile machinery for spinning, winding weaving, dyeing, finishing and printing.	Shaanxi Province People's Republic of China	April/ May	Interregional programme	Mechanical, industrial engineering or relevant engineering degree with two to five years of experience in repair and maintenance, employed with textile industry.
Industrial planning	Technical aspects and methods of industrial planning at different levels. Uniform systems of industrial planning on national, regional, sectoral and factory level (long-term forecasts, long-term, medium-term and annual plans). Organs of planning co-ordination of the national industrial development plans at international level. Strategies, planning and methods for human resources development at national, regional and enterprise level.	Institute of Economy of Developing Countries Berlin German Democratic Republic	April/ May 4 1/2 weeks	Interregional programme  English	Senior positions with government or public enterprises with academic background and/or extensive experience in industrial planning preferably at national, sectoral and branch levels. Good English.

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MAY - MAI - MAYO					
Methods and techniques of pesticide production and formulation	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 industries.	Karl Marx University Leipzig German Democratic Republic	13/05- 23/06	Interregional programme  English	A university degree (or equivalent) in agricultural or chemical engineering or chemistry and at least three years of practical experience in a supervisory or managerial capacity in the production and formulation of pesticides.
Modern foundry technology	The training programme will cover the following topics: the design of modern foundry processes (including economic and technical aspects); foundry materials, melting and casting technologies, pattern-making practice, moulding materials and moulding technology, mechanization and automation of foundry processes, quality control and repair of castings, environmental protection including noise control and other safety and pollution problems.	Foundry Research Institute Kraków Poland	May/June	Interregional programme  English	Degree in foundry or metallurgy (or equivalent) with at least two years practical experience (preferably in a supervisory position) in at least one of the following fields: moulding sands, moulding technologies, melting technologies, pattern-making practice, casting technologies, mechanization and automatization of foundry processes, quality control.
Small business consultancy	The training course will enable participants to: define the role of small- and medium-scale enterprises in relation to the economic development of the country, 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.	Institute for Small-scale Industries of the University of the Philippines Quezon City, Manila Philippines	May/ June	Least developed countries  English	University degree with at least three years of practical experience in the government or private sector engaged in providing consultancy to small- and medium-scale enterprises of the industrial sector.

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JUNE - JUIN - JUNIO					
Utilisation industrielle des herbes médicinales	Herbes médicinales provenant de la flore naturelle; établissement des cartes économiques de la flore médicinale; méthodes d'extraction des principes actifs; contrôle qualitatif des produits pharmaceutiques fabriqués à partir d'herbes médicinales; détermination des caractéristiques physicochimiques des huiles essentielles; travaux pratiques et visites d'usines.	ONUUDI et le Centre commun ONUUDI/ROUMANIE	Juin/ Juillet 5 semaines	Programme interrégional  Français	Titulaires d'un diplôme en pharmacie, en chimie, en botanique ou agronomie avec de l'expérience de la recherche-développement dans le domaine des plantes médicinales et aromatiques.
JULY - JUILLET - JULIO					
Design and manufacturing of agricultural machinery	With emphasis on practical training, the programme will cover operations related to casting, heat treatment, moulding, design, manufacturing processes, construction and operation of agricultural machinery including walking tractors and quality control.	ZHENJIANG Institute of Agricultural Machinery Zhenjiang China	July/ October	Interregional programme  English	Agricultural or mechanical engineering with three to five years of practical experience in manufacturing or farm machinery implements and industry supervisory responsibilities.
Repair and maintenance of diesel engines	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.	Ministry of Agricultural Machinery, Shanghai Diesel Engine Works Shanghai China	July/ October	Interregional programme  English	Mechanical engineering degree, three to five years' experience with supervisory responsibilities in maintenance, repair and overhaul of diesel engines.

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AUGUST - AOUT - AGOSTO					
Environmental assessment and management aspects of air and water pollution from industry	Analysis of air, water and soil pollution and industrial waste. Theoretical instructions and practical exercises in laboratories study visits to purifications plants and environmental control installations.	State University of Ghent Ghent Belgium	August/ September	Interregional programme  English	Degree either in chemistry, biology, geology, or pharmacy with experience and responsibilities related to environmental pollution problems.
SEPTEMBER - SEPTEMBRE - SEPTIEMBRE					
Repair and maintenance of medium/small ships	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.	Antwerp Port Engineering and Consulting (APEC) Apec Belgium	04/09- 09/11	Interregional programme  English	Engineers and technicians (or equivalent) having at least three years of practical experience in the field of maintenance and repair of medium/small ships.
Technology and equipment in rice processing industry	The following topics will be covered by the curriculum: major trends in the development of the grain-elevator and rice-processing industry; characteristics and range of rice mill products: modern rice grain and hulled-rice starch technology; modern types of rice granaries; modern technological equipment for rice-processing enterprises; basic flow-charts for rice-processing; preventive maintenance of equipment at rice-processing enterprises; quality control.	Institute for Advanced Training of Managers and Specialists of the USSR Ministry of State Purchases, Moscow (with visits to Kiev, Leningrad, Krasnodar, Slavynsk-na-Kubani and Krasnoarmeiskaya) Union of Soviet Socialist Republics	09/09- 04/12	Interregional programme  English	Engineers and technicians (a university level degree or equivalent) and at least three years of practical experience in a supervisory or managerial capacity in the rice-processing industry.

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Iron and steel industry technology	Theory in technological process of equipment, economic planning, management, maintenance. In-plant training in foundry, sintering plant, open hearth plant, rolling mills, refractory maintenance.	Zaporozh-Steel Zaporozhe Ukrainian Soviet Socialist Republic	10/09-21/12	Interregional programme English	Metallurgical, chemical, mechanical engineering degree and directly engaged in one of the production activities. Technical fields of iron and steel industry. Practical experience minimum three years.
Methods and technology in the printing industry	Production of newspapers, periodicals, books (including text-books 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. In addition to theoretical training, study visits, practical training will be arranged to plants manufacturing printing machinery and to printing houses.	VEB Polygraph Leipzig German Democratic Republic	23/09-12/10	Interregional programme English	A university degree or equivalent in the field of printing industry. Managerial or high level technical positions in the printing industry or senior officials of a public or private printing organization with at least two years of practical experience.
Measurements and tests in civil engineering	Participants will be able to apply various measurement methods and instruments in testing and quality control in civil engineering; in lectures, case studies, and workshops the following main topics will be dealt with: objectives of routine testing and measurement in civil engineering research; measurement methods and techniques; selected applications; organization of laboratories, training of staff.	Institute for Developing Countries Zagreb, Yugoslavia in co-operation with the International Measurement Confederation	Sept. 1 week	Interregional seminar English	Managers and/or civil engineers with a university degree in mechanical, electrical or other branch of engineering, or in physics; practical experience and responsibility in the civil engineering sector.

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Management of human resources development for industry	The basic objectives of the programme are 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.	Ministry of Middle and Higher Education and Institute for the Advanced Training of Managers and Specialists, Ministry of State Purchases Moscow Union of Soviet Socialist Republics	September/ October	Interregional programme  English	University background oriented to technological or economic sciences. At least three years of practical experience in industrial training. Candidate must be responsible for the planning and co-ordination of training activities at regional or sectoral industrial level or advising the policy-making organ dealing with industrial training.
Emballage et conditionnement	Perfectionnement aux techniques modernes d'emballage.	Milan Italie	Septembre/ Octobre	Interrégional Français	Diplômes universitaires. Trois années d'expérience.
Small-scale foundry operations for LDCs, land-locked and island countries	The following items will be covered by the curriculum: solidification in casting; feeder, riser and gating design; pattern making and pattern material; moulding and moulding materials; cast-iron and its melting and casting; copper alloys and their melting and casting; aluminium alloys and their melting and casting; special moulding and casting techniques such as investment casting, shell moulding, plaster mould casting; casting defects, quality control in foundries, vacuum melting and casting.	Marmara Scientific and Industrial Research Institute Istanbul and Technical Education Faculty Ankara Turkey	September/ October	Interregional programme for LDCs, land-locked and island countries  English	Foundry or metallurgy degree, supervisory or planning functions for operating and establishing small-scale foundries with at least one year of practical experience.
Technologie de l'industrie du ciment	Le programme porte sur les techniques de l'industrie du ciment et comprend des sujets tels que études de faisabilité, matières premières, gestion de la production, contrôle de la qualité, entretien et réparation, énergie.	Centre de développement et de recherche sur le ciment Ankara, Turquie	Septembre/ Octobre	Programme interrégional  Français	Diplôme d'ingénieur en chimie, mécanique, électricité, de 1 à 5 ans d'expérience pratique dans l'industrie du ciment.

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				<u>Language</u> <u>Lingue</u> <u>Lingua</u>	
Industrial planning and development	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.	International Development Centre Tokyo Japan	September/ October	Interregional programme  English	Industrial development economists at government organizations and public institutions for industrial development and implementation. Applicants aged between 30 and 45 years. Good English. University or college graduates or equivalent with basic knowledge and more than three years of practical experience in industrial development.
Iron and steel industry	The analysis and selection of raw materials, appropriate processes and technologies for iron and steel production; hot and cold rolling mill operations; quality control and testing; organization and management of steel plant maintenances.	Eregli Iron and Steel Plant Eregli Turkey	September/ November	Interregional programme  English	University degree in chemistry, metallurgy, mechanical or electrical engineering (or equivalent) with one to five years practical experience and holding supervisory function.
Entretien du matériel ferroviaire	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.	Société nationale des chemins de fer belges (SNCB), Bruxelles, Belgique et Afrique	Septembre/ Novembre	Programme régional pour l'Afrique  Français	Etre titulaire d'un diplôme d'ingénieur (ou d'un diplôme équivalent), justifier d'une expérience pratique de deux 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.



<u>Field of study</u> <u>Sujet d'étude</u> <u>Materia de estudio</u>	<u>General description</u> <u>Description générale</u> <u>Descripción general</u>	<u>Venue and host institution</u> <u>Lieu et organisme hôte</u> <u>Lugar e institución huésped</u>	<u>Duration</u> <u>Durée</u> <u>Duración</u>	<u>Invited countries</u> <u>Pays invités</u> <u>Países invitados</u>	<u>Qualifications</u> <u>Qualifications</u> <u>Cualificaciones</u>
				<u>Language</u> <u>Langue</u> <u>Lengua</u>	
Maintenance and repair of railroad equipment	Upgrading practical experience and theoretical knowledge in the field of maintenance and railway railway equipment.	Derby, United Kingdom and Africa	September/ November	Regional Africa English	Engineers in railway maintenance and repair.
Mantenimiento y reparación de equipo rodante ferroviario	Incrementar la experiencia práctica y el conocimiento técnico del mantenimiento de equipo rodante ferroviario.	Madrid España	Septiembre/ Noviembre	Programa inter-regional América Latina Africa Español	Ingenieros especializados en mantenimiento y reparación de material ferroviario.
Technologies textiles coton - laine	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.	Centre de recherche et de contrôle lainier et chimique et laboratoire de Meulemeester de technologie des matières textiles Chaineux et Gand Belgique	Septembre/ Décembre	Programme interrégional  Français	Ingénieur ou technicien responsable de la production ou du contrôle de qualité dans une entreprise textile ou travaillant dans un centre de recherche textile.
OCTOBER - OCTOBRE - OCTUBRE					
Organizatic and management of agro-industrial enterprises	Theoretical training on different aspects of agro-industrial enterprises. Organization planning, management financing and investment policy, economic infrastructure. Practical training on organizational aspects of agro-industrial enterprises, separate agro-industrial enterprises and food processing plants, study visits to agro-industrial enterprises.	Federal Centre for Agricultural and Industrial Managers' Training Novi Sad, Yugoslavia	October	Interregional programme  English	Engineering degree with managerial experience in food processing of at least three years.
Sugar (beet) production	The programme will be carried out both in sugar plants and a sugar research institute and consists of theoretical and specialized actual practical in-plant training as well as study visits and an evaluation seminar. It will concentrate on both economical and technical aspects, including feasibility studies, raw material surveys, maintenance, production technologies and quality control.	Sugar Research Institute Ankara Turkey	October/ November	Interregional programme  English	Chemical, agricultural, mechanical or electrical engineering with at least two years practical experience and presently employed directly in the production of sugar.

<u>Field of study</u> <u>Sujet d'étude</u> <u>Materia de estudio</u>	<u>General description</u> <u>Description générale</u> <u>Descripción general</u>	<u>Venue and host institution</u> <u>Lieu et organisme hôte</u> <u>Lugar e institución huésped</u>	<u>Duration</u> <u>Durée</u> <u>Duración</u>	<u>Invited countries</u> <u>Pays invités</u> <u>Países invitados</u>	<u>Qualifications</u> <u>Qualifications</u> <u>Cualificaciones</u>
<u>DATES NOT YET SPECIFIED</u> <u>DATES NON ENCORE PRECISEES</u> <u>FECHAS TODAVIA NO DETERMINADAS</u>					
Maintenance of gas and oil transportation networks	Theory and practice of designing oil and gas transportation systems. Operation, problems of operation and maintenance, telemetry and remote control of oil and gas pipelines. Technological instrumentation of oil and gas pipelines. Problems of operation and maintenance of remote control, telemetric and instrumentation systems. Telecommunication within the oil and gas pipeline system. Visits to plants and practical training.	Hungarian Gas and Oil Transportation Company's Educational Centre Siofok Siofok Hungary		Interregional programme  English	Engineers and technicians with experience in the field of maintenance of gas and oil transportation networks and related telecommunications.
Formation des formateurs des banques de développement et institutions de financement	Formation des formateurs des séminaires sur l'identification, la préparation, l'analyse, l'évaluation, la gestion de projets industriels.	Agence pour la coopération culturelle et technique Ecole internationale de Bordeaux Bordeaux France		Programme interrégional  Français	Cadres supérieurs des banques de développement, des institutions de financement, des offices de promotion.
Maintenance industrielle	Sensibiliser les participants aux aspects techniques et économiques de la maintenance industrielle. Recycler/perfectionner la formation et l'expérience professionnelle des ingénieurs, techniciens responsables de la maintenance et de la réparation dans les entreprises industrielles des pays prenant part au programme pour permettre un échange d'expérience en matière de maintenance entre participants.	Agence pour la coopération culturelle et technique Ecole internationale de Bordeaux Bordeaux France		Programme interrégional  Français	Chef de maintenance, chef d'exploitation, chef de production, directeur technique.

CHAPTER 2: TRAINING OPPORTUNITIES OFFERED BY INSTITUTIONS OTHER THAN UNIDO  
 CHAPITRE 2 : POSSIBILITES DE FORMATION OFFERTES PAR DES INSTITUTIONS AUTRES QUE L'ONUDI  
 CAPITULO 2: OPORTUNIDADES DE CAPACITACION OFRECIDAS POR INSTITUCIONES DISTINTAS DE LA ONUDI

A. INDUSTRIAL BRANCHES - SECTEURS INDUSTRIELS - RAMAS INDUSTRIALES

BUILDING MATERIALS INDUSTRIES  
 INDUSTRIE DES MATERIAUX DE CONSTRUCTION  
INDUSTRIAS DE LOS MATERIALES DE CONSTRUCCION

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Matériaux composites	Fabrication ; évaluation des propriétés; applications. Le choix d'un ou de plusieurs matériaux provenant d'un pays en voie de développement déterminé est effectué sur place. Les matériaux choisis sont susceptibles d'être utilisés pour la fabrication de composites et présentent un intérêt économique pour le pays d'origine.	C.R.I.F. 200, rue de Chéra B-4000 Liège Belgique	A arranger 5 mois	Qualifications professionnelles et expérience de la construction. Français ou anglais	-	\$US 5,000
L'industrie de la construction	Recherche technique appliquée dans les domaines suivants : matériaux, structures, équipements et confort acoustique et thermique. Planification des chantiers et gestion des entreprises.	Centre scientifique et technique de la construction 41, rue du Lombard B-1000 Bruxelles Belgique	A arranger 3 mois	Ingénieur civil ou architecte. Français, anglais, néerlandais	-	A arranger
Building materials	Extraction of non-metallic minerals, beneficiation of non-metallics, production of ceramics, refractories, building materials and selected products based on non-metallics, special areas of non-metallic mineral applications, such as agriculture and environmental protection, principles of proper energy management in industries processing non-metallics, special research and laboratory methods, non-waste technologies applicable in the processing of non-metallics	UNIDO-Czechoslovakia Joint Programme Pražská 12 P.O. Box 211 30511 Pilsen Czechoslovakia	5 October 1987 3 weeks	Professional qualifications. English	-	-
Concrete technology	Test of raw materials for concrete, laboratory and on-site concrete tests; cast technique; maintenance of concrete structures.	The Jutland Technological Institute Building Technology Section Teknologiparken 8000 Aarhus C Denmark	To be arranged 2 months	Professional qualifications English	-	To be arranged

BUILDING MATERIALS INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Low-cost housing	49th International Course on Housing, Planning and Building. Topics: (a) planning and policy; housing policies and programmes; views of housing of low-income groups; evolution of urban structures; scope and scale of housing programmes; land tenure and development control; housing financing; financial analysis and evolution; community participation and organization; institutional relationships; communication techniques; (b) design and technology; housing as an evolutionary process; users and professionals in the housing process; design tools; building materials and building technologies; views of project and construction management; programming and monitoring of construction; contracting; low-cost infrastructure and sanitation; alternative techniques and managerial implications; building materials production and delivery systems.	Institute for Housing Studies BIE P.O. Box 20718 3001 JA ROTTERDAM Netherlands	January 1987 5 months	Professional qualification English.	1 October 1986	To be arranged
Building materials for low-income housing	A symposium for the stimulation and exchange of innovative thinking in the field of building materials production and use in low-income housing.	ESCAP-CIE-RILEM in co-operation with TISTR, NHA, AIT Bangkok, Thailand	20-26 January 1987	English	-	\$US 200
Ferrocement	Ferrocement technology.	International Ferrocement Information Centre (IFIC) AIT GPO Box 2754 Bangkok Thailand	To be arranged 1-2 weeks	Professional qualifications English	-	To be arranged
Ferrocement technology	Design and fabrication of ferrocement structures.	International Ferrocement Information Centre (IFIC) AIT GPO Box 2754 Bangkok Thailand	To be arranged 2-8 weeks	Professional qualifications English	-	To be arranged
Cement industry technology	Concentrates on technical aspects of cement industry and includes technical subjects concerning feasibility studies, raw materials, production management technologies, quality control, maintenance, energy saving, pollution control.	Turkish Cement Manufacturers' Association Eskisehir Yolu 9 km Ankara, Turkey	13 April and 15 September 7 1/2 weeks	Professional qualifications and practical experience English	To be arranged	To be arranged
Construction materials	Technology and testing of construction materials including soils, cement, concrete, aggregates, asphalt, Part I: 13 weeks, covering basic technology and standard tests. Part II: 13 weeks, covering more advanced technology and testing followed by individually planned programmes for each participant.	Laing Design and Development Centre Page Street Mill Hill London NW7 2ER United Kingdom	1st week in January 1987 13 weeks	Technical or professional qualifications English	-	£5,250 + VAT (provisional) Fee includes food and accommodation

**BUILDING MATERIALS INDUSTRIES (continued)**

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Low-cost housing	Planning and policy; housing policies and programmes; views of housing of low-income groups; evolution of urban structures; scope and scale of housing programmes; land tenure and development control; housing financing; financial analysis and evolution; community participation and organization; institutional relationships; communication techniques; design and technology; housing as an evolutionary process; users and professionals in the housing process; design tools; building materials and building technologies; views of project and construction management; programming and monitoring of construction; contracting; low-cost infrastructure and sanitation; alternative techniques and managerial implications; building materials production and delivery systems.	Institute for Housing Studies BIE P.O. Box 20718 3001 JA ROTTERDAM The Netherlands	August 1987 5 months	Professional qualification English	1 April 1987	To be arranged
Construction materials	Technology and testing of construction materials including soils, cement, concrete, aggregate and asphalt. Part 1: 13 weeks, covering basic technology and standard tests. Part 2: 13 weeks, covering more advanced technology and testing followed by individually planned programmes for each participant.	Laing Technology Group Limited Page Street Mill Hill London NW7 2ER United Kingdom	Part 1: 3rd week in September 1987 Part 2: 1st week in January 1988 13 weeks in each case	Technical or professional qualifications	-	1987/88 Part 1: £5,300 + VAT (pro- visional) Part 2: £5,300 + VAT (pro- visional) Including board and accommodation

**CHEMICAL INDUSTRIES  
INDUSTRIE CHIMIQUE  
INDUSTRIAS QUIMICAS**

Curso básico de tecnología del caucho	Materiales utilizados; propiedades en crudo; mezclado; propiedades en vulcanizados; la extrusión; química de polímeros; ciclos de vulcanización; los cauchos; el reforzado; auxiliares de proceso y agentes antidegradantes; sistemas de vulcanización; introducción al cálculo para técnicas de caucho; cementsos y lubricantes; textiles; control de procesos; tecnología del látex.	CITIC - Centro de Investigación de la Industria del Caucho Parque Tecnológico Miguelete, Argentina	Marzo 9 meses	Estudios Secundarios. Castellano.	15 de marzo	Costo Total: \$US 212
Curso superior tecnología del caucho	Química de altos polímeros; materias primas; procesos.	CITIC - Centro de Investigación Tecnológica de la Industria del Caucho Parque Tecnológico Miguelete, Argentina	Abril 8 meses	Título universitario Castellano	31 de marzo	Costo Total: \$US 265

CHEMICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Tecnología de los plásticos	<p><u>Primer Año:</u> matemática; química aplicada; estática y resistencia de materiales; física aplicada; dibujo técnico.</p> <p><u>Segundo Año:</u> Fabricación y conocimiento de materiales; Herramental para moldeo de plásticos; Técnicas de moldeo: Moldeo de termoendurecibles; Inyección; Termoformado; Extrusión; Calandrado; Operaciones complementarias Laboratorio.</p>	<p>INSTIPLAST Instituto Técnico Argentino de la Industria Plástica Inclán 4233 1258 - Buenos Aires Republica Argentina</p>	<p>Abril 2 años</p>	<p>Egresado de Escuela de Educación Técnica Profesionales Universitarios Técnicos (Ingenieros y arquitectos) <u>Destino:</u> personal Técnico de producción Español</p>	Marzo	Gratuito
Tecnología de los plásticos	<p><u>Primer Año:</u> Física aplicada; Fabricación y conocimiento de Materiales; Química de plásticos; estudio y ensayo de materiales; Equipos; Moldeo de plásticos I: moldeo de termoendurecibles, extrusión I; Inyección I; Laboratorio I.</p> <p><u>Segundo Año:</u> Herramental para moldeo de plásticos; Equipos II; Moldeo de plásticos II: Termoformado; Extrusión; Calandrado; Inyección II; Control de calidad; Operaciones complementarias. Laboratorio II.</p>	<p>INSTIPLAST Instituto Técnico Argentino de la Industria Plástica Inclán 4233 1258 - Buenos Aires Republica Argentina</p>	<p>Abril 2 años</p>	<p>Egresado de Escuela de Educación Técnica Profesionales Universitarios Técnicos (Ingenieros y arquitectos). <u>Destino:</u> personal Técnico de Producción. Español</p>	Marzo	Gratuito
Chemical industry	<p>Management and operation of ammonia single-train plant, utilities; management and operation of urea plant; maintenance of urea plant; quality control in ammonia and urea plant; computer process control systems; maintenance of instrumentation; environment management, industrial water treatment; energy management and optimization; maintenance planning.</p>	<p>Chemserv Consulting GesmbH St. Peterstr. 25 4021 Linz Austria</p>	<p>Throughout year 2-4 weeks</p>	<p>Professional qualifications. English</p>	To be arranged	AS 2,600 per day
Plastics technology	<p>Theory courses on: technology transfer and development; trends in polymer chemistry; trends in polymer physics; principles of plastics technology; principles of mould design; principles of control engineering; plastics application engineering. Practical courses in: compounding, computation, controlling, extrusion, finishing, foaming, injection and compression moulding. Machining and forming, mould making, polymer chemical analysis, polymer physical analysis, quality control, reinforced plastics, trouble-shooting. Seminar and practical experiments on: quality control, polymer science, injection moulding, extrusion.</p>	<p>LKT-TGM Laboratorium für Kunststofftechnik Wexstrasse 19-23 A-1200 Vienna Austria</p>	<p>October 7 weeks</p>	<p>Professional qualifications. English</p>	-	To be arranged

CHEMICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Polymer engineering and plastics technology	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. High level courses on: mould design; compounding and recycling; application engineering; testing methods; statistical evaluation; automation and computation; control engineering; trouble-shooting; planning of maintenance. Basic level courses on: mould making; compounding; plastics application; controlling; trouble-shooting; maintenance.	LKT-TGM Laboratorium für Kunststofftechnik Wexstrasse 19-23 A-1200 Vienna Austria	To be arranged	Professional qualifications. English	-	To be arranged
Chemical analysis of mineral samples	Course and practical training in chemical analysis of ores and mineral samples: titrimetry, electrolysis, polarography, spectrophotometry, atomic absorption, fluorimetry, plasma emission spectrometry, etc.	Université Catholique de Louvain Laboratoire de Traitement des Minerais 2, place Ste Barbe B-1348 Louvain-la-Neuve Belgique	To be arranged Variable	Graduates in chemistry. English, French, Spanish	-	To be arranged
Technologies nouvelles	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 qualité - Traitement	C.R.I.F. 200, rue du Chéra B-4000 Liège Belgique	A arranger 5 mois	Qualifications professionnelles. Français, anglais	-	\$US 5,000
Environmental control in chemical and pharmaceutical industries	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; visits to different plants.	Department of Toxicology State University of Ghent Hospitaalstraat 13 B-9000 Ghent Belgium	Beginning of August 6 week course given every year alternately in English and French	Civil engineer, pharmacist, biologist, chemical engineer. English or French	-	BF 40,000 approx.
Methods and techniques of elemental analysis	Development of economic methods to analyse different materials, such as agricultural products, metallurgical samples, crude oil, geological samples, UV-VIS Spectrophotometry, Atomic Absorption Spectroscopy, ICAP/ICP Spectrometry	P & R Techconsult Ltd. Assoc. of Advanced Technical Services GmbH P.O. Box 3885 Nicosia Cyprus	1-8 weeks or up to 9 months	Professional qualifications. English (possibly Arabic)	-	To be arranged

## CHEMICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Plastics technology and mould design	Construction and application, quality in plastic constructions; form construction, calculation and pressure die-casting; polyurethane, basis courses, sandwich panels and structural foam; reinforced polyester, production and application; reinforced polyester, mechanical methods; tanks, pipes and silos of fibreglass reinforced polyester; construction, maintenance, repairs, design, construction and purchase.	The Jutland Technology Institute Plastic Technology Section Teknologiparken 8000 Aarhus Denmark	To be arranged	Professional qualifications. English	-	To be arranged
Peintures et vernis, transformation matières plastiques, colles et adhésifs	Formation scientifique et technique.	E.S.C.E.P.E.A. Ecole supérieure du cuir et des peintures encres et adhésifs 181-203, av. Jean Jaurès F-69007 Lyon France	Début septembre 8 mois	Qualification professionnelle. Français	-	F 30,000 hébergement non compris
Optimization of petroleum-processing	The purpose of this course is to demonstrate modern methods of optimization in crude distillation and other processes, and to present essential results. Special emphasis on: crude distillation with several circulating flow rates (refluxes); cracking of gas oil, atmospheric and vacuum residues; protective systems in petroleum processing plants; transport of highly viscous crude oil.	Technological University Leuna-Merseburg Gausaer Str. Merseburg 4200 German Democratic Republic	24 June-3 July 1987	Engineers, chemists and physicists who work in the field of crude processing. English	31 March 1987	To be arranged
Chemical engineer	Courses in: biotechnology; modern methods of food control; new protein sources in the food industry; chemical process control; chemical process engineering; a unit process for fibre and textile chemistry; textile chemical technology.	Technical University of Budapest Department of Studies Budapest, XI. Műgyetem rkp. 3/9 Hungary, H-1111	February to May and October 4 weeks-10 months	Professional qualifications. English	-	\$300-2,500 (depending on course - excluding board and lodging)
Programming the development of the chemical industry	Special methodology based on the Decision Support System (DSS) implemented as a Multiobjective Interactive Decision Aid (MIDA) computer system, including the scientific background and case studies in the methodology. All important aspects of technology assessment from the macro-economic to the single investment level. Analysis of aspects of critical resource allocation and the environmental impact of industrial development.	Institute for Control and Systems Engineering Academy of Mining and Metallurgy (ICSE/AMM) Al. Mickiewicza 30 30-059 Krakow, Poland	June - September 2-3 weeks Two courses a year	Professional qualifications. Practical experience	To be arranged	To be arranged



CHEMICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Ammonia production from coal	The following subjects will be given: gasification processes - Winkler gasifiers, Koppers gasifiers; ammonia production - air separation, gas removal, CO conversion, ammonia synthesis; dilute and concentrated nitric acid production; ammonium nitrate production.	Türkiye Gübre Sanayii A.S. APK ve Egt. Dairesi Başkanlığı Konya Devletiyolu No. 70 Ankara, Turkey	September 1988 2 weeks	Professional qualifications. English	March 1988	To be arranged
Orientation course for engineers in the fertilizer industry	The following subjects will be given: 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	Türkiye Gübre Sanayii A.S. APK ve Egt. Dairesi Başkanlığı Konya Devletiyolu No. 70 Ankara, Turkey	September 1987 6 weeks	Professional qualifications. English	March 1987	To be arranged
Orientation course for technicians in the fertilizer industry	Maintenance planning and materials technology, maintenance of turbines, compressors and boilers, instrumentation technology, industrial safety	Türkiye Gübre Sanayii A.S. APK ve Egt. Dairesi Başkanlığı Konya Devletiyolu No. 70 Ankara, Turkey	May 1988 4 weeks	Experience in the fertilizer industry	January 1988	To be arranged
Plastic forming	General information, machinery used, metals used in cold forming, calculations in cold forming, applications in manual plastic forming, extension and hammering procedures, general introduction to hot working, machinery for hot working, basic procedures of hot working, materials used, introduction to hot working machines and tools, drop hammering and friction press operation for open-die forging, drop hammering by open die forging, closed die forging on friction presses, die making, applications, heat treatment of dies.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 4 weeks	Professional qualifications. English	30 June 1987	\$US 1,000
Utilization of medicinal and aromatic plants in the pharmaceutical and related industries	Theoretical and practical courses, round-table discussions and field work on the 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 plants extracts into dosage forms, management of R&D, marketing, economic and regulatory aspects of medicinal and aromatic plants and drugs obtained therefrom.	University of Anatolia Medicinal Plants Research Centre Eskisehir Turkey	Autumn 1987 3-4 weeks	Professional qualifications and relevant experience. English	To be decided	-

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>ELECTRICAL AND ELECTRONIC INDUSTRIES INDUSTRIES ELECTRIQUES ET ELECTRONIQUES INDUSTRIAS ELECTRICAS Y ELECTRONICAS</b>						
Electrical engineering	Courses on: numerical solution of electromagnetic field problems; intelligent measuring instruments; modern computing aspects of electrical machines; modern methods in electrical machine measurements; production methods in microelectronics; digital image processing; technical aspects of microwave telecommunication; advances in microwave technology; speech recognition and synthesis; advanced methods of control engineering; microprocessor control and programmable logic controllers; fundamentals of the control of robots; advanced process instrumentation and control; application of microprocessors and development systems.	Technical University of Budapest Department of Studies Budapest, XI. Müegyetem rkp. 3/9 Hungary, H-1111	February, April, September, October 2 weeks - 2 months	Professional qualifications. English	-	\$US 200-650 (excluding board and lodging)
Electronics courses for industry	Courses in power electronics, electronic troubleshooting, introduction to data communication, the RS 232 interface, statistical multiplexing, satellite dish installation, electronics for electricians, component identification, electronic test equipment, introduction to digital hardware, advanced digital hardware, industrial electronics skills, advanced industrial electronics skills.	ANCO, The Industrial Training Authority 27-33 Upper Baggot St. Dublin 4 Ireland	Throughout the year	Professional or technical qualifications. English	-	To be arranged
Chemical processes in printed circuit board manufacture	The course is designed to give participants general knowledge of manufacturing single- and double-sided PC boards and detailed knowledge and experience in the chemical processes used.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Throughout the year 4 months	Professional qualifications English or Russian	-	\$US 3,000
Electronics industry	Chemical processes in printed circuit-board manufacture; photoprinting in printed circuit-board manufacture; machine treatment in printed circuit-board manufacture.	ZORPOT Group of Centres of Expertises and Technical Progress Zurawia 00-515 Warsaw Poland (Tele and Radio Research Institute)	Throughout the year 3-4 months	Professional qualifications. English	-	\$US 2,250-3,000
Machine treatment in printed circuit board manufacture	The course is designed to give participants general knowledge of manufacturing single- and double-sided PC boards and experience in machine treatment for this purpose.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Throughout the year 4 months	Professional qualifications. English or Russian	-	\$US 2,250

ELECTRICAL AND ELECTRONIC INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Photoprinting in printed circuit board manufacture	The course is designed to give participants general knowledge of manufacturing single- and double-sided PC boards and detailed knowledge and experience in photoprinting for this purpose.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Throughout the year 4 months	Professional qualifications English or Russian	-	\$US 3,000
Electronics	Courses can be arranged in: semi-conductors; microprocessors; technology and systems; microwave techniques; digital techniques.	IAL Bailbrook College London Road West Bath Avon BA1 7JD United Kingdom	To be arranged	Professional qualifications. English	-	To be arranged
Electronics	Courses in: introductory electronics; digital techniques; microprocessors; semi-conductors; data communications.	IAL Bailbrook College London Road West Bath Avon BA1 7JD United Kingdom	Throughout the year 2-52 weeks	Professional qualifications. English	-	To be arranged
Integrated circuit development and production	Introduction into integrated circuit development and production; plant engineering, equipment and facility requirements for integrated circuits production; physics and technology of integrated circuits; processes for integrated circuit production; electrical testing of integrated circuits; integrated circuit mask design; quality and reliability of integrated circuits; integrated circuit type engineering; integrated circuit mask design; mask production line; mos ion implantation line; diffusion and oxidation line; photo etching line; metal deposition line; electrical testing line; CVD thin film and epitaxial growth line; assembly and environmental testing line; gas and DI water production line; wafer and package production lines.	Faculty of Electronic Engineering University of Niš 14 Beogradaska, Niš Yugoslavia	To be arranged (February each year) 8 months	Professional qualifications. English	15 May each year for the following year	To be arranged

FOOD PROCESSING INDUSTRIES  
INDUSTRIE ALIMENTAIRE  
INDUSTRIAS ALIMENTARIAS

Marine fishery Pêche maritime	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, etc.	International Training and Contact (I.T.C.) Formation et Contact International (F.C.I.) a.s.b.l. Velodroomstr. 68 B-2600 Antwerpen Belgium	13 March + 11 September 3 months	Professional qualifications. English or French alternatively	-	To be arranged
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FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Meat processing	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.	International Training and Contact (I.T.C.) Formation et Contact International (F.C.I.) a.s.b.l. Velodroomstraat 68 B-2600 Antwerp 68 Belgium	Throughout the year 10 weeks	Professional qualifications. English or French	-	To be arranged
Industrie sucrière de la betterave et technologie de la fabrication du sucre à partir de la betterave sucrière	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.	S.A. Société sucrière d'études et de conseils Aamdorenstraat 1 B-3300 Tienen Tirlemont Belgique	Octobre à décembre (cette période correspond à la campagne sucrière) variable	Diplôme universitaire ou équivalent. Français	-	A arranger
Fruit production	Theoretical and practical training course on fruit plantations, storing, selling and management.	International Training and Contact (I.T.C.) Formation et Contact International (F.C.I.) a.s.b.l. Velodroomstr. 68 2600 Antwerpen Belgium	Throughout year except July and August 12 weeks	Professional qualifications. English, French or Dutch	-	To be arranged
Modern methods in food processing	A training course which concentrates on practical work with pilot-scale food processing equipment with a few lectures in food microbiology, food packaging and sensory evaluation. Training is given in food preservation techniques (continuous heat, batch heat, chilling, freezing, drying), milling, baking and extrusion cooking.	The Jutland Technological Institute <u>Food Tech. Section</u> Teknologiparken 8000 Aarhus C Denmark	To be arranged 3 months	Advanced technical education or university degree. Written and spoken English	-	To be arranged

FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Extrusion cooking of foodstuffs	A training course which concentrates on practical work with pilot-scale extruders but backed up by lectures on extruder design, types of equipment and process modelling. The participants will be working with cereals, beans, fish and meat products on various single and twinscrew extruders.	The Jutland Technological Institute <u>Food Tech. Section</u> Teknologiparken 8000 Aarhus C Denmark	To be arranged 1-3 weeks	Advanced technical education or university degree. Written and spoken English	-	To be arranged
Refrigerating plant courses	The programme includes all sizes of refrigerating plants for food industry, process industry and air condition plants. The courses focus on operation, tending and maintenance of these plants.	The Jutland Technological Institute <u>Energy Tech. Section</u> Teknologiparken 8000 Aarhus C Denmark	To be arranged 3-4 weeks	English	6 months prior to start of course	To be arranged
Dairy training programmes	Organization and management of dairy co-operatives; quality control in milk production and the dairy industry; technology and marketing of fermented milk.	FAO/FINNIDA Finland	May-August 1987 4-5 weeks	Professional qualifications Endorsement by national authorities of participants' countries	-	-
Microbiologie des aliments	Microbiologie des boissons (eaux, bières, vins, jus de fruits), des coquillages et des poissons; microbiologie des laits et des produits laitiers; microbiologie des viandes et des produits carnés; étude des principaux microorganismes rencontrés dans les aliments; micro-organismes des laits; les toxoinfections alimentaires.	Institut Pasteur de Lille B.P. 245 1, rue du Pr Calmette F-59019 Lille Cédex France	Mai, septembre, octobre 1987 1-2 semaines	Qualifications professionnelles. Français	-	7 4,000-6,000 environ
Automation of food production processes	Analysis of, and model formation for, selected processes of food production; structuring of control systems; presentation of practical examples.	Berlin Humboldt University Unter den Linden Berlin 1086 German Democratic Republic	3 weeks To be arranged	Engineers, technologists. English	31 March 1987 31 March 1988	To be arranged

FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Technology for producing and storing maize and cereals	Production technology and processing of the plants concerned, problems of their adaptation to the ecological conditions of developing countries. Introduction to the methods of plant improvement, agrochemistry and system organization. Planning and development of plant production. The proportion of theoretical and practical training is 40 to 60 per cent.	University of Agricultural Sciences Tropical Training Department 2103 G8d8118 P.O. Box 303 Hungary	1 April 1987 4 months	University degree. English, French or Spanish	28 February 1987	\$US 2,400 with full board
Food production	The course will cover the practical and theoretical aspects of processing Indonesian foods (kecap, tempe, tauco, tape, tahu, etc.).	Institute for R&D of Agro-Based Industries (IRDABI) Jl.Ir.H. Juanda 5-9 Bogor, Java Indonesia	To be arranged 1-2 months	Professional qualification. Indonesian and/or English	-	To be arranged
Post-harvest prevention of paddy/rice loss	Post-harvest systems, physical and biochemical properties of rice, harvesting systems, drying systems, storage and handling systems, rice milling systems, rice bran oil extraction, utilization of rice mill by-products.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Republic of China	To be decided 4 weeks	Middle-level management officials of central and regional government agencies of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Quality control for processed foods	Basic principles of quality control, controlling the quality of raw materials from the production point, modern methods of processing foods and built-in quality control, management aspects of quality control, nutritional aspects in maintaining food quality, problems encountered in controlling food quality.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Republic of China	To be decided 4 weeks	Senior-level officials of small and medium food processing industries of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations

FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Industrie sucrière	Cours sur le contrôle chimique des sucreries comprenant une introduction à la production du sucre, l'organisation d'une sucrerie, le rôle du chimiste, les buts et la base du contrôle chimique, définition des termes, la pesée, la mesure de l'eau des condenseurs, les balances; entretien et étalonnage, l'échantillonnage, l'organisation d'un laboratoire de sucrerie, préparation des divers bulletins, inventaire des produits sucrés, analyses des divers produits d'une sucrerie, analyses spéciales, contrôle de la qualité des sucres, méthodes de paiement de la canne des planteurs, les principes du management, les sous-produits. Cours théoriques et pratiques avec stages dans divers laboratoires.	Centre régional de formation sucrière pour l'Afrique avec l'Institut de recherches de l'industrie sucrière de Maurice comme agent d'exécution Réduit Maurice	Mai 3 mois	Licence ou diplôme dans un sujet approprié. Français	Fin mars	\$US 2,500
Industrie sucrière (canne à sucre)	Cours sur l'agronomie de la canne à sucre comprenant la botanique, les sols, la biométrie et l'expérimentation aux champs, les opérations culturales, la physiologie, les fertilisants et la fertilisation, le breeding et la génétique, la mécanisation aux champs, le transport, les maladies, insectes nuisibles et les mauvaises herbes et leur contrôle, l'irrigation et le drainage, les principes du management et les sous-produits. Cours théoriques et pratiques plus 12 colloques sur des sujets d'intérêt pratique.	Centre régional de formation sucrière pour l'Afrique avec l'Institut de recherches de Maurice comme agent d'exécution Réduit Maurice	Mai 3 mois	Licence ou diplôme dans un sujet approprié et expérience pratique. Français	Fin mars	\$US 2,500
Sugar industry (sugar-cane)	Course on the chemical control of sugar factories covering outline of sugar manufacturing processes, factory organization, duties of the chemist, purpose of chemical control, basis of factory control, definition of terms, methods of weighing, scales, condenser water, sampling, sugar laboratory organization, calculation of reports, stock-taking, practical sugar analysis, analysis of all sugar factory products, special analyses, quality control of sugar, planters' cane payment systems, principles of management, by-products. Theoretical, analytical and practical at various factory laboratories.	Regional Sugarcane Training Centre for Africa with Mauritius Sugar Industry Research Institute as executing agency Réduit Mauritius	September 3 months	University degree. English	End June	\$US 2,500

## FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Sugar industry (sugar-cane)	Course on sugar-cane agronomy covering botany, soils, biometry and field experimentation, cultural practices, physiology, fertilizers and fertilization, breeding and genetics, field mechanization, transport, diseases, pests and weeds and their control, irrigation and drainage, principles of management, by-products. Theoretical and practical plus 12 group discussions on selected specialized subjects.	Regional Sugar-cane Training Centre for Africa with Mauritius Sugar Industry Research Institute as executing agency Réduit Mauritius	September 3 months	University degree or relevant diploma with practical experience. English	End June	\$US 2,500
Industrie sucrière (canne à sucre)	Cours sur la fabrication du sucre comprenant le transport, la manutention et la préparation de la canne, le broyage, le réchauffage, la pesée et la clarification du jus de canne, la filtration des boues, l'évaporation, la cuite, le malaxage, le turbinage, le séchage, l'emballage et l'emmagasinage du sucre, le raffinage, la production de la vapeur, la production de l'énergie électrique, les séquences de démarrage et d'arrêt d'une sucrerie, l'introduction au contrôle chimique, les principes de management et les sous-produits. Cours théoriques et pratiques dans des sucreries.	Centre régional de formation sucrière pour l'Afrique avec l'Institut de recherches de l'industrie sucrière de Maurice comme agent d'exécution Réduit Maurice	Mai 3 mois	Licence ou diplôme dans un sujet approprié et expérience pratique. Français	Fin mars	\$US 2,500
Sugar industry (sugar-cane)	Course on cane sugar processing covering cane handling and preparation, milling, juice weighing, heating and clarification, mud filtration, evaporation, pan-boiling, crystallization, centrifuging, sugar drying, bagging and storage, sugar refining, steam generation, power generation and utilization, factory start-up and shut-down procedures, introduction to chemical control of sugar factories, principles of management, by-products. Theoretical and practical in sugar factories.	Regional Sugar-cane Training Centre for Africa with Mauritius Sugar Industry Research Institute as executing agency Réduit Mauritius	September 3 months	University degree or relevant diploma with practical experience English	End June	\$US 2,500
Technologie alimentaire	Thermodynamique, mécanique, électronique, transfert de masse et de moment, opérations unitaires.	Section de technologie alimentaire Institut agronomique et vétérinaire Hassan II BP 6202 Instituts Rabat Maroc	Septembre-juillet	Baccalauréat + concours d'entrée à l'APESA. Français	Mai	-



FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Cereal chemistry	Training in cereal laboratory methods; both chemical and physical, and the relation between analytical results and technology; technology of milling for food or feed, baking of bread, biscuits and flour confectionary products, extrusion cooking, roasting, steaming, drum drying, pasta production and pelleting.	TNO Cereals, Flour and Bread P.O. Box 15 6700 AA Wageningen Netherlands	To be arranged	Professional qualifications. Dutch, English or German	-	To be arranged
Food industry	Courses on: meat processing; fish handling and preservation; cereal technology.	TNO Division for Nutrition and Food Research P.O. Box 360 (Utrechtseweg 48) 3700 AJ Zeist Netherlands	To be arranged 3-6 weeks	Professional qualifications. English, Dutch	-	To be arranged
Food sector technology and management	Introduction; food technology (identification phase), management (choice and implementation), in-plant applications (exercise and contact development), plan of action and presentation before an expert audience.	Research Institute for Management Science (RVB) 11, Mijnbouwplein P.O. Box 143 2600 AC Delft Netherlands	9 March 1987 13 1/2 weeks	Professional qualifications and relevant job and sector experience. English	15 December 1986	f.15,500 (tuition only)
Cereal technology	Training in cereals technology with emphasis on the production of 'composite flours', covering milling, grinding and baking at village level.	TNO Division of Nutrition and Food Research P.O. Box 360 (Utrechtseweg 48) 3700 AJ Zeist Netherlands	To be arranged 4-6 weeks	Professional qualifications. English, Dutch	-	To be arranged
Fish handling and processing	Theoretical and practical instruction with respect to: microbial and chemical spoilage of fish; quality control; fish preservation techniques; storage; transport and international legal aspects.	TNO Division for Nutrition and Food Research P.O. Box 360 (Utrechtseweg 48) 3700 AJ Zeist Netherlands	To be arranged 4-6 weeks	Professional qualifications. English, Dutch	-	To be arranged

## FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Meat processing	Training in meat plant management; meat processing, including edible and non-edible by-products, hygiene and quality control and food legislation aspects.	TNO Division for Nutrition and Food Research P.O. Box 360 (Utrechtseweg 48) 3700 AJ Zeist Netherlands	To be arranged 4-6 weeks	Professional qualifications. English, Dutch	-	To be arranged
Ciencia y tecnología de alimentos	Fundamentos científicos de la tecnología de alimentos, de sus procesos industriales, de la técnicas de control de fabricación y de los problemas específicos de las principales industrias de la alimentación. Comprende cuatro asignaturas generales y una de las asignaturas de tecnología específica, con clases teóricas y prácticas, sesiones de seminario y visitas a fábricas. Además y con objeto de estimular la capacidad creadora y espíritu crítico del alumno, cada uno de ellos desarrollará a lo largo del curso, un trabajo de investigación sobre un tema de interés en tecnología de alimentos. 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.	Instituto de Agroquímica y Tecnología de Alimentos (CSIC) C/. Jaime Roig 11 Valencia 46010 España	15 septiembre 10 meses	Calificaciones profesionales Español	Julio	Ptas 75,000 (Ptas 15,000 alumno, gasto por trabajo experimental)
Especialización en grasas	Consta de 5 Grupos de materias; Características generales de las grasas; análisis de las materias grasas; extracción del aceite de oliva; extracción de aceites de semillas y orujo de aceitunas; transformación de grasas comestibles y de grasas industriales.	Instituto de la Grasa y sus Derivados C.S.I.C. Avda. Padre García Tejero, No. 4 41012 - Sevilla España	9 de noviembre de 1987 5 meses	Titulación universitaria superior o de grado medio. (O titulación equivalente de otros países). Español	15 de octubre de 1987	75.000 ptas., para cursar los 5 Grupos y/o 20.000 ptas., para cursar un Grupo aislado
Milling technology	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 subunits in pneumatics, electrotechnics and programmable control systems; course also covers brewing technology and oat milling techniques as well as technical drawing and plant management.	The Swiss School of Milling Tellstrasse 2 CH-9000 St. Gallen Switzerland	1st Monday in September each year 10 months	Professional qualifications. (Experience in practical cereal processing.) German or English alternatively	1 year in advance	SwF 1,800
Beet sugar production	All aspects of the production of beet sugar including supervisory skills, industrial safety and management techniques.	BSD Limited (British Sugar PLC) P.O. Box 26 Oundle Road Peterborough PE2 9QU United Kingdom	September- December Up to 4 months	Professional qualifications. English	-	To be arranged

FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Beet sugar production and technology	Short courses on: process technology; new developments in sugar industry; welding; training of electrical and mechanical engineers for sugar factories; process instrumentation.	BSD Limited (British Sugar PLC) P.O. Box 26 Oundle, Road Peterborough PE2 9QU United Kingdom	Throughout year 3 days- 10 months	Professional qualifications. English	-	To be arranged
Sugar beet	Practical instruction in all aspects of factory management and field agronomy including: beet delivery and sampling, extension services, field operations from sowing to harvesting, pest and disease control, herbicide application and weed control, complete crop maintenance.	BSD Limited (British Sugar PLC) P.O. Box 26 Oundle Road Peterborough PE2 9QU United Kingdom	Throughout year 3 days- 10 months	Professional qualifications. English	-	To be arranged
Advanced pesticide residue analysis	Analysis of organophosphorus, carbamate and pyrethroid pesticides, analysis of "unknown" samples, development, modification and assessment of analytical procedures, determination of analytical procedures for one or more compounds on a range of substrates, introduction to other clean-up techniques, analysis of fungicide residues, introduction to HPLC, UV/visible spectrophotometric and fluorescence detection systems. Use of HPLC for residue analysis.	Tropical Development and Research Institute (TDRI) 127 Clerkenwell Road London EC1R 5DB United Kingdom	January	Professional qualifications in chemistry, completion of introductory programme or practical experience. English	15 October	To be arranged
Aflatoxin analysis and mycotoxins	Aflatoxin: modern analytical techniques such as HPLC, HPTLC, etc. to aflatoxin analysis. Mycotoxins: analytical methods, bioassay, sampling, human and animal toxicology, legislation, storage and detoxification.	Tropical Development and Research Institute (TDRI) 127 Clerkenwell Road London EC1R 5DB United Kingdom	Late March 13 weeks	Knowledge of chemistry at least equal to university entrance level and/or appropriate experience. English	1 January	To be arranged
Basic food microbiology	Nature and enumeration of micro-organisms, identification of indicator organisms and pathogens, public health, hygiene and sanitation, microbial spoilage, physical and chemical agents for food preservation, micro-organisms in the fermentation industry, microbial ecology of selected food commodities, design and operation of a microbiology laboratory.	Tropical Development and Research Institute (TDRI) 127 Clerkenwell Road London EC1R 5DB United Kingdom	April	Experience in microbiology, a related discipline or food technology. English	1 January	To be arranged

FOOD PROCESSING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Introduction to pesticide residue analysis	Introduction to gas liquid chromatography (GLC) and to the use of the electron capture detector (ECD), techniques for sampling, grinding and blending, primary extraction procedures, sample clean-up, GLC separator of mixtures using ECD and a range of chlorinated insecticides, preparation and storage of pesticide solutions, operation and use of the Flame Photometric Detector, introduction to the use of the Alkali Flame Ionization Detector (Thermionic Detector (TID)), analysis of synthetic pyrethroids.	Tropical Development and Research Institute (TDRI) 127 Clerkenwell Road London EC1R 5DB United Kingdom	September 13 weeks	Professional qualifications in chemistry, with several years' recent practical experience in analytical work. English	15 June	To be arranged
Post-harvest technology of fruit, vegetables and root crops	The principles of perishable crop handling and their application to commercial operation.	Tropical Development and Research Institute (TDRI) 127 Clerkenwell Road London EC1R 5DB United Kingdom Venue: TDRI Storage Department, Slough (near London Airport)	April 13-15 weeks	Degree or equivalent in biology, agriculture or engineering or appropriate experience. English	15 January	To be arranged
Storage of durable agricultural products in the tropics	Storage of cereals, grain, legumes, oil-seeds, coffee, cocoa, etc., including: storage losses, inspection methods, climate and storage, insect identification, chemical control, fumigation, moisture content, storage systems and structures, rodents, packaging.	Tropical Development and Research Institute 127 Clerkenwell Road London EC1R 5DB United Kingdom Venue: TDRI Storage Department, Slough (near London Airport)	Mid-August 4-6 months	Degree or equivalent in biology, agriculture or engineering or appropriate experience. English	1 June	To be arranged
Industria alimentaria	Esterilización en la industria.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	20 de mayo 7 semanas	Técnicos y supervisores. Español	13 de mayo	\$US 110
Refrigeración industrial	Principios básicos y operación eficiente y seguro de sistemas.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	22 de julio 7 semanas	Técnicos y supervisores. Español	15 de julio	\$US 110

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
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GLASS AND OPTICAL INDUSTRIES  
INDUSTRIE DE LA VERRERIE ET DE L'OPTIQUE  
INDUSTRIAS DEL VIDRIO Y OPTICAS

Sciences et techniques verrières	Formation scientifique et technique dans le domaine du verre ; enseignement dans les sciences existantes et dans les disciplines ou techniques nouvelles.	Ecole supérieure du verre - E.S.V. c/o C.I.Fo.P. 1b, av. Général Michel B-6000 Charleroi Belgique	A arranger 1-6 mois	Français, anglais	-	A arranger
Glass reinforced plastic technology	Safe working practice, basic polymer chemistry, material selection, contact moulding practices, plug and mould manufacture, mechanical processes, faults analysis, cutting, trimming and finishing.	Marine Builders Training Trust Hazel Road Woolston Southampton SO2 7GB United Kingdom	January 1987 May 1987 September 1987 6 weeks	English	4 weeks before start of course	£1,200

LEATHER AND LEATHER PRODUCTS INDUSTRIES  
INDUSTRIE DU CUIR ET DES ARTICLES EN CUIR  
INDUSTRIAS DEL CUERO Y DE LOS PRODUCTOS DE CUERO

Tecnología del cuero	Período de adiestramiento sobre: procesos de fabricación, control de calidad, efluentes de curtiembre.	Centro de Investigación de Tecnología del Cuero (CITEC) Camino Centenario e/505 y 508 (Casilla de Correo No. 6) 1897 M. B. Gonnet Argentina	1º Abril 1987 3-6 meses	Ingeniero o licenciado en química egresado de escuelas técnicas de curtiduría. España	1º febrero 1987	A convenir
Chimie et technologie de la fabrication du cuir	Bases de chimie générale, organique et analytique nécessaires à l'étude de la chimie du cuir et aux travaux de laboratoire, chimie et technologie de la fabrication du cuir : composition et structure de la peau, conservation, défauts, étude détaillée des travaux de rivière ; tannages chrome, végétal, fourrure, etc. ; opérations après tannage ; finissage des cuirs, machines de tannerie, épuration des eaux ; méthodes de fabrication des différents types de cuir. 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.	Ecole belge de tannerie Quai Gloesmer 6 B-4020 Liège Belgique	Septembre 9 mois	Qualifications professionnelles. Français	25 juin	FB 80,000

LEATHER AND LEATHER PRODUCTS INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Leather garment design, patternmaking and manufacture	Creation design, planning and execution.	PISIE (International Polytechnic for Industrial and Economic Development) PO Box 364 Via S. Marco 13 60035 Jesi (An) Italy	1 September 4 months 1 March 4 months	Professional qualifications. English, French or Spanish on request	30 July 30 January	\$US 4,000 for 4 months
Leather goods design, patternmaking and manufacture	Fashion design, aspect of leather goods, patternmaking techniques, assembly techniques, management techniques, in-factory training, visual design, significance and functions of the advertising trademark, packaging systems and their uses.	PISIE (International Polytechnic for Industrial and Economic Development) PO Box 364 Via S. Marco 13 60035 Jesi (An) Italy	1 September 3 months 1 March 3 months	Professional qualifications. English, French or Spanish on request	30 July 30 January	\$US 3,000 for 3 months
Shoe design, patternmaking and manufacture	Design and patternmaking techniques, manufacturing plants and techniques, production techniques for footwear components, visual design, in-factory training and field trips.	PISIE (International Polytechnic for Industrial and Economic Development) PO Box 364 Via S. Marco 13 60035 Jesi (An) Italy	1 January 3 months 1 July 3 months	Professional qualifications. English, French or Spanish on request	30 November 30 May	\$US 3,500 for 3 months
Leather quality control	Theoretical and practical training in laboratories covering leather and leather goods quality control, physical as well as chemical, and environmental control activities.	TNO Leather and Shoe Research Institute Mr. van Coothstraat 55 5141 Er Waalwijk Netherlands	April and September 1987 and 1988 13 weeks	Engineering or chemistry degree. English	1 January and 15 May	To be arranged
Leather technology	Technical training courses for work and departmental managers in leather-producing factories (tanneries). Practical training in the manufacture of the desired types of leather with regard to the chemical-technological part, to mechanical operations and environmental problems. Procedures are made available and discussed, attention is given to knowledge of sorting and judging hides and skins, semi-manufactured and finished leather. In the mechanical operations knowledge and maintenance of machines and safety measures are treated. Alternating with the practical part of the training a theoretical course is given.	TNO Leather and Shoe Research Institute Mr. van Coothstraat 55 5141 Er Waalwijk Netherlands	April and September 1987 and 1988 13 weeks	Professional qualifications. English	1 January and 15 May	To be arranged

LEATHER AND LEATHER PRODUCTS INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Shoe designing and pattern cutting	Sizing system and insole designing and pattern cutting; upper designing and pattern cutting; designing and pattern cutting of different types of shoes; grading upper and insole patterns; designing, pattern cutting and making a shoe up to bottoming; the trainee will create a shoe to his own idea and translate his idea into a functional and fashionable shoe.	TNO Leather and Shoe Research Institute Mr. van Coothstraat 55 5141 Er Waalwijk Netherlands	April and September 1987 and 1988 13 weeks	Professional qualifications. English	1 January and 15 May	To be arranged
Basic leather production techniques	Introduction to leather manufacture and the opportunity for course 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.	National Leather-sellers Centre Nene College Moulton Park Campus Northampton NN2 7AL United Kingdom	Through-out year 4 weeks Longer courses can be arranged	Professional qualifications. English	Two months before start of course	£1,000
Tannery effluent treatment and the recycling of process liquors	The course deals with the treatment of tannery waste liquors and current legislation for disposal in various countries. Course 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.	National Leather-sellers Centre Nene College Moulton Park Campus Northampton NN2 7AL United Kingdom	Through-out year 4 weeks Longer courses can be arranged	Professional qualifications. English	Two months before start of course	£1,000
Physical testing and chemical analysis of leathers, chemicals and process liquors	An introduction to testing and analysis in a leather control laboratory based on official methods of analysis of the International Union of Leather Technologists and Chemists. Course will cover sampling, sample preparation, physical and fastness tests on selected leathers. Analysis of chromium and vegetable tanned leathers and chromium and vegetable tanning materials. Analysis of waste tanning liquors.	National Leather-sellers Centre Nene College Moulton Park Campus Northampton NN2 7AL United Kingdom	7 July 1986 4 weeks	Professional qualifications. English	-	£750

Course or seminar	General description	Organizer; Venue	Duration	Commencing date; Language requirements	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>MECHANICAL AND METALWORKING INDUSTRIES</b>							
<b>INDUSTRIE DE CONSTRUCTION MECANIQUE ET DE TRANSFORMATION DE METAUX</b>							
<b>INDUSTRIAS MECANICAS Y DE TRANSFORMACION DE METALES</b>							
Construction métallique	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.	Spoorwegmateriel en Metaalconstructies, BN Vaartdijkstraat 5 B-8200 Brugge Belgique	A arranger 3 mois approx.		Qualifications professionnelles. Français, anglais ou néerlandais	-	A arranger
Mécanique générale	Large éventail de sujets dans le domaine de la mécanique générale.	Spoorwegmateriel en Metaalconstructies, BN Vaartdijkstraat 5 B-8200 Brugge, Belgique	A fixer 3 mois en moyenne		Qualifications professionnelles. Français, anglais ou néerlandais	-	A arranger
Shipbuilding	Statistical evaluation of wave bending moments and shear forces; phase angles between the components of the load; design loads; statistical estimation of the geometrical characteristics of as-rolled and as-built hull frames and ship's hull cross-sections; topics of primary importance for the ship as a whole - reliability analysis of ship structures based on the most advanced technique; the mathematical basis of statistical dynamics, formulation of the spaces of loads, reactions, quality, acceptable limits.	Bulgarian Ship Hydrodynamics Centre in collaboration with the technical institute in Varna Varna 9003 Bulgaria	Through-out the year 2-7 months variable		Professional qualifications. English Russian	-	To be arranged
Shipbuilding	Advanced methods for ship resistance reduction and wave resistance theories; application of wave resistance theory in ship design; investigation of ship resistance and squat in restricted waters; application of boundary layer theory in 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 for energy and fuel saving.	Bulgarian Ship Hydrodynamics Centre Varna 9003 Bulgaria	Through-out the year 2 weeks - 10 months variable		Professional qualifications. English Russian	-	To be arranged
Advanced hydrodynamics theory and applications in shipbuilding and hydraulic machines	Short or longer-term courses on: kinematics of flow field, equations of motion, basic principles, acquisition of potential solutions, approximate and numerical methods, basic and applied boundary layer theory, foil theory, free-streamline and cavity flows, body hydrodynamics.	Bulgarian Ship Hydrodynamics Centre in collaboration with the technical institutes in Varna and Sofia Varna 9003 Bulgaria	Through-out the year variable 3 weeks - 4 months		Professional qualifications. English Russian French	-	To be arranged



MECHANICAL AND METALWORKING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Technologie industrielle	Cours de : menuiserie aluminium, soudure; froid industriel; hydraulique.	Chambre de métiers des Deux-Sèvres Centre de formation du Moulin des Isles 79400 St. Georges-de-Noisne France	Octobre et mars 200 h	Français	2 mois avant démarrage	FF 6,000
Welding	Courses in welding for engineers and technicians held in many countries of the world throughout the year are available through the kind offices of the International Institute of Welding.	International Institute of Welding 32 Bd. de la Chapelle 75880 Paris Cedex 18 France	Through-out the year	Professional qualifications. Courses held in various languages	-	-
Welding technology	Basic and upgrading skills in all aspects of welding.	AnCO, The Industrial Training Authority 27-33 Upper Baggot St. Dublin 4 Ireland	Through-out the year	Professional or technical qualifications. English	-	To be arranged
Agricultural mechanization for managers of agricultural machinery pools	The role of mechanization for different environments and crops, optimum use from the technical and economic points of view.	CORI SpA Centro Studi Agricoli Borgo a Mozzano 55060 Mutigliano/ Ponte del Giglio Lucca Italy	September 1987 (English) September 1988 (French)	Professional qualifications.	June 1987 June 1988	To be arranged
Fishing vessel technology	Fishing vessels, fishing gear design, fishing operations.	Norwegian Institute of Technology University of Trondheim in collaboration with NORAD N-7034 Trondheim Norway	August-September 10 months	Professional qualifications. 2-5 years' experience	31 January	-
Mechanical engineering design	Application of finite element/boundary element methods. The course is designed to enable engineers to model, solve and evaluate results for a number of mechanical design problems in industry.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Through-out the year 2 weeks course plus 3-6 months training	Professional qualifications. English	-	To be arranged

## MECHANICAL AND METALWORKING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Les machines-outils	Rôle des machines-outils, contact avec les machines, ajustage-tournage, ajustage-fraisage, rectification, entretien et maintenance des machines outils.	Division atelier central Atelier machines-outils Direction des équipements SAED Ross-Béthio Via Saint-Louis BP 74 Sénégal	-	-	-	-
Machinisme agricole	Présentation du tracteur - les différentes parties, le moteur diesel; fonctionnement, les outils portés, le travail du sol, défense des cultures, matériel de récolte.	Division formation mécanique Direction des méthodes de développement SAED Ross-Béthio Via Saint-Louis BP 74 Sénégal	Stage long 6 mois ou 24 semaines ou stage de courte durée 9 semaines	A arranger	-	-
Mechanical technology	Compulsory course in machine technology plus any two of the following options: metal turning, grinding, milling, internal combustion engines, automotive technology, heating and ventilation.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 2 weeks	Professional qualifications. English	30 June 1987	\$US 1,500
Patternmaking	Introduction to patternmaking, materials and tools, classification of patterns by materials and moulding methods, machine finish and shrinkage allowances, technical drawing for pattern construction, construction and painting of patterns, moulding sands and moulding, core boxes and cores, production and drying of cores, metal patterns, gating and feeding, preparation, melting and pouring of a copper-zinc alloy, mould making and pouring for aluminium castings.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 5 weeks	Professional qualifications. English	30 June 1987	\$US 1,000
Welding	Classification, oxyfuel gas welding applications, fillet and pipe welding applications, oxyfuel gas welding equipment and properties, vertical and overhead pipe welds, oxyfuel cutting techniques, brazing of copper and copper alloys, welding of Al and Al alloys, brazing, soldering, applications and testing, resistance welding, welding of cast irons, arc welding, gas metal and gas tungsten arc welding, submerged arc welding.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 3 weeks	Professional qualifications. English	30 June 1987	\$US 1,000

MECHANICAL AND METALWORKING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Machining processes	Practical training in the operation of machine tools including centre lathes, horizontal and vertical milling machines, surface grinding and shaping machines.	Metcon Training 14 Pall Mall London United Kingdom	August- November February-May 13 weeks	English	-	-
Welding technology and inspection	Design, metallurgical processes and inspection, aspects of welds. Practical case study work.	Scottish School of Non-destructive Testing Paisley College High Street Paisley PA1 2BE United Kingdom	Throughout yes. 2-4 weeks	Experience of the welding industry. English	-	£310 (2 weeks) £500 (4 weeks)
<u>METALLURGICAL INDUSTRIES</u> <u>INDUSTRIE METALLURGIQUE</u> <u>INDUSTRIAS METALURGICAS</u>						
Metalurgia	Cursos en: muestreo de materiales a granel; la molienda autogena y sus aplicaciones al procesamiento de minerales; aplicabilidad de los modelos matemáticos al dimensionamiento y optimización de circuitos de molienda - clasificación; hidrometalurgia - lixiviación; pirometalurgia del cobre.	Centro de Investigación Minera y Metalúrgica (CIMM) Av. Pargue Institu- cional 6.500 Manquehue (Lo Recabarren) Casilla 170 Casilla 170 - Correo 10 Santiago, Chile	Marzo- Octubre 1-2 semanas	Calificación profesional. Español o inglés	1 mes antes de iniciar el curso	\$US 400 - 1,200
Welding	Courses in welding for engineers and technicians held in many countries of the world throughout the year are available through the kind offices of the International Institute of Welding.	International Institute of Welding 32 Bd. de la Chapelle 75880 Paris Cedex 18 France	Through- out the year	Professional qualifications. Courses held in various languages	-	-
Testing at foundries	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.	Mining Academy in Freiberg Akademiestr. 6 Freiberg 9200 German Democratic Republic	To be arranged 1-4 weeks	Foundry engineers and materials technologists English	31 March 1987 31 March 1988	To be arranged

**METALLURGICAL INDUSTRIES (continued)**

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Foundry technology	Principles of hand moulding, the foundry shop, moulding processes, moulding equipment, patterns, flasks, gating systems and vents, pouring methods, feeders, cores, types of casting, re-melting furnaces, binders, tests, the overall process from design to production.	Asian Productivity Organization Akasaka 8-chome Minato-ku Tokyo 107, Japan Venue: Islamic Republic of Iran	August 1987 13 weeks	Foundry technicians in a manufacturing industry of APO member countries	3 months before start of course	\$US 200 per participant from profit-making organizations
Foundry technology seminar	Outline of the foundry industry in Japan, problems faced by the foundry industry in member countries, fundamentals of casting, patterns, melting and pouring, moulding sands and processes, core-making, finishing, heat treatment, remedies for defective casting, quality control, testing and inspection, management and leadership, environment and safety.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 4 weeks	Foundry engineers from industry and technical consultants of national productivity organizations, etc. of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Foundry technology training course	Principles of hand moulding, foundry shop, moulding processes, moulding equipment, patterns, flasks, gating systems and vents, pouring methods, feeders, cores, types of casting, remelting furnaces, binders, tests, the overall process from design to production.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Islamic Republic of Iran	August 1987 13 weeks	Foundry technicians in a manufacturing industry of APO member countries English	3 months before commencement	\$US 200 per participant from profit-making organizations
Metallurgy	Short courses on: specimen cutting and polishing, microscopic studies and their interpretation, heat treatment practices, hardness, tensile and impact testing, ultrasonic testing, X-ray radiography, thermal analysis, metal finishing, sand and bentonite testing, non-ferrous foundry practice, casting practice, steel foundry practice, statistical quality control.	Metal Industry Research and Development Centre Pakistan	1-4 weeks	Technical or professional qualifications.	-	PKs 150 per week (tuition only)
Iron and steel technology	Extractive metallurgy, iron ore preparation and evaluation, ferro-alloy production, iron ore sintering, blast furnace, open hearth, electric arc, LD converters, ladle metallurgy, vacuum and secondary processes; plastic working: rolling, forging, tube making, drawing, roll pass and die design; physical metallurgy: alloy and process design, metallography, roentgenography, mechanical and plastic properties, process modelling; control and measurements: mass and energy flow control, automation, nondestructive testing; chemical analysis: wet and instrumental analysis, standard analytical samples, water preparation and environmental protection.	Institute of Ferrous Metallurgy Gliwice Centrozap - Katowice 44-100 Gliwice ul. K. Miarki 14 Poland	To be arranged Not less than one month	Professional qualifications. English, Russian German	-	\$US 2,000 - 2,500

METALLURGICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
BOF and concast operation	Scrap handling operations, hot metal handling operations, furnace refractories and relining, the BOF process, slab caster, ladle metallurgy for different steel grades, process variables of concast, ingot teeming.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English	-	-
Cold rolling mills and finishing line electrical maintenance	Electrical equipment for hot rolled pickling lines, five-stand tandem mills, alkali cleaning lines, batch annealing lines, temper mills, hot rolled shear lines, tinning lines.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English	-	-
Cold rolling mills and finishing line operation	Introduction to the pickling process and acid generation, alkali cleaning lines, batch annealing lines, shearing lines with side trimming, temper rolling of cold-rolled sheet, temper rolling of tin-black sheet.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English	-	-
Foundry	Patternmaking, classification of patterns tapering, machining and shrinkage allowances, technical drawing for pattern construction, making simple patterns, plastic patterns and core boxes, moulding sand, gating feeding and risering of castings, making simple moulds, moulding of a single pattern without core, moulding of a split pattern, moulding of a pattern with a core print, moulding without a pattern, cupola furnaces, preparation, lining and drying of ladles, charging of cupola furnaces and melting of grey cast iron, problems in cupola operation and necessary precautions, cleaning of castings, casting defects, causes and necessary precautions, cast steel technology and the melting of steel, alloying elements and their effects on steel casting, moulding of steel castings, melting and pouring of cast steel, heat treatment of cast steel, crucible furnaces, lining of crucible furnaces, moulding for copper base alloy castings, preparation, melting and pouring of a copper-zinc alloy, mould making and pouring for aluminium castings.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 6 weeks	Professional qualifications. English	30 June 1987	\$US 1,000
Small-scale foundry operations for LDCs	Foundry technology, with emphasis on the special requirements of participants. Practical demonstration on moulding, core-making, cupola, arc and induction furnace operation, ladle lining, melting and casting of cast iron, steel, aluminium and copper alloys in the foundry of the Institute. Practical training on the above subjects in the foundry of Gazi University, study visits to foundries of various sizes.	Marmara Scientific and Industrial Research Institute Gebze Kocaeli Turkey	7 September 1987 7 September 1988 7 weeks	Professional qualifications and at least one year's practical experience English	26 June 1987 26 June 1988	Through UNIDO fellowships

METALLURGICAL INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Foundry technology	In-depth study of the basic principles of metal founding and their application, the effect of casting design and material selection, foundry principles in relation to specific processes in the manufacture and use of casting, foundry activities over a wide spectrum of production techniques.	Metcon Training 14 Pall Mall London United Kingdom	August- November February- May 13 weeks	English	-	-
Welding	Practical training in various forms of welding to a variety of international standards.	Metcon Training 14 Pall Mall London United Kingdom	August- November February- May 13 weeks	English	-	-

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)	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).	Centre d'études des matières plastiques Université de Liège 2, rue Armand-Stewart B-4000 Liège Belgique	Toute l'année sauf juillet et août 6 mois - 1 an	Ingénieur chimiste, licencié en sciences pharmaceutiques. Français	-	A arranger
Emballage	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 la qualité; les accessoires d'emballages; le transport des marchandises dangereuses; le corrosion; les machines d'emballages; visites d'usines et canaux de distribution.	Institut belge de l'emballage 15, rue Picard B-1020 Bruxelles Belgique	A fixer 3 mois en moyenne	Degré universitaire Français ou anglais	-	A arranger

PACKAGING INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Packaging design and engineering	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.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 3 weeks	Packaging engineers in industry and technical consultants of national productivity organizations, etc. of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Packaging technology	Retail packaging; packaging research; information/documentation; processability of packaging materials; quality control.	TNO Packaging Research Institute P.O. Box 169 2600 AD Delft Netherlands	To be arranged	Professional qualifications English	-	To be arranged
Packaging	All aspects of packaging use and manufacture: manufacturing methods, specifications and testing, laboratory practice, design of packaging, packaging machinery. Specialized modules cover analytical chemistry, distribution packaging, packaging and marketing.	PIRA - The UK Technical Centre for the Packaging Industries Randalls Road Leatherhead Surrey KT22 7RU United Kingdom	Various	Professional qualifications. English	-	To be arranged
<p>PRINTING INDUSTRIES INDUSTRIES GRAPHIQUES INDUSTRIAS GRAFICAS</p>						
Printing	Training courses specially organized for developing countries on: reproduction; offset printing.	PRINTPROMOTION GmbH Postfach 71 08 64 D-600 Frankfurt-71 Federal Republic of Germany	August 1987 11 months	Basic knowledge of photography Basic knowledge of printing	-	To be arranged
Printing industry	Courses on electronic composition (using the latest equipment); colour reproduction and platemaking; microcomputers for printers; bar coding systems; basics of printing and finishing; paper and film assembly; quality control; sheet fed lithography; web offset newspapers, electronic publishing, non-impact systems.	PIRA - The UK Centre for Printing Randalls Road Leatherhead Surrey KT22 7RU United Kingdom	To be arranged 1-4 weeks on average	Professional qualifications. English	-	To be arranged

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>PULP AND PAPER INDUSTRIES</b>						
<b>INDUSTRIE DE LA PATE A PAPIER ET DU PAPIER</b>						
<b>INDUSTRIAS DE LA CELULOSA Y EL PAPEL</b>						
Pulp and paper technology	Theoretical and practical training in: wood chemistry; pulp technology; paper technology; laboratory courses; individual research projects.	The Norwegian Institute of Technology Laboratory of Chemical Engineering, Pulp and Paper Laboratory N-7034 Trondheim NTH In collaboration with NORAD (Norwegian Agency for International Development) P.O. Box 8142 Dep. N.0033 Oslo 1, Norway	1 September 10 months	Admission through NORAD B.Sc. or M.Sc in chemistry or chemical engineering with experience in the pulp or paper industry English	Inquiries to NORAD	-
Pulp, paper and board technology	Pulping of raw materials; paper and pulp testing; papermaking technology; organization and management of research; wastepaper recycling; microbiological aspects of paper and board making; water and effluent treatment; energy conservation; water conservation; technical services; automation and computer control.	PIRA, Paper and Board Division Randalls Road Leatherhead Surrey KT22 7UR United Kingdom	To be arranged 2-6 weeks on average	Professional qualifications. English	-	To be arranged
<b>TEXTILE INDUSTRIES</b>						
<b>INDUSTRIE TEXTILE</b>						
<b>INDUSTRIAS TEXTILES</b>						
Textiles	Métriologie de 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.	Centexbel 24, rue Montoyer 1040 Bruxelles Belgique	Toute l'année sauf juillet et août 3-6 mois	Qualifications professionnelles. Français, néerlandais	-	A arranger



TEXTILE INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Industrie textile	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.	Centre de recherche et de contrôle lainier et chimique (CELAC) Zoning de Petit Rechain Avenue du Parc 69H B-4655 Chaineux Verviers Belgique	Toute l'année sauf juillet et août. A fixer	Qualifications professionnelles. Français	-	FB 20,000 par mois
Technologies textiles coton-laine	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 qualité, productivité et économie des procédés de fabrication.	Centre de recherche et de contrôle lainier et chimique et Laboratoire de Meulemeester de technologie des matières textiles Chaineux et Gand Belgique	10 septembre au 15 décembre	Qualifications professionnelles. Français	-	-
Hand weaving	Practical and theoretical training for persons wishing to establish a small business or craft industry. Training covers fibres, spinning techniques, dyeing, weaves, patterns, finishes, product and market development by identification of target buyers and product potential, make-up, packaging, etc.	Kilkenny Design Workshops Kilkenny Ireland	To be arranged 3-6 months	Minimum of one year's training in weaving and/or craft-based business management English	-	£1r 450 per week including bed and board
Textiles	The 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.	TNO Fibre Research Institute P.O. Box 110 2600 AC Delft Netherlands	To be arranged 4 days - 3 months	Professional qualifications. English or German	-	To be arranged
Textile industry	Spinning, weaving including preparation yarn and piece dyeing, finishing, printing, testing.	Ten Gate Consultants Egbert Gorterstraat 3 P.O. Box 58 7600 GD Almelo Netherlands	Throughout year 4-12 weeks	Graduate of technical school. English/German	-	To be arranged

TEXTILE INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Textile mill management	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, cotton and synthetics spinning, weaving, knitting, dyeing, finishing and printing. In-plant training, case study.	Ten Cate Consultants Egbert Gorterstraat 3 P.O. Box 58 7600 GD Almelo Netherlands in collaboration with the Textile Engineering College I.H.B.O. "De Maere" P.O. Box 1075 7500 BB Enschede Netherlands	September 4-5 months	Production managers and technical staff; minimum secondary level schooling, 2 years' experience in textile industry. English	August	To be arranged
International garment technology	Theoretical and practical training for work and departmental managers in clothing producing factories, covering: quality; assembling techniques; machinery; organization; pattern engineering techniques.	TNO Fibre Research Institute Clothing Department Hengelosestraat 715 7521 PA Enschede Netherlands	April 1987/1988 September 1987/1988 Duration: 8 weeks Courses to be arranged according to needs	Knowledge of clothing industry and/or some years of working experience in production English	1 February 1987/1988 1 July 1987/1988	f1.9,000
Textile industry	In-plant training of instructors for spinning fitters to enable them to use the Analytical Methods Productivity Systems approach.	Textile Industry Research and Development Centre Karachi Pakistan	Throughout the year 10-12 weeks	Technical qualifications 3 years' experience English/Urdu	-	-
Textile industry	In-plant training of instructors for weaving fitters to enable them to use the Analytical Methods Productivity Systems approach.	Textile Industry Research and Development Centre Karachi Pakistan	Throughout the year 72 working days	Technical qualifications 5 years' experience English/Urdu	-	-
Cotton fibre technology, testing and evaluation	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.	International Institute for Cotton Kingston Road Didsbury Manchester M20 8RD United Kingdom	April 1987 8 weeks	Education at least up to university entrance level and technical qualifications in either: (a) agricultural subjects, preferably related to cotton production, or (b) textile technology at least up to Higher National Diploma (or equivalent) level. English	28 February 1987	To be arranged

TEXTILE INDUSTRIES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Cotton textiles: management principles and techniques	Leadership; control data and procedure; work-force potential; selection; communications; training; health and safety.	International Institute for Cotton Kingston Road Didsbury Manchester M20 8RD United Kingdom (Fielden House Productivity Centre)	June 1987 4 weeks	Management trainees, supervisors, departmental managers, etc. English	31 March 1987	To be arranged
Sizing and weaving of cotton yarns	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.	International Institute for Cotton Kingston Road Didsbury Manchester M20 8RD United Kingdom	April 1987 8 weeks	A sound general education combined with some experience in the textile industry English	28 February 1987	To be arranged
Wet processing of cotton textiles	The final appearance, quality and performance of a fabric can be greatly enhanced, or on the other hand 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 emphasis therefore in this course is on these aspects of wet processing but there is sufficient flexibility in the course structure to allow attention to be given to dyeing and printing techniques if required.	International Institute for Cotton Kingston Road Didsbury Manchester M20 8RD United Kingdom	April 1987 8 weeks	A sound general education, preferably up to university entrance level; some practical experience in wet processing of textiles is essential. English	28 February 1987	To be arranged
Textile technology	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.	Shirley Institute Didsbury Manchester M20 8RX United Kingdom	Throughout year 1 day- 6 months	Professional qualifications. English	-	To be arranged

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>WOOD PROCESSING AND WOOD PRODUCTS INDUSTRIES</b> <b>INDUSTRIE DU BOIS ET DES ARTICLES EN BOIS</b> <b>INDUSTRIAS DE ELABORACION DE LA MADERA Y DE PRODUCTOS DE MADERA</b>						
Technologie du bois	Panneaux de particules; utilisation des copeaux; techniques de fabrication des panneaux de particules; équipements employés; contrôle de qualité des panneaux.	Station de technologie forestière Avenue du Maréchal Juin 1 B-5800 Gembloux Belgique	Toute l'année sauf juillet à septembre 2 mois	Qualifications professionnelles. Français	-	FB 15,000 par mois
Start and operation of furniture factory under local conditions	Examination of the local conditions for furniture production (manpower, know-how, machines, raw wood, market and economy); related wood technology courses; training in project management during project construction and factory establishment; training in management during operation of furniture factory; marketing organization - national and international marketing; follow-up projects.	The Jutland Technology Institute Wood Technology Section Teknologiparken 8000 Aarhus C Denmark	Once a year, September or to be arranged 2 months	Degree in engineering or technology English	3 months prior to start-up of course	To be arranged
Wood industry	Short courses (one month) arranged in developing countries and long courses (five months) arranged in Finland on topics defined in a three-year action plan.	Forestry Training Programme (FTP) National Board of Vocational Education Asematiehenkatu 4 A SF-00520 Helsinki Finland	-	English Spanish	-	Scholarships available
Woodworking industry	Materials, machines and accessories and applications, furniture design and applications, engraving and inlay, types of construction work applications, surface finishing processes, wood dyes, celluloidal, polyurethane and polyester varnishes, engraving and marquetry.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 6 weeks	Professional qualifications English	30 June 1987	\$US 1,000
Timber studies	All aspects of timber technology; management; marketing; specialization modules available in a wide range of subjects.	Buckinghamshire College of Higher Education High Wycombe Buckinghamshire United Kingdom	September 1987 10 months	Professional qualifications. English	-	£3,570

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Timber technology: timber engineering and wood protection	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.	Department of Civil Engineering and Department of Pure and Applied Biology Imperial College University of London London SW7 2BU United Kingdom	October 1987 12 months	Degree or appropriate relevant experience. English	May 1987	£5,700
Furniture technology and production management	Production management, design and marketing for furniture companies.	Furniture Industry Research Association Maxwell Road Stevenage Hertfordshire SG1 2EW United Kingdom	To be arranged 1-2 weeks	English	-	To be arranged

CHAPTER 2: TRAINING OPPORTUNITIES OFFERED BY INSTITUTIONS OTHER THAN UNIDO  
 CHAPITRE 2 : POSSIBILITES DE FORMATION OFFERTES PAR DES INSTITUTIONS AUTRES QUE L'ONU  
 CAPITULO 2: OPORTUNIDADES DE CAPACITACION OFRECIDAS POR INSTITUCIONES DISTINTAS DE LA ONU

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

AUTOMATION AND DATA PROCESSING  
 AUTOMATISATION ET TRAITEMENT DES DONNEES  
 AUTOMATIZACION Y PROCESAMIENTO DE DATOS

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Automated ship design	Short or longer-term courses covering all or separate fields, namely: trends in the development of scientific and technical progress in shipbuilding and marine economy and topical research programmes and perspective types of ships, 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 and application of computer technique in the automation of engineering activities, etc.	Bulgarian Ship Hydrodynamics Centre, in collaboration with the Shipbuilding Institute, the Shipbuilding Computer Centre and technical institutes Varna 9003 Bulgaria	Through-out the year Variable 4 weeks - 10 months	Professional qualification English Russian	-	To be arranged
Automation	Fundamentals of data structures, types of data bases, hierarchy, data base management system; implementation of CAD data bases.	CAD Research and Development Laboratory P.O. Box 112 Sofia 1113 Bulgaria	To be arranged	Professional qualifications English	-	To be arranged
Automation	Short practical courses on: analog and digital electronics, active filters, trouble shooting; microprocessors in instruments and control, intelligent sensors, realtime data acquisition and processing; force, length, thrust and torque measurements; non-destructive measurements.	Bulgarian Ship Hydrodynamics Centre Varna 9003 Bulgaria	Through-out the year 2-4 weeks	Professional qualification English Russian	-	To be arranged
Automation	Short course on numerical methods using ready libraries; presentation of curves and surfaces and numerical control machines. The course is designed for hydrodynamic and aerodynamic investigations and for experimental investigations in general.	Bulgarian Ship Hydrodynamics Centre Varna 9003 Bulgaria	Through-out the year 3 weeks variable	Professional qualifications English Russian	-	To be arranged

AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Microprocessors and microcomputers	Intensive course with both theoretical and practical emphasis in the field of microprocessors and microcomputers; laboratory sessions with 6800/6809 development system; exercises with 2920 analog microprocessors; personal and industrial microcomputers. Practical considerations; application in data processing and industrial control. Advanced techniques. On completion, participants should be able to implement microprocessor systems and specialized microcomputers.	Bulgarian Ship Hydrodynamics Centre in collaboration with the technical institutes in Varna and Sofia Varna 9003 Bulgaria	Throughout the year 6-12 weeks	Professional qualifications English Russian	-	To be arranged
Automation	History and development of numerical control, coding and controlling media, computerized numerical control (CNC), block formats and command functions, turning operation programming, milling, drilling, boring operation programming, manual and computer assisted part-programming, NC-program preparation system, NC machine tools. Lectures and discussions	Economic Corporation "Machine Tools and Robots", Central Machine Tool Research Institute Sofia, Bulgaria	2 April - 27 May 8 weeks	Graduate mechanics' engineers English	End of November	-
	organizing for numerical control - selection, procurement and installation of at the request of the participants, visits to plants using CNC machine tools.					
Automation	Intensive course for choice of the necessary configuration and application of technical means on the basis of PDP-11 minicomputers; basic and application PDP-11 software.	Bulgarian Ship Hydrodynamics Centre Varna 9003 Bulgaria	Throughout the year 2-6 weeks variable	Professional qualifications English Russian German	-	To be arranged
Automation	Courses on: real-time programming for micro- and minicomputers; step-by-step microprocessor devices design; microprocessor programming, programming languages Basic, Fortran, Assembler; basics, R&D procedures and maintenance of digital measuring devices and process control instruments; reliability of process control and measuring instruments.	Institute for Instrument Design Blvd. "Lenin" 7th km Sofia 1184 Bulgaria	1 May 1987 1 Sept. 1987 1 month, 1.5 months, 2 months	Professional qualifications English Russian	November 1986 December 1986 February 1987	To be arranged
Digital measuring devices	Basics, R & D procedures, maintenance.	Institute for Instrument Design Blvd. Lenin 7:h km Sofia 1184 Bulgaria	1 September 1987 1.5 months	Professional qualifications English Russian	December 1986	\$US 600

## AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Microprocessor programming - INTEL, MOTOROLA	Programming languages - Basic, Fortran, Assembler.	Institute for Instrument Design Blvd. Lenin 7th km Sofia 1184 Bulgaria	1 September 1987 3 months	Professional qualifications English Russian	February 1987	\$US 1,150
Microprocessor techniques	Step-by-step microprocessor devices design.	Institute for Instrument Design Blvd. Lenin 7th km Sofia 1184 Bulgaria	1 May 1987 2 months	Graduate engineers in electronics to work on developing new products English Russian	December 1986	\$US 900
Process control instruments	Basics, R&D procedures, maintenance.	Institute for Instrument Design Blvd. Lenin 7th km Sofia 1184 Bulgaria	1 May 1987 2 months	Professional qualifications English Russian	December 1986	\$US 900
Real-time programming for micro- and mini-computers	Real-time introduction.	Institute for Instrument Design Blvd. Lenin 7th km Sofia 1184 Bulgaria	1 May 1987 2 months	Professional qualifications English Russian	December 1986	To be arranged
Reliability of process control instruments	Basics, R&D procedures, maintenance.	Institute for Instrument Design Blvd. Lenin 7th km Sofia 1184 Bulgaria	1 May 1987 1 month	Technicians and engineers to work in testing and calibration units English Russian	December 1986	\$US 450
Computer-aided design	Computer-aided design system; hardware; basic system software; application software.	The State Committee for Science and Technical Progress CAD Scientific and Research Laboratory 55A Chapaev Street Sofia 1574 Bulgaria	24 March 1987 6 weeks	Professional qualifications. English	-	\$US 815



AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Interactive graphic system	Basic principles of computer graphics; application software; interaction; structure, description and functions of the two-dimensional interactive graphic system.	The State Committee for Science and Technical Progress CAD Scientific and Research Laboratory 55A Chapaev Street Sofia 1574 Bulgaria	26 May 1987 3 weeks	Professional qualifications. English	-	\$US 460
Automatización neumática	Funciones lógicas; elementos neumáticos, para operaciones lógicas; método paso a paso-mayor de automatización; método paso a paso-menor de automatización; método cascada; método lógico de elementos mínimos; automatización mediante integrados neumáticos y aplicación del método secuencial; condiciones en los mandos neumáticos; comparación entre los métodos de automatización.	INACAP Chesterton 7028 Santiago, Chile	A determinar 3 semanas	Ingenieros civiles o de ejecución Español	Abril 1987	\$US 300
Computer technology	Elementary, intermediary and advanced levels, computer software development and network planning.	P + R Techconsult Ltd. Assoc. of Advanced Technical Services GmbH P.O. Box 3885 Nicosia, Cyprus	1-8 weeks	Professional qualifications English (possibly Arabic)	-	Sfr. 3,300 to 7,800
Formation en automatique avancée et robotique	Donner à des techniciens, ayant une bonne connaissance des problèmes de la production, les outils indispensables à la mise en oeuvre des techniques de l'automatique (robots industriels).	Institut national des sciences appliquées de Lyon Formation continue Bât.: 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex France	5.10.87 au 26.03.88 900 h	Techniciens supérieurs en mécanique ou électrotechnique ou niveau équivalent Français	2 mois avant début du stage	FF 52,080 FF 52,080
Formation action en automatisation de la production	Permettre aux ingénieurs et techniciens chargés de la mise en oeuvre de l'automatisation dans l'entreprise de se former à partir de la résolution d'un problème posé par l'entreprise.	Institut National des Sciences Appliquées de Lyon Formation Continue Bât.: 601 20 Avenue Albert Einstein 69621 Villeurbanne Cedex France	120 à 250 heures sur 4 à 12 mois selon cas	Les salariés de l'entreprise chargés du problème d'automatisation Français	-	A fixer

## AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Formation intensive à l'informatique	Formation à la conception et au développement d'applications informatiques: 3 parties: Information système, système d'information, informatique industrielle.	Institut national des sciences appliquées de Lyon Formation continue Bât.: 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex, France	07.08.87 au 23.04.88 4.01.87 au 20.08.88 1,240 heures par session	Ingénieurs ou formation équivalente Français	2 mois avant début du stage	FF 28,875 FF 31,500 (candidats au Master)
Formation à la conception et fabrication assistée par ordinateur	Apporter une bonne connaissance de problèmes de production maîtrise de l'outil informatique en dessin assisté (D.A.O.) de méthodes et programmation de machines à commande numérique.	Institut national des sciences appliquées de Lyon Formation continue Bât.: 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex, France	19.10.87 au 26.02.88 600 h	Techniciens supérieurs, Ingénieurs en mécanique ou électromécanique avec 3 ans d'exp. prof. Français	2 mois avant début du stage	FF 28,920
Automatique et robotique industrielle	Méthodes et pratiques des commandes séquentielles; méthodes et pratique des asservissements et régulation; robotique industrielle; mémoire de synthèse.	Université de Paris-Nord IUT de St. Denis/ Génie mécanique et productique Place du 8 Mai 1945 92306 St. Denis Cedex 1 France	Novembre chaque année 240 heures	Technicien supérieur Français	Fin juin chaque année	FF 12,000
Conception et fabrication assistée par ordinateur	Conception assistée par ordinateur (CAO); fabrication assistée par ordinateur (FAO); logiciels d'application en productique; mémoire de synthèse.	Université de Paris-Nord IUT de St. Denis/ Génie Mécanique et Productique Place du 8 Mai 1945 92306 St. Denis Cedex 1 France	Novembre chaque année 240 heures	Technicien supérieur Français	Fin juin chaque année	FF 12,000
Informatique générale	Méthodes et langages de programmation; systèmes informatiques; bases de données intelligence artificielle.	Université de Paris-Nord IUT de St. Denis/ Génie mécanique et productique Place du 8 Mai 1945 92306 St. Denis Cedex 1 France	Novembre chaque année 120 heures	Technicien supérieur Français	Fin juin chaque année	FF 6,000

AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Sciences de l'ingénieur	Outils mathématiques; outils de mécanique; éléments de robotique.	Université de Paris Nord IUT de St. Denis/ Génie Mécanique et Productique Place du 8 Mai 1945 92306 St. Denis Cedex 1 France	Novembre chaque année 100 heures	Technicien supérieur Français	Fin juin chaque année	F 4,000
Computers	Short courses on: fundamentals of EDP; introduction to software technology; data base systems for microcomputers.	VEB Robotron Anlagenbau 7010 Leipzig Gerberstrasse 3-5 German Democratic Republic	To be arranged 2-3 weeks	Vocational training Professional qualifications	-	\$US 650 - 1,230
AUTOTECH '87 Conference	Applications of microcomputers for affordable automation.	The Hong Kong Productivity Council Room 1313-1316 World Commerce Centre Harbour City 11 Canton Road Tsimshatsui Kowloon, Hong Kong	24-26 March 1987	English	-	\$US 300
Basic systems analysis "NCC package"	Basic systems analysis training package developed by the British National Computing Centre (NCC). Fully documented series of lecture notes, case studies, projects and practical exercises. Course designed to lead the student step by step through the range of activities with which a systems analyst will need to be familiar, following the stages of a typical assignment.	Hong Kong Productivity Council 13/F Wing Lung Bank Building 45 Des Voeux Road Central Hong Kong	To be arranged One month	Basic knowledge of computers and their business applications English	-	HK\$8,000 Exam fee HK\$750
Certificate programme on EDP management for user executives	Introduction, general concepts of system studies, limitations of computer systems, forms design, design of procedures to allow for efficient and secure use of computer systems, style, content and presentation of procedures manuals, data conversion, system testing, installation review, introduction to office automation.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	October 1987 3 months	Middle level executives English	September 1987	HK\$3,445

AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Endorsement certificate in computer numerical control machine tool technology and practice	CNC/NC machine tool technology, CNC/NC machine tool practice I, CNC/NC machine tool practice II.	Industrial Centre Hong Kong Polytechnic Hung Hom Kowloon Hong Kong	1 October 1987 7 months	Certificate in production and industrial engineering English	1 May 1987	Approx. HK\$1,325
Endorsement certificate in engineering drafting and CAD practice	Drafting practice and procedures, engineering drafting and design, computer aided design and drafting.	Industrial Centre Hong Kong Polytechnic Hung Hom Kowloon Hong Kong	1 October 1987 7 months	Certificate in production and industrial engineering English	1 May 1987	Approx. HK\$1,325
Endorsement certificate in industrial automation	Automation elements and systems, computer aided automation, appliances of industrial automation.	Industrial Centre Hong Kong Polytechnic Hung Hom Kowloon Hong Kong	1 October 1987 7 months	Technical qualifications	1 May 1987	Approx. HK\$1,350 per course
Information storage and retrieval systems	To provide necessary tools in the application of information processing techniques, in the use of information sources and provision of information services; identify information systems and services required for organization; understanding of the application of modern management ideas and techniques in the management of information systems and services; computer applications in information processing and dissemination.	National Institute of Small Industry Extension Training (NISJET) Yousufguda Hyderabad 500 045 India	October 8 weeks	University degree. English	-	\$US 2,320
Computer courses for industry	Computer aided design, computer aided manufacture, computer-based training programmes, data processing, computer use in business operations, computer applications, microprocessing, analog electronics, industrial instrumentation.	AnCo, The Industrial Training Authority 27-33 Upper Baggot St. Dublin 4 Ireland	Throughout the year	English	-	To be arranged
Computer applications in manufacture	The feasibility and applications of computers in various activities of manufacturing industries, such as production planning and control, inventory control, etc.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 3 weeks	Senior engineers from industry and technical consultants of national productivity organizations etc. of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations

AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
International garment CAD/CAM pattern design	Theoretical and practical training for pattern-engineers and members of the technical staff occupied with product-development, covering: pattern-engineering and preparation; conversion of manual grading techniques into computerized grading; grading techniques and their organization; cutplanning, computerized; 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.	TNO Fibre Research Institute Clothing Department Hengelosestraat 715 7521 PA Enschede Netherlands	March 1987/1988 November 1987/1988 Duration: 3 weeks Courses to be arranged according to needs	Knowledge of pattern engineering and/or grading, experience in the cutting-room is not required specifically English	1 January 1987/1988 1 September 1987/1988	f. 4,500
Computer maintenance	Digital techniques, microprocessors, microprocessor interfacing, operating systems, compilers and assembly, language, computer peripherals, computer fault diagnosis and servicing techniques.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) PO Box 8913 Karachi Pakistan	January 1987 January 1988 1 year	Secondary school certificate	One month before commencement of course	\$US 150 per month
Computer science	Understanding and use of computer language, hands-on experience on micros, running programs on computers, assistance to systems analysts in developing systems.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) PO Box 8913 Karachi Pakistan	January 1987 January 1988 1 year	Higher secondary school certificate	One month before commencement of course	\$US 150 per month
Industrial electronics	Diagnosis of faults in electronic equipment and circuits; semiconductor devices, digital techniques, microprocessors, electronic circuits, optoelectronics.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) PO Box 8913 Karachi Pakistan	April and October 1987 April 1988 9 months	Secondary school certificate	One month before commencement of course	\$US 150 per month
Industrial instrumentation	Pneumatic, electronic, electrical and hydraulic aspects of a variety of industrial instruments, including pressure and temperature measuring instruments, flow and level measuring instruments, telemetry and display systems and analytical and display systems and testing instruments.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) PO Box 8913 Karachi Pakistan	April and October 1987 April 1988 9 months	Secondary school certificate	One month before commencement of course	\$US 150 per month

## AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Language programs	Basic, Cobol, RPG-II, Fortran, including hands-on experience.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) PO Box 8913 Karachi Pakistan	January, April, July October 1987 January, April, July, October 1948 3 months	Higher secondary school certificate	One month before commencement of course	\$US 150 per month
Automation for industry	Computer-aided design in mechanical engineering; NC lathe and milling machine programming; postprocessors for numerically controlled lathes and milling machines.	ZORPOT Group Zurawia 00-515 Warsaw Poland (Computer Aided Engineering Centre)	Throughout the year 3-6 months training	Professional qualifications English	-	To be arranged
Computer aided design in mechanical engineering	The course covers a wide range of computer methods and is designed to enable engineers to model, solve and evaluate results for a number of mechanical design problems in industry.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Throughout the year 2 weeks course plus 3-6 months training	Professional qualifications English	-	To be arranged
NC lathe programming and utilization	Effective programming and postprocessing for NC lathes. Advanced high-level language programming, computer part programming for NC machines in the APT compatible system, numerical-geometrical description of surfaces, cutting process relationships for the optimization of turning processes and adaptive control.	ZORPOT Group Zurawia 22 00-515 Warsaw Poland	Throughout the year 6 months	Professional qualifications English or Russian	-	\$US 4,800
NC milling machine programming	Three-dimensional programming for NC milling machines. Same topics as for NC lathes but related to milling machines and milling processes.	ZORPOT Group Zurawia 22 00-515 Warsaw	Throughout the year 6 months	Professional qualifications English or Russian	-	\$US 4,800
Postprocessors for numerically controlled lathes and milling machines	The course is designed to enable participants to use, modify and build new postprocessors for APT type NC machine tool programming systems.	ZORPOT Group Zurawia 22 00-515 Warsaw	Throughout the year 6 months	Professional qualifications English or Russian	-	\$US 4,800

AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Information and data processing systems	Courses covering main fields of information systems and training of systems analysts.	CEPECA International Centre for Management Development and Electronic Data Processing and Consulting Centre, Otopeni, Soseaua Odai, No. 20, Bucharest, Romania	To be arranged 4-10 weeks	Professional qualifications English and French	-	\$US 540 per week (Accommodation and meals included)
Programs in computer applications development (PCAD)	Mainframe and microcomputer training; CAD/CAM.	Regional Computer Centre Asian Institute of Technology RCC-AIT PO Box 2754 Bangkok 10501 Thailand	5 January 1987 4 May 1987 Usually 15 weeks	English	-	To be arranged
Industrial electronics	Structure of semiconductor materials, power devices, control features of firing circuits, rectifying circuits, single-phase half-way and single-phase bridge rectifying circuits, single-phase half-way and single phase bridge uncontrolled and half controlled circuits, fully controlled circuits, three-phase half controlled and three-phase bridge fully controlled circuits, converter operation and inversion, DC line commutation with parallel capacitance, DC line commutation with resonant turn-off, frequency conversion and cycloconverter, DC machine control, basic machine concepts and equations, variable speed drives of DC machines, variable speed drives of DC machines and control feedback loops, AC machines and control, cage induction motors and slip-ring induction machine control, types of induction machine control.	Faculty of Technical Education Gazi University Ankara Turkey	3 August 1987 4 weeks	Professional qualifications English	30 June 1987	\$US 1,000
CAD advanced computer aided design	Computer aided design course structured to give a good theoretical-practical balance for architects and engineers.	Chattaway (UK) Training Services Pool Chambers 26 Dam Street Lichfield Staffs. WS13 6AA United Kingdom	6 months minimum	English	1st week of month for commencement in the following month	To be arranged
Computer subjects	Introduction, lectures and hands-on training in writing programs for industrial and commercial applications in the popular programming languages.	Chattaway (UK) Training Services Pool Chambers 26 Dam Street Lichfield Staffs. WS13 6AA United Kingdom	2 March 1987 1 June 1987 7 September 1987 7 December 1987 3 months	English	1 month before commencement	To be arranged

## AUTOMATION AND DATA PROCESSING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Computer applications and development	Short courses on microcomputer appreciation; database management systems; word and data processing; financial modelling; programming; management information systems; computer hardware/software; evaluation and selection; systems analysis and design, with particular emphasis on Third World agriculture and rural development.	Computer and Development Department MASDAR Technology Limited MASDAR House 141 Nine Mile Ride Finchampstead, Wokingham Berkshire RG11 4HY United Kingdom	Throughout year Various	Professional qualifications English	-	To be arranged
IBM mainframe technical skills	Short courses on: IBM mainframe overview, MVS overview, MVS, JCL, TSO, CICS, VSAM, Assembler, and Data Communications.	Datasolve Education 4th Floor, Glen House Stag Place London SW1E 5AG United Kingdom	Regular scheduled courses in London or on site anywhere	Relevant technical experience	-	From \$80 per day
Manufacturing systems and technology	Wide range of aspects of computer applications, including CAD, CAE and CAM. Microelectronics, quality and high technology. Systems analysis and design. High and low resolution graphics. Business strategy and organization.	Institute of Production Control National Westminster House Wood Street Stratford-upon-Avon Warwickshire CV37 6JF United Kingdom	Throughout the year 12 weeks	Professional qualifications English	-	To be arranged
Industrial instrumentation and process control	Theoretical classroom work supported by demonstration and practical exercises in electronics/computer and instrumentation/control laboratories and workshops.	Training Centre Roxby Engineering International Limited Lagonda Road Billingham Cleveland TS23 4JA United Kingdom	Normally: January, May and September 16 weeks Commencing dates for 1987/88 to be confirmed	Secondary school level in mathematics and science	One month before start of course	£4,400
Large-scale control systems: theory and applications	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.	Centre for Large Scale Control and Decision Systems Institute for Measurement and Control Faculty of Technical Sciences University of Novi Sad Yugoslavia	October 1987 9 months	Professional qualifications	June 1987	\$US 3,500



Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<u>ENERGY</u> <u>ENERGIE</u> <u>ENERGIA</u>						
Utilisation rationnelle de l'énergie	Cours théoriques: énergétique 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. Cours pratiques: participation à l'audit de 5 entreprises différentes - Visite de 2 ou 3 entreprises modèles.	INIEX 200, rue du Chéra B-4000 Liège Belgique	A arranger 2 mois	Niveau ingénieur industriel Français ou anglais	-	A arranger
Energies renouvelables	Disponibilité et mesure des sources des énergies renouvelables : solaire, éolienne, hydraulique; description des équipements techniques commerciales, performances, champ d'application, cas pratiques; calculs technico-économiques des équipements utilisant les énergies renouvelables en fonction des besoins; réalisation de projets concrets; visite des installations existant en Belgique; possibilité de production de ces équipements dans les P.V.D., transfert de technologie, joint-venture, etc.	SCIENCE 98, av. de Tervueren B-1040 Bruxelles Belgique	A arranger 2 mois	Niveau : ingénieur industriel. Français ou anglais	-	A fixer
Stabilized power supplies	Basics, design procedures, maintenance.	Institute for Instrument Design Sofia 1184, Blvd. "Lenin" 7 km Bulgaria	1 April 1987 1 month	Participants have to be graduate engineers intended to work in electronic laboratories, maintenance facilities and universities English, Russian	December 1986	\$US 450
Stoking and incineration technology	Courses in operation, tending and maintenance of oil, gas and solid fuel heating plants for industry.	The Jutland Technological Institute Energy Technology Section Denmark	To be arranged 3-4 weeks	English	-	To be arranged
Electric power systems	Trends in the development of electric power systems, particularly for industry; measures to reduce electric power losses; measures to increase the reliability of electric power supply and electric installations; automation and protection of electric power systems.	Leipzig Technological University Karl-Liebknecht-Str.132 Leipzig 7010 German Democratic Republic	To be arranged 3 weeks	Designers and operators of electric power systems English	31 March 1987 31 March 1988	To be arranged

ENERGY (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Energy management	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 - co-generation systems, energy audit, measurement and instrumentation for energy saving.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 3 weeks	Technical consultants of national productivity agencies, etc. and senior plant engineers concerned with the diagnosis of energy utilization in small and medium industries of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Energy management (Plant-level fuel efficiency)	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 - co-generation systems, energy audit, measurement and instrumentation for energy saving.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 4 weeks	Technical consultants of national productivity agencies, etc. and senior plant engineers concerned with the diagnosis of energy utilization in small and medium industries of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Energy saving in injection moulding of plastics	Energy usage in plastics processing; efficient use; machine/mould combination; materials; the process; energy measurements; costs; management.	TNO Plastics and Rubber Research Institute P.O. Box 71 2600 AB Delft Netherlands	To be arranged	Professional qualifications English	-	To be arranged
Electric power distribution systems	Power systems analysis; insulating co-ordination, computer programming; dimensioning and practical construction of different components in a distribution system such as overhead lines, cables, circuit-breakers, fuses, transformers; laboratory courses; project work. Excursions will be arranged to power supply companies and to manufacturing industries in Norway. Diplomas will be given for completed courses.	Norwegian Institute of Technology University of Trondheim in collaboration with NORAD. N-7034 Trondheim/NTH	August-September 10 months	B.Sc. or M.Sc in electrical engineering, preferably some practical experience English	31 January	-
Hydropower development	Lectures, exercises, excursion and individual projects aiming at providing a sound working background in planning, design and construction of hydropower plants.	The University of Trondheim, The Norwegian Institute of Technology (NTH) The River and Harbour Laboratory in collaboration with NORAD N-7034 Trondheim Norway	August/September 1987 10 months	Professional qualifications. English	31 January	-

ENERGY (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Energy analysis	The overall framework for energy analysis and planning; data and energy statistics required for analytical tools; analytical tools for integrated energy planning; presentation of a specific plan for the implementation of energy analysis and planning systems.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) P.O. Box 8913 Karachi Pakistan	5 April 1987 12 days	In-service personnel English	One month before com- mencement of course	\$US 600
Drilling engineering	Practical rig-site training, mud engineering (on programmable calculators), practical mud testing, casing design and bits and hydraulics, cementing, directional drilling, floating drilling and testing, well control and blowout prevention. Emphasis on safe working practices.	Drilling & Production Technology Training Centre Forties Road Montrose Angus DD10 9ET United Kingdom	To be arranged 8 weeks	English	To be arranged	To be arranged
"Energy" school training	Short courses on: energy technologies in developing countries, solar energy application possibilities and methods, low temperature conversion of solar energy for central heating and water heating, architecture and energy.	Working People University "Buro Bakovic" Sarajevo Yugoslavia	18 May 1987 8-12 days according to the course	Engineers and energy experts Groups of up to 25 English	70 days in advance	\$US 13,000- 20,000 per group according to the course

ENVIRONMENT  
ENVIRONNEMENT  
MEDIO AMBIENTE

Environmental control in the chemical and pharmaceutical industries	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.	Department of Toxicology State University of Ghent Hospitaalstraat 13 B-9000 Ghent Belgium	Beginning of August 6 weeks	Civil engineers, pharmacists, biologists, chemical engineers. Course held in alternate years in English and French	-	Approx. BF 40,000
Environment	Monitoring of environmental pollutants in the aquatic environment; industrial water pollution and environmental control.	The Water Quality Institute 11, Agern Alle DK-2970 Hørsholm Denmark	To be arranged	B.Sc. or M.Sc. degree English	-	To be arranged

ENVIRONMENT (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Treatment of wastewater	Wastewater characteristics; domestic wastewater; industrial wastewater; effluent standards; biological treatment; chemical treatment; physical treatment; sludge treatment; removal of: organic matter, suspended solids, nitrogen and phosphorus, heavy metals, toxic organics.	The Water Quality Institute 11, Agern Alle DK-2970 Hørsholm, Denmark	To be arranged 3 weeks	English	-	Approx. Dkk 150,000 for 8 persons in 3 weeks
Industrial pollution control	Environmental pollution in Japan, policy and regulations concerning environmental protection in Japan, overview of water and air pollution, techniques of waste water treatment, water pollution control techniques for small industry, sewage disposal systems, grey (domestic wastes) water treatment, water quality measurement.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 4 weeks	Technical consultants of national productivity organizations, etc., engineers at the government level and senior plant/production engineers concerned with industrial pollution control of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Water treatment	Training and industrial experience in water treatment technology for the processing, chemical fertilizer industries, etc.	Chattaway (UK) Training Services Pool Chambers 26 Dam Street Lichfield Staffs. WS13 6AA United Kingdom	5 January 6 April 6 June 5 October 3 months	Relevant qualifications English	1 month before commencement	To be arranged
Water and waste engineering	Problems of industrialization, project preparation, laboratory management and operation, wastewater engineering, community and management, solid waste management, mechanical and electrical plant management.	Water and Engineering for Developing Countries (WEDC) Dept. of Civil Engineering Loughborough University of Technology, Loughborough LE11 3TU, United Kingdom	-	Good honours degree in engineering or science. Preliminary year course also available.	-	-
<p><u>INDUSTRIAL DESIGN</u> <u>DESIGN INDUSTRIEL</u> <u>DISENO INDUSTRIAL</u></p>						
Design for industry	Residential courses in craft product design appropriate to low technology or unskilled workers, industrial product design for the high-tech industries, packaging design including research, marketing and production considerations, etc., jewellery and silver-smithing for upgrading the skills and experience of metalworkers. Courses also cover design management and costing aspects.	Kilkenny Design Workshops Kilkenny Ireland	To be arranged 3-6 months	Professional qualifications. English	-	£.Ir. 450 per week including bed and board

INDUSTRIAL DESIGN (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Design	Core courses (theoretical) and design studio courses (practical).	Domus Academy Edificio I/C Milanofiori I-20090 Assago (MI) Italy	January- November 1987 11 months	Professional qualifications. English, Italian	October 1986	\$US 10,000
Design management	The programme includes socio-economic forecasting, design culture and history, industrial design management, marketing innovation, post-modern and post-industrial markets.	Domus Academy Edificio I/C Milanofiori I-20090 Assago (MI) Italy	January to November 1987 11 months	Professional qualifications	October 1986	\$US 10,000
Design engineering for mechanical or production engineers and design draughtsmen	Design and draughting techniques, manufacturing methods, planning project control; design office management in electrical/electronic engineering.	Chattaway (UK) Training Services Pool Chambers 26 Dam Street Lichfield Staffs. WS13 6AA United Kingdom	9 months January, April, July, October	English	1 month before commencement	To be arranged
Industrial design	Courses in industrial design, architectural and manufacturing. Basic concepts of design and a universal system for reworking, modifying and repairing circuit boards and electronic assemblies.	Mapline Training Ltd. Raycam House Arterial Road Rayleigh Essex SS6 7UQ United Kingdom	To be arranged 9 months	Professional qualifications. English	-	To be arranged
<p><u>INDUSTRIAL INFORMATION AND DOCUMENTATION</u>  <u>INFORMATION ET DOCUMENTATION INDUSTRIELLES</u>  <u>INFORMACION Y DOCUMENTACION INDUSTRIALES</u></p>						
Advanced systems analysis and design	The managerial decision-making process and evolving of an interdisciplinary approach for planning, analysis, design and implementation of computer-based information systems; tools and techniques in the design of software systems for implementing computer-based information systems.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	19 October 1987 8 weeks	Systems analysts, senior programmers and computer managers English	17 September 1987	\$US 4,584

## INDUSTRIAL INFORMATION AND DOCUMENTATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Systems analysis	Comprehensive set of courses based on modern structured methodology, including 5-week course leading to NCC Basic Certificate in Systems Analysis.	Datasolve Education 4th floor Glen House Stag Place London SW1E 5AG United Kingdom	Regular scheduled courses in London or on site anywhere	Relevant technical experience	-	From £80 per day
INDUSTRIAL PLANNING AND PROGRAMMING PLANIFICATION ET PROGRAMMATION INDUSTRIELLES PLANEAMIENTO Y PROGRAMACION INDUSTRIAL						
Projets industriels	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.	Bureau d'ingénieurs-conseils Gombert Cadic-Gombert S.A. 123a, chaussée de Charleroi Bte 7 B-1060 Bruxelles Belgique	A fixer	Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de 2 ans. Français	-	A fixer
Planification industrielle	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.	Société coopérative MISIFA 67, rue Tenbosch B-1050 Bruxelles Belgique	Toute l'année sauf juillet et août ; variable (selon chaque cas)	Qualifications professionnelles. Français	-	FB 15,000 à FB 40,000 par mois
Industrial location and development	General principles of industrial location and development, project evaluation, analysis and interpretation of financial statements, corporate and project finance, international contracts; mathematical, statistical and computer approach courses; transport and distribution, site engineering, ecology and industry.	Vrije Universiteit Brussel Research Centre for Industrial Location Industrial Research Park 1120 Brussels, Belgium	October-June 600 hours	Professional qualifications English	-	To be arranged

INDUSTRIAL PLANNING AND PROGRAMMING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Estudio de factibilidad	Conceptos económicos; estudio de mercado; estudio técnico del proyecto; aspecto económico del proyecto; aspecto financiero del proyecto; guía para elaboración del estudio del proyecto. El participante tendrá que elaborar un proyecto de uso práctico en su país.	INFOP Tegucigalpa Honduras, C.A.	1 al 30 de junio 1987	Que sean ejecutivos de una empresa o empresarios en potencia. Español	28 de febrero 1987	-
Certificate programme on project management	Project management in the planning and control framework, the systems concept, technology for project managers, the arts and politics of project management, the behaviour issue in project management.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	April 1987 and September 1987 3 months	Project executives English	March 1987 and August 1987	HK\$1,565
Planning and promotion of agro-industries	The scope for various groups of agro-industries under different agro-climatic environments, policy and institutional considerations; sharing the Indian experience; developing skills for preparing feasibility studies for agro-industries and study of alternate technologies and sizes of plants.	National Institute of Small Industry Extension Training (NISLET) Yousufguda Hyderabad 500 045 India	October-December 8 weeks	Personnel involved in relevant policy formulation English	-	\$US 2,320
Industrial planning	Basic concepts in industrial planning; methods and techniques of industrial planning; industrial policies and tools; industrial development strategies.	National Institute for Planning Baghdad Iraq	To be arranged once a year 1 month	Professional qualifications. Arabic	-	To be arranged
Project evaluation	The structure of economic and technical feasibility studies; data requirements; project financial evaluation; project economic evaluation; the experience of Iraq in project evaluation.	National Institute for Planning Baghdad Iraq	To be arranged 3 times a year 1 month	Professional qualifications Arabic	-	To be arranged
Industrial development programme	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.	Development Co-operation Division Industrial Development Authority - Ireland Wilton Park House Dublin Ireland	June and September 6 weeks	English	31 April 31 August	£Ir. 5,000 (funding available from international development agencies)

INDUSTRIAL PLANNING AND PROGRAMMING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Community development	Promotion of income-generating projects for rural women: development, community work, working with groups, communication, co-operatives, production, financial management, marketing study visits, practical work.	The Golda Meir Mount Carmel International Training Centre 12 David Pinsky 34351 Haifa Israel	23 April 1987 3 1/2 months	Training in community development, 3 years' practical experience	-	\$US 1,200 per month (including accommodation and meals)
Project feasibility	The project management cycle, project identification and definition, project feasibility study (marketing, technical, financial, organization and personnel aspects).	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	January/February 1988 4 weeks	Officers of development banks, small industry advisory agencies, etc. of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Initiation aux techniques d'évaluation de projets	Notion de projet. Classification des projets. Différentes étapes de la planification d'un projet. Analyse coûts-avantages : identification et estimation des coûts et avantages. Analyse des effets : évaluation des effets primaires et des effets indirects.	Institut malgache des techniques de planification (IMaTeP) Boite postale 4344 Antananarivo 101 Madagascar	Septembre 1987	Titulaire du diplôme de fin d'études du premier cycle Universitaire français	Juillet 1987	-
Industrial project cycle programme	The national, regional, sectoral and project planning framework, industrialization policies, stages of the project development cycle, market analysis and plant capacity, technical analysis, financial analysis, Computer Model for Financial Analysis and Reporting (COMFAR), elements of industrial promotion, project implementation, project management, control and evaluation.	Research Institute for Management Science (RVB) 11, Mijnbouwplein P.O. Box 143 2600 AC Delft Netherlands	7 March 1987 5 March 1988 13 1/2 weeks	Professional qualifications and relevant experience English	15 December 1986 15 December 1987	f.12,500 (tuition only)
Project management	The phases of the project cycle, various techniques of project planning, implementation, monitoring and evaluation, and practice in the relevant techniques; development of skills in planning, finance and administration.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) P.O. Box 8913 Karachi Pakistan	29 March 1987 4 weeks	In-service personnel English	One month before commencement of course	\$US 600



INDUSTRIAL PLANNING AND PROGRAMMING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Planning and appraisal of industrial and agro-industrial projects	Project preparation and appraisal, financial statements, capital budgeting, economic and social cost-benefit analysis, project implementation and management, marketing systems and market analysis, agricultural production, etc.	Eastern and Southern African Management Institute Njiro Hill P.O. Box.3030 Arusha Tanzania	September-October 6 weeks	Administrators and planners with relevant responsibilities English	31 August	\$US 4,054 per participant
Project implementation	The project cycle, definition and terminology of projects, project management as compared with general management, operational planning, project control techniques, project budgeting and cost control, problems in project management (cost overrun, motivation and incentives, conflict management).	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	June-August 6 weeks	Project managers and senior officials directly involved in project management English	5 February 1987	\$US 3,564 per participant
Project preparation, appraisal and implementation	Preparation, appraisal and implementation of industrial projects from the technical, economic and financial points of view. The course covers basic introductory subjects, and principles of project preparation and project appraisal.	State Investment Bank Milli Müdafaa Cad. 20 Ba'anliklar Ankara Turkey	January and September 10 weeks	Professional qualifications English	-	ET200,000 (\$US 300) (\$US 1 = ET1,658 as of 5 May 1986) reviewed annually
Basic industrial modules	Management course on industrial development, quality control and inspection, health and safety in industry, fire precautions, safety precautions and hazards, methods of instruction, financial appraisal and management.	Chattaway (UK) Training Services Pool Chambers 26 Dam Street Lichfield Staffs. WS13 6AA United Kingdom	9 March 8 June 14 September 3 months	English	1 month before commencement	To be arranged
Planning industries in cities	Part 1: Overall strategies for a city or town; Part 2: Policies of principal sectors and subsectors of local industry; Part 3: Choices of location, space and services.	Development Planning Unit Bartless School of Architecture and Planning University College London 9 Endsleigh Gardens London WC1H 0ED United Kingdom	5 January 1987 12 weeks or 4 weeks for each of the three parts Also January 1988	Professional qualifications City and town authorities in LDCs English	5 January 1987 5 January 1988	£2,750 + £150 for field trips for 12 weeks Prorated for participation in only one or two parts

## INDUSTRIAL PLANNING AND PROGRAMMING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
New technology development	Sharing British new technology expertise. The implementation of technological change, particularly information technology and management information systems within organizations.	Industrial Training Service Ltd. Overseas Division 43 Market Place Wetherby West Yorkshire LS22 4LN United Kingdom	May 1987 May 1988 10 weeks	Senior management with relevant responsibilities	6 weeks before start of course	No fee yet fixed for 1987 1986 fee was £4,450 excluding accommodation
Planning and appraisal of industrial projects	All aspects of the planning process from inception to project implementation, including detailed examination of methods of identifying, appraising, financing and monitoring development projects. Various types of industrial projects will be considered. Projects will be studied both from a commercial and a national point of view.	University of Bradford Project Planning Centre for Developing Countries Bradford West Yorkshire BD7 1DP United Kingdom	12 January 1987 12 weeks	University degree and several years' experience of development planning and/or project work English	-	£3,600 (estimate includes tuition and accommodation)
Technology and development	Problems of development and industrialization and guidelines for selecting industrial techniques appropriate to particular LDC economic and social circumstances.	David Livingstone Institute of Overseas Development Studies University of Strathclyde 16 Richmond Street McCance Building Glasgow G1 1XQ Scotland, United Kingdom	Late September and/or early April 3 months	Professional qualifications. Relevant work experience	To be arranged	£4,000 (including accommodation and meals)
Regional development planning	The meaning of development, the regional planning development process, economic, social and demographic analysis, planning for strategic sectors, infrastructure and land use planning, environmental planning, regional social planning, local-level planning, regional plan and budget interfacing and co-ordination, project planning, management and evaluation, lessons of experience.	United Nations Centre for Regional Development 1-47-1 Nagano Nakamura-ku Nagoya 450 Japan	1 April 1987	Professional qualifications English	December 1986	\$US 3,800
Preparation, evaluation, financing and realization of industrialization projects in developing countries	Project identification and background studies, market analysis, supply programme, technical-technological design, civil engineering, project financial and economic analysis and evaluation, project implementation	Institute of Industrial Economics 16 Marshal Tito Belgrade Yugoslavia	15 October 1987 6 1/2 weeks	Professional qualifications English	30 May 1987	To be arranged

INDUSTRIAL PLANNING AND PROGRAMMING (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Project analysis	Effective project formulation, planning and appraisal. Application of project analysis techniques to the solution of real problems in organizations.	Graduate School USDA International Programs 600 Maryland Ave. SW Washington DC 20024 United States of America	5 January and 13 July 1987 8 weeks	Professional qualifications English	5 December 1986 and 13 June 1987	\$US 4,500

INVESTMENT PROMOTION AND INDUSTRIAL FINANCING  
PROMOTION DES INVESTISSEMENTS ET FINANCEMENT INDUSTRIEL  
PROMOCION DE LAS INVERSIONES Y FINANCIACION INDUSTRIAL

Promotion des investissements et financement industriel	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 comme outil de gestion (e.a. tableaux de bord); l'audit interne et externe; la gestion budgétaire; les aspects juridiques liés à l'investissement (e.a. propriété industrielle); la stratégie industrielle; la pratique des conseils d'administration.	Institut belge de formation et de transfert de technologie - I.B.F. Rue Montoyer 63 B-1040 Bruxelles Belgique	Début à convenir. Durée 2-8 semaines	Qualifications professionnelles. Français, anglais	-	A fixer
Zones franches et développement industriel	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.	Havenbedrijf van de Stad Antwerpen Stadhuis B-2000 Antwerpen Belgique	Toute l'année sauf juillet et août 1-2 semaines (éventuellement 1-2 mois)	Niveau universitaire. Français, anglais	-	-
International promotion and foreign investment	Market research; market penetration; international trade promotion; exportation means and techniques; international distribution; export finance and pricing; foreign investment.	International Trade Invest Institute 2, avenue de Broqueville Bte 7 B-1150 Bruxelles Belgique	To be arranged About 4 months	University degree. English or French	-	To be arranged

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>MAINTENANCE AND REPAIR ENTRETIEN ET REPARATION MANTENIMIENTO Y REPARACION</b>						
Corrosion et lutte contre la corrosion	Corrosion électrochimique; diagrammes d'équilibres électrochimiques; études cinétiques de la corrosion; méthodes expérimentales; théorie et applications à la lutte contre la corrosion; principes de protection et cas particuliers de corrosion.	Centre belge d'étude de la Corrosion CEBELCOR Avenue Paul Héger Grille 2 B-1050 Bruxelles Belgique	2 ou 3 semaines toute l'année sauf juillet et août	Diplôme de l'enseignement universitaire ou technique supérieur. Français, anglais	-	A arranger
Maintenance industrielle	Séminaire sur les systèmes de gestion de maintenance adaptés aux conditions d'exploitation dans les pays en voie de 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 complète par des visites d'usines.	DGS international S.A. Jubilaumlaan 75 B-9000 Gand Belgique	Toute l'année sauf juillet et août 1-3 mois	Technicien supérieur ou ingénieur	-	A fixer
Repair and maintenance of laboratory equipment, modern instrumentation and microcomputers.	Repair and maintenance of laboratory equipment, modern instrumentation and microcomputers.	P+R Techconsult Ltd. Assoc. of Advanced Technical Services GmbH P. O. Box 3885 Nicosia Cyprus	1-8 weeks	Professional qualifications. English (possibly Arabic)	-	Sfr. 2,000-5,600
Repair and maintenance	Repair and maintenance of hospital and medical equipment; laboratory equipment; diagnostic X-ray equipment; operating theatre equipment; electro-medical equipment; microprocessor-based equipment; dental equipment.	Regional Training Centre (RTC) of the Higher Technical Institute P.O. Box 2423 Nicosia, Cyprus	February and September 1987 and 1988 To be arranged (5-10 months)	Professional qualifications. English	-	\$US 2,200
Maintenance industrielle	Formations techniques : mécanique de base, électricité industrielle, automatismes, électronique industrielle, micro-informatique, pneumatique, hydraulique, nécessaires à la maintenance des équipements industriels. Formations fonctionnelles relatives à l'organisation et gestion de la maintenance.	C.I.M.I. Centre international de maintenance industrielle 8, rue de l'Azin 41018 - Blois Cedex France	1er - 2ème 4ème trimestre 1987	Niveau C.A.P. Français, anglais	1 mois avant de début du stage	FF 640/heure Groupe ou FF 64/heure stagiaire hors frais annexe restaurant, hébergement, etc.

MAINTENANCE AND REPAIR (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Formation supérieure de cadres de maintenance industrielle	Permettre à des cadres ou des responsables possédant une expérience ind. d'acquérir une formation complémentaire ou nouvelle en maintenance.	Institut national des sciences appliquées de Lyon Formation continue Bât : 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex France	2 novembre 1987 au 21 mai 1988 960 h	Ingenieurs ou assimilés. Adjoints techniques de maintenance. Responsables de maintenance. Français	2 mois avant début du stage	FF 32,550
Certificate programme on maintenance management	Introduction, rules and regulations and standards, organizing maintenance operations, staffing, maintenance planning, preventive maintenance, works control, maintenance contracts, computer applications, building maintenance, building services maintenance.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	October 1987 3 months	Middle level engineers. English	September 1987	HK\$1,435
Maintenance of bio-medical electronic equipment	Three-week refresher course at the Technical University of Budapest followed by practical training in maintenance at various factories producing biomedical electronic equipment.	TESCO, Organization for International Technical and Scientific Co-operation Technical University of Budapest Hungarian Instrument Manufacturers Association and 4 industrial enterprises	January 1988 2 months	Professional qualifications. English	1 October 1987	-
Productive maintenance training	The present state and future outlook of productive maintenance, productive maintenance and planning design of a productive maintenance system, maintenance data collection and analysis, maintenance of machinery, electrical installations and chemical plant, lubrication and wear, monitoring equipment, spare parts management, economic aspects of productive maintenance, training of maintenance engineers.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: India	To be decided 4 weeks	Managers/engineers engaged in maintenance in industry and productivity consultants of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Management of equipment maintenance	Methods and techniques of organizing and managing maintenance and repair activities in industrial enterprises.	CEPECA International Centre for Management Development Otopeni Soseaua Odai No. 20 Bucharest Romania	September 1987 and 1988 6-10 weeks	Professional qualifications. English and French	31 July 1987 and 1988	\$US 540 per week (Accommodation and meals included)

MAINTENANCE AND REPAIR (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Applied practical maintenance	The syllabus covers economic and organizational, as well as practical aspects of maintenance, including special repair methods, hydraulic, pneumatic and electrical maintenance.	SWEDEC International AB Riddargatan 37 S-114 57 Stockholm Sweden (can also be conducted at customer's site)	3 August 1987 14 weeks	Professional qualifications. English	1 March 1987	\$US 6,200 (May 1986 exchange rate)
BOF and concast maintenance	Safety rules in BOF and CSC maintenance, overall machine alignment, hydraulic control systems, lubrication, electrical maintenance, cooling water circuits.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988, 12 weeks	English	-	-
Hot rolling mills electrical maintenance	Basic motor types, motor bearings, lubrication, preventive maintenance, insulation systems.	Ercoli Iron and Steel Plant Ercoli, Turkey Turkey	September 1987 September 1988 12 weeks	English	-	-
Mechanical maintenance of cold rolling mills and finishing lines	Maintenance of lubrication, mechanical and hydraulic systems, pickling lines, tandem mills, temper mills and electrolytical tinning lines.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English	-	-
Building services maintenance	Refrigeration, air conditioning maintenance and design, heat pump maintenance; electrical and electronic controls; fire sprinkler control systems and heating systems; energy conservation.	Haden Training Centre 23 Gladstone Road Croydon, Surrey CRO 2BQ United Kingdom	1 September 1987 12 weeks January 1988 12 weeks	English	June 1987 November 1987	£3,900 £4,500
Mechanical and electrical maintenance	Practical training in the maintenance of both electrical and mechanical machines and equipment.	Metcon Training 14 Pall Mall London, United Kingdom	August- November February-May 13 weeks	English	-	-

MANAGEMENT AND INDUSTRIAL ADMINISTRATION  
GESTION ET ADMINISTRATION INDUSTRIELLE  
GESTION Y ADMINISTRACION INDUSTRIAL

Management	Intensive courses in the functional areas of managements as follows: accounting, marketing, finance, production and operations management, personnel and industrial relations, management of human resources, statistics, economics, computer applications in management and introduction to microcomputers; management of small-scale enterprises; advanced management.	The Barbados Institute of Management and Productivity Bimap Drive Wildey St. Michael Barbados	January 1987 and 1988 April 1987 and 1988 September 1987 and 1988 11 weeks	At least two years experience in a management or supervisory position. English	One month before commencement date	\$BDS 500 per course
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MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Gestion des entreprises	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; gestion des approvisionnements et des stocks; organisation de la production; étude du travail; gestion des équipements, choix des investissements, organisation des ventes. Le séminaire peut être complété par des séjours guidés dans des entreprises et organismes publics belges.	Bureau d'Ingénieurs-Conseils Gombert Cadic-Gombert S.A. 123a, chaussée de Charleroi, Bte 7 B-1060 Bruxelles Belgique	A fixer	Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de deux ans. Français	-	A fixer
Organisation et gestion des entreprises	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.	Bureau d'ingénieurs-conseils Gombert Cadic-Gombert S.A. 123a, chaussée de Charleroi, Boite 7 B-1060 Bruxelles Belgique	A fixer	Humanités complètes plus formation spécialisée plus expérience professionnelle minimum de deux ans. Français	-	A fixer
Industrial engineering	Electronics for process control and analytical instrumentation, laboratory equipment evaluation and preventive maintenance.	P&R Techconsult Ltd. Assoc. of Advanced Technical Services GmbH P.O. Box 3885 Nicosia, Cyprus	1-8 weeks	Professional qualifications. English (possibly Arabic)	-	SFR 1,400 to 4,800
General management course	The programme is designed to equip the participants with a combination of professional skills and experience in preparation for senior management positions in industry, commerce and the public services. The programme places great emphasis on meeting the needs of the expanding enterprises of the third world. To meet these demands, the programme is designed in such a way as to cover theory, industrial placement and above all project work. The project work will require the participant to discuss a particular problem/need in their organizations which requires solving/implementing in the home organization. Production management and marketing management are organized as parallel courses. The JTI general management course is based on experience of many years of management training, and is a successor to the DANIDA management courses of 1980, 1982, 1984 and 1986.	The Jutland Technology Institute International Section Teknologiparken 8000 Aarhus C Denmark	2 February 1987 13 weeks	Applicants should hold a position of managerial responsibility or be nominated for promotion to such a position. Further he or she must have at least 5 years of practical business experience. Secondary school certificate followed by a technical or commercial education. English	-	Participants' fees including accommodation, pocket money and clothing allowance to be met by DANIDA

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Executive management	The programme will provide executives with the tools and techniques demanded of their positions i.e. an overall view of the continuing production process and project management skills for implementing new activities. Moreover, the participants should also develop a set of action plans for use on return to their organizations. Main areas to be covered: project strategy; project planning; project provision; risk analysis; project structure; project cost control.	The Jutland Technology Institute International Section Teknologiparken 8000 Aarhus C, Denmark	To be arranged 4 weeks	Executive managers from industry English	-	To be arranged
Project management	Instruction in the principles of project management with specific emphasis upon the relationship between design, procurement and maintenance costs.	The Jutland Technology Institute International Section Teknologiparken 8000 Aarhus C Denmark	To be arranged 10 weeks	Professional qualifications Applicants should hold a position of technical responsibility in either the public or private sector and at least 5 years of practical involvement in capital projects. English	-	To be arranged
Quality management	Structure, implementation, operation and maintenance of activities for control and improvement of quality in production firms.	The Jutland Technology Institute Quality Control Section Teknologiparken 8000 Aarhus C Denmark	September 1987 3 weeks	Senior managers from developing countries who are responsible for quality and productivity in their organizations. English	3 months prior to start of course	To be arranged
Techniques et gestion de la production pour cadres	Permettre à des cadres, possédant une expérience en production, d'acquérir une formation complémentaire en technique de fabrication en organisation et gestion de la production (manuelle et assistée par ordinateur).	Institut national des sciences appliquées de Lyon Formation continue Bât. 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex, France	Du 11 novembre 1987 au 23 avril 1988	Cadres techniques recherchant une actualisation de leurs connaissances ou une reconversion ou ayant en vue la création d'une entreprise. Français	2 mois avant début du stage	FF 24,675
Organisation et gestion de production	Organisation; gestion de production; qualité.	Université de Paris-Nord IUT de St. Denis/ Génie mécanique et productique Place du 8 Mai 1945 92306 St. Denis Cedex 1, France	Novembre chaque année 60 heures	Technicien supérieur. Français	Fin juin chaque année	FF 2,400
Agricultural management	General management principles; basic economic principles; managing an organized farm; basis of investment decisions in agriculture; effects of research and technology; case studies; field trips.	GIMPA P.O. Box 50 Greenhill Achimota Ghana	3 weeks	Professional qualifications	-	C 2,500 per week



MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Transport logistics	Logistics in national and managerial economy; logistics as a matter of decision in transport logistics; elements of transport logistics (connections between transport customers and transport enterprises, turnover and storage, centres of logistics; performance plan for transport logistics; processes of transport logistics e.g. formation of models, operation research, decisive and aiding methods, data basis and data processing, use of LPI and Fuzzy-Information effects of logistical transport plans.	TCIB/TCAC Hochschule für Verkehrswesen "Friedrich List" 9010 Dresden, Friedrich-List-Pl. 1 German Democratic Republic	To be arranged	Professional qualifications. English	-	To be arranged
Transport orientated location planning	National economy and managerial aspects of the location planning for industrial projects; location factors and time limits in its efficiency; kinds of location planning, especially direct and indirect location determination; transport expenditure as a location factor; criteria of locations with the best transport conditions; methodical basic elements of the location planning with the best transport conditions; software for computer technique; supply with information, use of LPI (Linear Partial Information) and Fuzzy-Information.	TCIB/TCAC Hochschule für Verkehrswesen "Friedrich List" 8010 Dresden Friedrich-List-Pl. 1 German Democratic Republic	March-June September- November 3 weeks	Professional qualifications. English	-	To be arranged
Management	Senior management development course; interpersonal skills for senior managers; project planning and management; administrative management; functional course in personnel management; certificate in public administration; diploma in public administration.	GIMPA P.O. Box 50 Greenhill Achimota Ghana	To be arranged 3-33 weeks	Professional qualifications	-	C2,500 per week
Management development for engineers	Planning and organizing; problem analysis, decision-making and implementation; group dynamics; human relations and communication; personnel management practices; basic accounting; analysis and interpretation of financial statements; costing and budgeting; production planning and control; work study; inventory control; network analysis; quality control; plant maintenance; marketing concepts; marketing mix.	Director Management Development and Productivity Inst. P.O. Box 297 Accra Ghana	25 May- 3 July 1987 6 weeks	Engineers, architects, quantity surveyors, date lawyers with no formal management training. English	4 weeks before course opening	\$600
Certificate programme on data communication	Introduction and basic concepts, theoretical foundation, tools, equipment and monitors, networks and performance considerations, communications services and media, local area networks, applications and security, workshop.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	February 1987 and November 1987 4 months	Middle level data processing professionals English	January 1987 and October 1987	HK\$2,715

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Diploma in management studies	Basic modules: business and government - the Hong Kong environment, principles of management, principles of economics, principles of accounting, introduction to management data analysis, human relations. Six optional modules within one of the following orientations: personnel orientation, finance orientation, production orientation, marketing orientation.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	May 1987 and September 1987 18 months	Minimum age 27 Professional qualifications, university entrance standard and 3 years' executive experience or secondary school leaving standard and 5 years' executive experience. Interview. English	April 1987 and August 1987	HK\$700 per basic module HK\$800 per optional module
Financial management for engineers	The role of financial management, importance of planning, the budgeting process, controlling direct and indirect costs, pricing decisions, profit planning, cash management, financial reporting systems, computerized financial systems, project management, capital equipment acquisition, international operations.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	March 1987 One day	Middle to senior level engineers. English	February 1987	HK\$1,215
Management certificate programme for technical professionals	Operational aspects, report writing, management aspects, financial aspects, legal aspects.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	May 1987 3 months	Middle level technical executives English	March 1987	HK\$1,215
Endorsement certificate in industrial automation	Automation elements and systems, computer aided automation, applications of industrial automation.	Industrial Centre Hong Kong Polytechnic Hung Hom Kowloon Hong Kong	1 October 1987 7 months	Certificate in production and industrial engineering and at least one years' post-qualification industrial experience. English	1 May 1987	Approx. HK\$1,325
Business/enterprise courses for industry	Entrepreneurial skills development, agency development, patents and copyrights, product development, communications in business, export marketing, selling skills, sales planning and reporting, customer services.	ANCO, The Industrial Training Authority 27-33 Upper Baggot St. Dublin 4 Ireland	Throughout the year	Professional qualifications. English	-	To be arranged
Management services: a course for practitioners	The course will give participants a wider knowledge and understanding of management service techniques, an opportunity to conduct a job evaluation project and an analysis of work flow and procedures in an office setting and make recommendations for change, an understanding of the impact of change in organizations; it will teach appropriate techniques of information gathering, interviewing and consultancy skills and give familiarity with the range of office equipment available and its appropriate use and with developments in information technology.	Institute of Public Administration 59 Lansdowne Road Dublin 4 Ireland	29 September 1987 27 September 1988 10 weeks	Professional qualifications. English	29 July 1987 27 July 1988	£Ir 2,850 £Ir 2,995

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Public enterprise in-plant management	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 in-plant assignment specially designed to meet the participants' own particular needs.	Institute of Public Administration 57-61 Lansdowne Road Dublin 4 Ireland	11 August- 26 September 1987 9 August - 24 September 1988	Professional qualifications. English	11 June 1987 9 June 1988	£Ir 7,370 (including accommodation) £Ir 5,400 (not including accommodation); £Ir 7,750 (including accommodation) £Ir 5,700 (not including accommodation)
Chief executive programme	Study of business management in Ireland, formal programme in advanced management techniques, establishment of linkage for appropriate technology transfer and development of business plans.	Irish Management Institute Sandyford Road Dublin 16 Ireland	7 April 1987 10 weeks (To be repeated in 1988)	Recently appointed chief executives, and senior managers being groomed for general manager positions in co-operative, parastatal and private manufacturing, service and distribution organizations	4 weeks before commencement of programme	To be arranged
Management development	Development of skills in business management, marketing, finance and accounting, manufacturing and operations, people management, personnel administration, and personal skills.	Irish Management Institute Sandyford Road Dublin 16 Ireland	9 September 1987 8 weeks	Senior and middle managers of co-operative, parastatal and private organizations in the manufacturing, service and distribution sectors	4 weeks before commencement of programme	To be arranged
Productivity management in industry	Measurement and evaluation of productivity, improvement in productivity and management of productivity improvement. The course covers these topics at industry, sector and enterprise level.	Irish Productivity 35-39 Shelbourne Road Ballsbridge Dublin 4 Ireland	29 June 1987 10 weeks 27 June 1988 10 weeks	Senior management experience in industry or public sector. Specialist position in productivity area. Professional qualifications. English	1 May 1987 1 May 1988	£Ir 8,000 £Ir 8,300 (including accommodation and subsistence)

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management development	To give managers a comprehensive understanding of the management functions and to develop their skills to manage a business such as: business management; marketing management; finance and accounting; operations; managing people at work; personnel and personal skills.	Irish Management Institute Sandyford Road Dublin 16 Ireland	9 September 1987 8 weeks	Senior and middle level managers. English	-	To be arranged
Informatics for development	Courses in computer programming with intensive hands-on experience of micros and mainframes, hardware, applications software, data base management, methodologies of systems analysis and design, informatics project appraisal, planning and control, national informatics planning, research planning and report writing. Optional courses in economics for development, organization and management, accounting, quantitative techniques of management science.	Systems Development Programme Trinity College Dublin 2 Ireland	1 October Short course 6 months Full course 12 months	Professional qualifications	30 June	Short course \$US 5,000 Full course \$US 8,000
Systems development certificate	Mandatory courses in the practice of project appraisal, economics for development, organization and management, statistics in administration, case exercises, research planning and research writing; elective courses from: economics, accounting, systems, informatics, research methodology, quantitative techniques; in-depth study related to the development objectives of the participants' organizations.	Systems Development Programme Trinity College Dublin 2 Ireland	1 October 9 months/ 12 months	Professional qualifications	30 June	\$US 7,500
Agro-industry management	Basic analysis and decision-making, personal communication, planning, organization and staffing, leading and activating, controlling.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: To be decided	November/December 1988 4 weeks	Senior-level executives of small and medium-sized agro-industry firms and consultants/trainers of national productivity organizations of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Industrial engineering applications (specific industry group)	General outline of production systems and the role of industrial engineering, recent trends in individual and batch type production in Japan, the systems approach to industrial engineering problem solving, methods study (working methods, layout of equipment, etc.) work measurement, tools, jigs and fixtures, including rapid tool setting, economy analysis, human aspects (human relations and human factors engineering).	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 3 weeks	Industrial engineers of national productivity organizations, etc. and manufacturing industry of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Manufacturing management	Design of productions systems: plant layout, work study, production planning, network planning; operation of production systems; stock and inventory control, production control, quality control, maintenance and replacement.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Islamic Republic of Iran	September 1987 4 weeks	Manufacturing engineers or managers of industrial plants or technical consultants of national productivity organizations of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Office automation	Introduction to office automation (OA), OA equipment and applications, OA and the office environment, OA and new technologies, planning and implementing OA, exercises on the personal computer and word processor, the future of OA.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 4 weeks	Consultants of national productivity agencies, etc. and senior office managers of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Production planning and control	Organizing for production, planning of production, materials procurement and storage, control of production (scheduling and loading, despatching, expediting).	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 3 weeks	Production engineers and managers in manufacturing industry and technical consultants of national productivity agencies, etc. of APO member countries. English	3 months before commencement	\$US 100 per participant from profit-making organizations
Senior management consultants training course	Management consultancy in participants' countries, overview of industry and management in Japan, analytical techniques in consultancy, industrial engineering, professional management consultancy practices, integrated business diagnosis.	Asian Productivity Organization Akasaka, 8-chome Minato-ku Tokyo 107 Japan	To be decided 9 weeks	Persons with relevant responsibilities in APO member countries	3 months before start of course	\$US 200 per participant from profit-making organizations
Systematic problem solving for production management	Problem identification, detecting and defining problems, total productivity measurement, profitability analysis, problem solving in the area of systems and procedures, problem solving in the application of ergonomics, behaviour modelling for productivity, small group activities.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be arranged 6 weeks	Senior production managers in manufacturing plants, senior production/ industrial engineers and consultants of national productivity organizations, etc. English	3 months before commencement	\$US 200 per participant from profit-making organizations

## MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Tools for managerial decision-making	Practice of computer programming, principles and techniques in the analysis and design of information systems, application of quantitative methods in industrial management, the practice of decision-making in industrial management.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	Mid-1987 6 weeks	Senior systems/ industrial engineering trainers and consultants of national productivity agencies, etc., university teachers in production engineering and management and senior managers in industry of APO member countries. English	3 months before commencement of the programme	\$US 100 per participant from profit-making organizations
Gross cultural management	Participants with different cultural backgrounds can get a clue to develop new management styles of their own through a comparison between the Japanese management system and theirs, observation tours and discussions with lecturers and Japanese managers.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo Japan	May, October November 1987 and 1988 3 weeks	Junior and senior managers of developing countries with more than 5 years of practical experience in transnational business activities. English	5 months before commencement of the programme	Y 327,000
Executive programme on corporate management	Participants will review the basic functions in corporate management such as production, marketing, financing, personnel management, etc. Through exposure to the Japanese experiences, they will also study the human aspect of corporate management such as motivation, leadership, education and training, etc.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo Japan	October 1987 and 1988 2 weeks	Senior executives/ directors who are responsible for overall management of an organization in developing countries. English	5 months before commencement of the programme	Y 327,000
Production management	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.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo Japan	February 1987 and 1988 6 weeks	Engineers and managerial staff who are (or expect to be) in charge of production control or factory management in industries of developing countries. English	5 months before commencement of the programme	Y 550,000
Production management in manufacturing industry	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.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo	Jan. - Mar. 1988 8 weeks	Factory managers, production managers or managers having production management responsibility with more than three years of practical managerial experience	31 October 1987	-

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Quality control	Participants will study various fundamental QC techniques through lectures, classroom discussions and in-plant exercises and learn how to apply statistical QC techniques in an actual production site.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo Japan	July 1987 and 1988 6 weeks	Engineers and managerial staff of developing countries who supervise quality control, production control or factory management. English	5 months before the commencement of the programme	Y 550,000
Quality management	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.	The Association for Overseas Technical Scholarship, Japan 30-1, Senju-azuma 1-chome, Adachi-ku Tokyo Japan	June, November 1987 and 1988 3 weeks	Senior managers from developing countries who are responsible for quality and productivity in their organizations. English	5 months before commencement of the programme	Y 327,000
Information management	Information as a commodity; information policies; legal aspects; flow of information in enterprises; information technologies.	Institut Européen pour la Gestion de l'Information 13 rue de Bragançe L-1255 Luxembourg	10 October 1987	University degree or equivalent	1 June 1987	FLux 120,000
Gestion et administration industrielles	Le Centre organise des cours sur le marketing et la politique commerciale; le management stratégique; mise en place d'une comptabilité analytique; organisation du travail du cadre; gestion des stocks; techniques générales de management; organisation de l'entreprise; gestion de la qualité; le cadre et les relations humaines; étude de faisabilité et évaluation de projets; le cadre supérieur et la formation interne; organisation et gestion de la production; mise en oeuvre pratique de l'analyse de la valeur; management pour membre de Comité de gestion et administrateur; introduction au contrôle de gestion.	Centre de Formation des Cadres B.P. 170 Antsirabe Madagascar	Janvier - juin 5 jours	Qualifications professionnelles. Français	10 jours avant	FMG 175,000 A 200,000
Industrial extension officers training programme	The scope, role problems and opportunities of small industry, government promotion and development programmes, relations with boundary areas; methods of extension; small industry management; technology for small industry; forms and programmes of financial assistance; organization of extension services.	Research Institute for Management Science (RVB) 11 Mijnbouwplein P.O. Box 143 2600 AC Delft Netherlands	7 September 1987 5 September 1988 13 1/2 weeks	Professional qualifications and practical experience in industry. English	15 December 1986	f. 15,500 (tuition only)

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management	Short course on general management, conceptual foundations and performance improvement seminars.	National Bank of Pakistan Staff Colleges at Karachi, Lahore and Islamabad Pakistan	To be decided 1-4 weeks	Serving bank staff	To be decided	-
Management	Short courses on: personnel management, problem solving and decision making, advanced management, management of production operations; development course for managers, chief executive officers conference.	Pakistan Institute of Management Management House Shahrah Iran Clifton Karachi 6 Pakistan	Various dates (January, March, June, July, August, November) 1 week	Professional qualifications	1 month before start of course	PRs 1,000 - 6,000
Capacitación gerencial	Maestría en administración.	Escuela de Post Grado Universidad del Pacífico Av. Salaverry 2020 Lima 11, Perú	Febrero 1986 Mayo 1986 Septiembre 1986 Febrero 1987 Mayo 1987 Septiembre 1987, Febrero 1988, Mayo 1988, Septiembre 1988. A tiempo parcial 3 años aprox.	Grado universitario Español Tres años de experiencia laboral	Diciembre Abril Agosto cada año	\$US 50 por crédito- Promedio: 6 créditos por cuatrimestre
Diploma course in entrepreneurship	Labour jurisprudence, commercial jurisprudence, quality and production, management, new technologies, standardization, statistics, computing, operational research.	Instituto de Soldadura e Qualidade e Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia Portugal	October 1987 December 1988	Professional qualifications	July	\$US 3,200
Management and industrial development	General management, management of industrial and agro-industrial enterprises, management of small and medium-sized enterprises, management in various economic sectors, management in various industrial branches and sub-branches, functional management.	CEPECA International Centre for Management Development Otopeni Soseaua Odai No. 20 Bucharest Romania	To be arranged 6-10 weeks	Professional qualifications English and French	-	\$US 540 per week (Accommodation and meals included)



MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Diploma en gestion de empresas	Programa de dirección comercial y marketing; programa de dirección económico-financiera.	Facultad de CC.EE. y Empresariales (ESTE) de la Universidad de Deusto, sede en San Sebastián Pº Mundaiz s/n 20012 San Sebastián España	3 Módulos 1º Oct-Ene 2º Feb-Jun 3º Sep-Ene	Curriculum vitae adecuado al nivel del programa, valorándose positivamente la posesión de título o diploma universitario	25 de Sept. (recomendable realizarlo con un mes de antelación al menos)	Revisable cada año. Derechos de Inscripción 10,000 pesetas Mensualidad PDC 231,000 pesetas PDF 220,000 pesetas
Licenciatura en ciencias empresariales	Objeto: Carrera universitaria de 5 años de duración, destinada a la formación de profesionales capacitados para la asunción de responsabilidades de dirección en el marco general de la actividad empresarial. Especialidades: A desarrollar en el 2º Ciclo (4º y 5º Cursos): 1. Gestión general; 2. Gestión Financiera; 3. Gestión de Marketing. Título: "Licenciado en Ciencias Empresariales por la Facultad de CC.EE. y Empresariales (ESTE) de la Universidad de Deusto"	Facultad de CC.EE. y Empresariales (ESTE) de la Universidad de Deusto, Sede en San Sebastián Pº Mundaiz s/n 20012 San Sebastián España	La duración de cada curso académico abarca desde el 1º de octubre al 30 de junio	Requisitos de admisión: COU y Pruebas de Acceso a la Universidad Española superadas. Mayores de 25 años; únicamente un examen de ingreso específico de la Facultad. Español	15 de Junio (recomendable realizarlo con un mes de antelación, al menos)	Revisable cada año. Aproximadamente \$1,000/curso académico
Master en gestión de empresas	Dirección general; dirección administrativo-financiera; dirección comercial y marketing; 3 cursos cuatrimestrales, a dedicación plena; 5 cursos cuatrimestrales, a dedicación parcial.	Facultad de CC.EE. y Empresariales (ESTE) de la Universidad de Deusto, sede en San Sebastián Pº Mundaiz s/n 20012 San Setastían España	Modalidad 3 cursos Oct-Feb Feb-Jun Sept-Ene Modalidad 5 cursos Oct-Feb Feb-Jun Sept-Feb Feb-Jun Sept-Ene	Titulados universitarios de grado superior (licenciados e ingenieros) Titulados universitarios de grado medio con experiencia empresarial Excepcionalmente, no titulados con experiencia a nivel de alta dirección. Español	25 de Septiembre (recomendable realizarlo con un mes de antelación, al menos)	Revisable cada año. Derechos de Inscripción 30,000 pesetas Mensualidad 3 curs. 34,500, pesetas 5 curs. 20,500, pesetas
Management	General management programme for managers responsible for planning and control of industrial activities in the developing countries. Particular emphasis: strategic issues, management accounting and control, production management, financial management, marketing, technology transfer, international project management, joint ventures, field work in Swedish companies.	Swedish Institute of Management (IFL) Box 6501 113 83 Stockholm Sweden	19 July 1987 6 weeks 18 July 1988 6 weeks	Professional qualification Minimum 10 years' work experience in business or administration. English	15 April 1987	To be arranged

## MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management	The IMI organizes short courses: improvements in board practices on both sides of the Atlantic; international programme for senior executives; international executive programme; international advanced management programme; Master of Business Administration programme; financial management; financial control; marketing; research and development; management of technology; personnel management; management development; manufacturing policy.	International Management Institute (IMI) 4, chemin de Conches CH-1231 Geneva Switzerland	Throughout year 3 days- 9 months	Professional qualifications. English	-	SFr 5,00- 32,000
Advanced management analysis and operational research	Scientific decision making for efficient resource planning, allocation and control; use of management science techniques.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	10 August 1987 3 weeks	Middle-level managers. English	9 July 1987	\$US 1,934
Farm accounting and management seminar	Seminar on financing and accounting for farms, more recent accounting and management techniques relevant to medium and large-scale farm operations.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	4 October 1987 4 weeks September 1988 4 weeks	Professional qualifications Field experience in farm management. English	31 August 1987	\$US 2,464
Materials management	Principles, methods, equipment, machines and knowledge for improving efficiency and reducing financial outlay in locating, obtaining, transporting, storing, handling and distributing materials.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	12 October 1987 4 weeks	Supplies and materials managers, senior executives and supervisors with experience of materials control. English	11 September 1987	\$US 2,464
Production management	Preparation and appropriate design, operation and control of production systems within the overall framework of production management. Analytical skills for examining the structure of production management and interactive links with other organizational functions and the substantive environment.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	4 September 1987 4 weeks	Production managers, production/maintenance engineers, senior managers. English	3 August 1987	\$US 2,464

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Stock control and warehouse management	Stock control and stores operations techniques for achieving the most efficient utilization of funds available for inventory investment, principles of purchasing, problems and constraints of international purchasing practice, financial aspects of stores management, stores accounting and costing systems, budgetary control and audit.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	3 April 1987 4 weeks	Senior-level scores personnel; stores managers and supervisors English	5 February 1987	\$US 2,464
Purchasing	Efficient ways and means of foreign procurement and expediting, procurement through World Bank loans.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English		-
Stock control	Stock control methods used in Erdemir, computers in stock control, materials accounting plan, classification and identification of materials.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English		-
Documentation and industrial information	The function of industrial information in industrial development, retrieval systems and their practical application, classification systems, information systems for industry. Practical training in industrial information and documentation and study visits to industrial information units at plants and factories as well as to specialized institutes providing information services to industry.	VINIT All-Union Institute for Scientific and Technical Information Moscow Union of Soviet Socialist Republics	2 May- 10 June	Professional qualifications. English	-	-
Construction management	Modern construction management practices.	Henry Boot & Sons PLC Banner Cross Hall Sheffield S11 9PD United Kingdom	Ongoing	English	Ongoing	To be arranged
Financial management, administration, and marketing	A modular programme which caters flexibly for the specific requirements of companies. The sponsoring organization may select any combination of modules from a range which includes: accounting and finance, personnel management, communications and marketing, commercial law, etc.	Brown and Brown - Tutors 20 Warnborough Road Oxford OX2 6JA United Kingdom	Throughout the year. Variable	Professional qualifications. English	-	To be arranged

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
General management	Senior Managers Programme designed to broaden experience of other functions of management, update knowledge of management practice and techniques, improve effectiveness as members of management teams, develop potential for promotion, increase knowledge of corporate and functional policy issues and create awareness of the role of boards of management and general managers.	Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	22 February 1987 31 May 1987 1 November 1987 3 weeks	Senior managers English	-	£3,800 (including accommodation)
General management for specialists	Analysis of participants' jobs and demonstrate the relation of different aspects of management activity in the implementation of a corporate plan; development of a critical awareness of participants' management style and approaches to forming working relationships; improvement of managerial skills; evaluation of participants' effectiveness as managers and development of action plans to improve performance.	Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	22 February 1987 26 April 1987 26 June 1987 15 November 1987 3 weeks	Managers from specialist backgrounds English	-	£3,200 (including accommodation)
Management development	General management for middle managers: accounting for general managers, human resources management, marketing, operations management, business policy, managing technological change, economics and the environment, personal development and action planning, individual fitness routine.	Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	21 September 1987 6 weeks	Middle managers aged 30-40. English	-	£5,750 (including accommodation)
Young managers programme	To provide emerging managers with a good business grounding and a broader understanding of the elements of business and their own roles within the organization.	Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	1 February 1987 7 June 1987 27 September 1987 6 weeks	Junior managers aged 23-33. English	-	£2,700 (including accommodation)
Site management	Industry and management; communications in the construction industry; site surveying and levelling; contractual procedures; planning and organization; productivity techniques.	Crown Agents for Overseas Governments and Administrations Training Services St. Nicholas House Sutton Surrey SM1 1EL United Kingdom	16 February and 14 September 1987	Middle and senior construction managers and civil engineers English	-	£5,600 (including accommodation)

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Supply and materials management	To enable middle and senior management personnel to develop existing supplies procedures, plan new supplies system and to integrate existing but diversified supply activities. (Courses are also organized in management and maintenance of physical assets; training, its design and management; procurement for development projects; management and maintenance of agricultural machinery and plant.)	Crown Agents for Overseas Governments and Administrations Training Services St. Nicholas House Sutton Surrey SM1 1EL United Kingdom	5 January, 6 April, 29 June and 22 September 1987 12 weeks	Professional qualifications. English	-	£5,600 (including full board and accommodation)
Management	Effective management of organizations.	Industrial Training Service Ltd. Overseas Division 43 Market Place Wetherby West Yorkshire LS22 4LN United Kingdom	July and October 1987 July and October 1988 approx. 4 weeks	Professional qualifications and relevant responsibilities	6 weeks before start of course	No fee yet fixed for 1987/1988 1986 fee was £975 excluding accommodation
Production management	Sharing British production management expertise. A programme for production and industrial engineering specialists from countries other than the United Kingdom.	Industrial Training Service Ltd. Overseas Division 43 Market Place Wetherby West Yorkshire LS22 4LN United Kingdom	21 September 1987 19 September 1988 3 months	Professional qualifications. English	6 weeks before start of course	To be arranged
Industrial management	Courses on: industrial administration; production planning and control; planned maintenance; production control; production and materials management; production and management control; modern materials management.	Institute of Production Control National Westminster House Wood Street Stratford-upon-Avon Warwickshire United Kingdom (in various countries)	Throughout year 4-16 weeks	Professional qualifications. English	-	To be arranged (including accommodation and course documentation)
Purchasing and materials management	Purchase practice and technique; purchasing and supply management; stores management and stock control; materials management; business studies; international purchasing.	Institute of Purchasing and Supply Easton House Easton on the Hill Stamford Lincolnshire PE9 3NZ United Kingdom Venue: Eastbourne East Sussex, United Kingdom	12 weeks commencing 9 March - 30 May and 14 September - 5 December 1987	Middle management and senior personnel. English	60 days before course starting date	£5,600

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management for engineers and scientists	Personnel management: general management principles and the achievement of results; techniques of communication, motivation, discipline, organization of training, the management of change, etc.	International Department The Industrial Society 48 Bryanston Square London W1H 7LN	July and October 1987 July and October 1988 3 weeks (fully residential)	Professional qualifications. English	4 weeks before start of course	£900 + VAT
Management today programme	Personal skills, team building, team maintenance, visits to member organizations, job planning and reward. Conditions of employment, the manager's responsibility for training, marketing, finance, aids to management efficiency; workshop for alleviating problems in participants' organizations.	International Department The Industrial Society 48 Bryanston Square London W1H 7LN	13 January 1987 4 May 1987 21 September 1987 January, May, September 1988 12 weeks	Relevant experience English	One month before start of course	1987 Society Member rate £2,475 + VAT Non-Member rate £2,915 + VAT
Management	More than 70 courses and in-company training programmes are organized in such subjects as: communications; management; supervision; sales; design; maintenance; electronics; production technology; quality; industrial purchasing; stock control, etc.	PERA Training Melton Mowbray Leicestershire LE13 0PB United Kingdom	Throughout the year Variable	Professional qualifications. English	-	To be arranged
Engineering project management	Cash flow analysis, contractual arrangements, planning, estimating and risk analysis and management.	Project Management Group Department of Civil UNIST Manchester United Kingdom	April 1987	Professional qualifications	-	£440
Administration and management	Courses on: organization; personnel management; management information systems; public sector administration; project management; management services; training techniques; management of training; financial management in government; advanced management in government; management analysis and consultancy skills; loan administration; training techniques; national development; manpower budgeting and staff inspection.	Royal Institute of Public Administration Overseas Services Unit Hamilton House Maletton Place London WC1H 9BD United Kingdom	February-October 1-3 months	Professional qualifications. English	-	£900-4,050 approx.

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Public enterprise management	Concentration is on policy and strategy with the overall objective of increasing effectiveness. The specific nature of public enterprises is analysed and the relationship with government and public is explored. Delegates will study specific experiences of public enterprise management, will update their appreciation of a range of management techniques and develop personal management skills.	University of Leeds Department of Management Studies Leeds LS2 9JT United Kingdom	April 12 weeks	Professional qualifications. English	-	£3,000
Management (training and internal consultancy)	A project-based intensive course for pairs of delegates designed to achieve tangible, beneficial change in their home organization. Delegates apply the management, training and consultancy knowledge and skills they learn to a real problem, plan their approach in detail and target for significant but achievable improvement.	University of Leeds Department of Management Studies Leeds LS2 9JT United Kingdom	April 12 weeks	Professional qualifications. English	-	Presently £3,000 Subject to review 1987
Managing large-scale projects	Principles and up-to-date practice of project management, practical advice and assistance on the implementation of projects, improvement of personal skills and managerial effectiveness, development of subjects of individual interest by participants.	Urwick Management Centre Baylis House Stoke Poges Lane Slough Berks United Kingdom	15 June 1987 10 weeks	English	-	To be arranged
R+D management	Philosophy of management; planning; organizing; staffing and staff development; directing and leading; evaluating and controlling.	Battelle Memorial Institute 505 King Avenue Columbus, Ohio 43201 United States of America	August 3 weeks	Professional qualifications. English	1 July	To be arranged
Organization and management of agro-industrial enterprises	Theoretical training in organization planning, management, financing and investment policy, economic infrastructure. Practical training on organizational aspects of agro-industrial enterprises. Separate agro-industrial enterprises and food processing plants, study visits to agro-industrial enterprises.	Joint UNIDO-Yugoslavia Centre for International Co-operation in Development of Agro-industries in the Developing Countries	September	Interregional programme Engineering degree with 3 years' experience in food processing. English	-	-

MANAGEMENT AND INDUSTRIAL ADMINISTRATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management staff training	The personality of management staff, systems, methods and skills in modern management, work and group relations, the manager as an instructor.	Working People University "Buro Bakovic" S-rajevo Yugoslavia	Throughout the year except in July and August	Managers Groups of 15-20 persons English	70 days in advance	\$US 9,500 per group

MARKETING AND EXPORT PROMOTION  
MARKETING ET PROMOTION DES EXPORTATIONS  
COMERCIALIZACION Y PROMOCION DE LAS EXPORTACIONES

International marketing and export for small- and medium-size firms	The course is oriented towards small- and medium-size firms in developing countries. Topics dealt with are: principles and basic concepts; strategic decisions in international marketing; international market research; international product decisions; international distribution decisions; international pricing decisions; international communications; organization for international market; successful exporting; case studies and work visits.	International Centre for Quality and Management Sciences P.O. Box 2082 3000 CB Rotterdam Netherlands	6 April 1987 and 4 April 1988 3 months	Bachelor degree or equivalent and experience in a relevant field of study. English	-	f.10,000
Marketing management and physical distribution	The marketing concept, strategic marketing management, marketing research, aids to decision-making, physical distribution; "hands-on" experience through computer utilization, business gaming, fieldwork and design of a marketing plan.	Research Institute for Management Science (RVB) 11, Mijnbouwplein P.O. Box 143 2600 AC Delft Netherlands	9 March 1987 and 18 January 1988 13 1/2 weeks	Professional qualifications and marketing experience at middle management level English	-	f.15,000 (tuition only)
International marketing	Covers all major decision areas to enable participants to run an effective international trading department.	Missenden Abbey Management Centre Great Missenden Bucks HP16 0BD United Kingdom	6 July 1987 8 weeks	Professional qualifications Senior status English	15 May 1987	f5,200 including accommodation
Agricultural marketing in developing countries	The first 8 weeks are devoted to the study of the four key elements in the marketing of agricultural inputs and outputs, namely, planning, implementing, monitoring and controlling. Two weeks of attachment to relevant organizations are arranged and the last 2 weeks are occupied in project preparation.	University of Leeds Department of Management Studies Leeds LS2 9JT United Kingdom	April 12 weeks	Professional qualifications. English	-	Presently f3,000 subject to review 1987



Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
<b>QUALITY CONTROL AND STANDARDIZATION</b> <b>CONTROLE DE LA QUALITE ET NORMALISATION</b> <b>CONTROL DE CALIDAD Y NORMALIZACION</b>						
Análisis de fallas de materiales	Introducción al análisis de fallas de materiales metálicos. Estudio del origen de fallas y clasificación de las mismas. Estudio de casos prácticos con el empleo de equipos científicos modernos.	Dirección General de Asesoramiento Técnico Salta 2752 - 2000 Rosario - Argentina	Mayo 3 junio 2 semanas	Profesionales jóvenes o técnicos con experiencia Español	-	\$US 200
Normalisation	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 CEDEC. 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.	Institut belge de normalisation (I.B.N.) 29, avenue de la Brabançonne B-1040 Bruxelles Belgique	A fixer	Niveau universitaire. Français	-	A arranger
Quality control	Classroom work, discussions, group work and visits to firms, to give participants an insight into the commonest methods for process and sampling control. Further it will be possible to see the methods used in production firms.	The Jutland Technological Institute Quality Control Section Teknologiparken 8000 Aarhus C Denmark	June 1987 3 weeks	Engineers and managerial staff of developing countries who supervise quality control, production control or factory management English	3 months prior to start of course	To be arranged
Qualité et fiabilité	Donner une solide formation à la "qualité" à des ingénieurs pour les spécialiser, grâce aux techniques informatiques les plus récentes.	Institut national des sciences appliquées de Lyon Formation continue Bât.: 601 20, avenue Albert Einstein 69621 Villeurbanne Cedex France	15.02.88 au 14.05.88	Ingénieur et technicien super. Français	2 mois avant début du stage	FF 20,475

## QUALITY CONTROL AND STANDARDIZATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Total quality control	The concept and principles of TQC: functions, organisation and systems of TQC activities, quality policy planning and management, manpower development, education in awareness, information analysis and data collection, product design and development; QCC activities, characteristic features, rules and pitfalls, TQC activities in different industries.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Venue: Japan	To be decided 4 weeks	Quality control managers/engineers in industry and technical consultants of national productivity organizations, etc. of APO member countries English	3 months before commencement	\$US 100 per participant from profit-making organizations
Statistical quality control, a computer-oriented approach	The emphasis is devoted to the development and applications of various statistical tools underlying the modern methods of controlling the quality of goods and services at an early stage of the production cycle and showing how the calculations can be made by computer. Topics covered in the course include: 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.	International Centre for Quality and Management Sciences P.O. Box 2082 3000 CB Rotterdam Netherlands	12 January 24 August 1987 and 11 January 22 August 1988 2 months	Bachelor degree or equivalent and experience in quality control or a related discipline English	3 months before commencing date	f.7,000
Total quality control	The course is divided into three parts: 1. Theoretical; dealing with the 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 in quality control and standardization are given special attention. 2. Practical; conducted in factories, offices or institutes concerned with quality control. 3. General; spent on transmission of knowledge, studying topics of special interest and visits to industrial plants.	International Centre for Quality and Management Sciences P.O. Box 2082 3000 CB Rotterdam Netherlands	12 January and 24 August 1987 and 11 January and 22 August 1988 4 months	Bachelor degree or equivalent and experience in quality control or a related discipline English	-	f.13,000
Quality systems installation, auditing and improvement	Various types of control systems are discussed including the organization schemes and cost-reporting methods that go with each type. For existing quality control systems, the seminar shows systematic methods of auditing and improving the system to make it work more efficiently, hence economically. Topics dealt with include: 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 systems auditing, quality motivation and improvement programmes and quality requirements for export to industrial countries.	International Centre for Quality and Management Sciences P.O. Box 2082 3000 CB Rotterdam Netherlands	12 January 24 August 1987 and 11 January 22 August 1988 6 weeks	Bachelor degree or equivalent and experience in quality control or a related discipline. English	3 months before commencing date	f.5,500

QUALITY CONTROL AND STANDARDIZATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Applied practical quality control inspection and metrology for mechanical engineering	Theoretical and practical areas of quality control, inspection and dimensional metrology.	SWEDEC International AB Riddargatan 37 S-114 57 Stockholm Sweden (can also be conducted on customers' premises)	19 October 1987 6 weeks	Professional qualifications English	15 March 1987	\$US 4,200 (May 1986 exchange rate)
Quality control	Practical experience in the application of quality control techniques, systems and principles in industry, advantages of good quality products to consumers and manufacturers, increase of profits through quality improvement.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	2 February 1987 6 weeks	Quality and production control managers English	5 January 1987	\$US 3,564
Metallurgical quality control	Concepts of specifications standards and quality, purchasing orders and their preparation, determination of tolerances, raw material specifications, ladle metallurgy, defects of mould ingots and their causes, defects of concast slab and their causes, determination of hot and cold rolling mill quality control conditions, sample preparation, X-ray examination and photography, evaluation of customer complaints, stock yard quality control.	Ercoli Iron and Steel Plant Ercoli Turkey	September 1987 September 1988 12 weeks	English	-	-
Pipemill inspection	Studies in specifications, codes and standards; visual and dimensional inspection; welding technology; basic metallurgy; heat treatment; welding codes; weld defects; destructive and nondestructive testing; quality assurance and evaluation; quality control.	Inspectorate - Unit Inspection Sketty Hall Sketty Park Road Swansea SA2 8QE United Kingdom Inspectorate - Unit Inspection, P.O. Box 45 Portrack Lane Stockton-on-Tees Cleveland TS18 2PP United Kingdom	March and November 6 months or by arrangement	Equivalent of GCE "O" level in Mathematics, and Physics/ General Science	1 month before start of course	£160 per man/week
Nondestructive testing	Theoretical and practical training in ultrasonic, radiographic, penetrant and magnetic particle testing methods and welding inspection. (All subjects or any individual subjects may be taken.)	Inspectorate - Unit Inspection Sketty Hall Sketty Park Road Swansea SA2 8QE United Kingdom Inspectorate - Unit Inspection, P.O. Box 45 Portrack Lane, Stockton-on-Tees Cleveland TS18 2PP, United Kingdom	January, July and September or by arrangement 2-12 months	Equivalent of GCE "O" level in Mathematics, and Physics/ General Science	1 month before start of course	£160 per man/week

QUALITY CONTROL AND STANDARDIZATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Quality control procedures	Theoretical and practical training in quality assurance, quality evaluation and control, statutory inspection, nondestructive testing and welding inspection.	Inspectorate - Unit Inspection Sketty Hall Sketty Park Road Swansea SA2 8QE United Kingdom Inspectorate - Unit Inspection, P.O. Box 45 Portrack Lane Stockton-on-Tees Cleveland TS18 2PP United Kingdom	March and September or by arrangement 2-12 months	Equivalent of GCE "O" level in Mathematics, and Physics/General Science	1 month before start of course	£150 per man/week
Quality assurance	Quality survey and related training activities designed to meet British Standard B.S.5750.	Metcon Training 14 Pall Mall London United Kingdom	Throughout the year	English	-	-
Weights - metrology	Calibration of length, mass and volume standards.	National Weights and Measures Laboratory NPL Teddington TW11 0LW United Kingdom	May each year 3 weeks	Professional qualifications English	February	£660
Metrology and trading standards enforcement	Metrological controls imposed on equipment, goods and services in trade use which are exercised by Trading Standards Officers (Weights and Measures Inspectors), including Consumer Protection law and practice.	South West Trading Standards Unit Daunceys Hotel Claremont Crescent Weston-Super-Mare Avon BS3 5EE United Kingdom	February English	Professional qualifications	November	£2,400 (approx.)
Quality control	Advanced materials: investigative methods for surface analysis, I.R. spectroscopy, electrical and electronic properties, tensile and dynamic mechanical testing, fluid rheology, polymers, composites and metallic materials.	Dept. of Pure and Applied Chemistry University of Strathclyde Glasgow G1 1XL United Kingdom	To be arranged Normally 3 months to one year	Professional qualifications or degree	To be arranged	To be arranged
Control de calidad	Administración de la calidad en la industria alimentaria.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	9 de setiembre 7 semanas	Técnicos con experiencia Español	3 de setiembre	\$US 110

QUALITY CONTROL AND STANDARDIZATION (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Control de calidad I	Tecnología del control estadístico de la calidad.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	2 de junio 3 de septiembre 4 semanas	Graduados en ingeniería o técnicos con experiencia Español	24 de mayo 29 de agosto	\$US 90 \$US 90
Control de calidad II y métodos estadísticos	Herramientas estadísticas, complementarias a las del Curso I.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	5 de noviembre 4 semanas	Graduados en ingeniería o técnicos con experiencia Español	30 de octubre	\$US 110

SMALL-SCALE INDUSTRIES AND ENTREPRENEURSHIP  
 PETITES INDUSTRIES ET ENTREPRENEURS  
 PEQUEÑAS INDUSTRIAS Y LOS EMPRESARIOS

Entrepreneur development training (EDT)	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.	International Training and Contact (ITC) Formation et Contact International (FCI) a.s.b.l. Velodroomstraat 68 2600 Antwerp Belgium	September-October 8 weeks	Professional qualifications English	May	To be arranged
Small industry financing	Understand the policies and programmes in India for financing small industry; improve skills in scrutinizing and appraising applications for loans; and develop suitable systems for proper utilization of funds by the borrower and ensure prompt recovery.	National Institute of Small Industry Extension Training (NISJET), Yousufguda Hyderabad 500 045 India	October 8 weeks	2-3 years experience in banks, financial institutions or development corporations English	-	\$US 2,320
Small industry management consultancy	Refresh knowledge in the function areas of industrial management; sharpen skills of analytical techniques in providing integrated counselling services to identify the real problems and evaluate alternative solutions; acquire the skills to practise management consultancy for performing general business diagnosis and diagnosis of the problems in the functional areas in a small industry; contribute to the development of industrial management consultancy services in their countries.	National Institute of Small Industry Extension Training (NISJET), Yousufguda Hyderabad 500 045, India	September 12 weeks	Management consultants, teachers and trainers English	-	\$US 3,250

SMALL-SCALE INDUSTRIES AND ENTREPRENEURSHIP (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Small industry promotion in developing economies	Develop the required analytical skills for identifying industrial opportunities and making project analysis; share Indian experience in the field of small industry development and promotion, and in other sub-areas of the decentralized sector; and impart promotional techniques for the accelerated development of small industries.	National Institute of Small Industry Extension Training (NISIET), Yousufguda Hyderabad 500 045 India	September 12 weeks	Personnel associated with policy formulation, promotion and development of cottage and small industries English	-	\$US 3,250
La microempresa	Desarrollo y cambio, trabajo comunitario, trabajo con grupos, cooperativas, planificación de proyectos, organización de la microempresa, administración de producción, administración de finanzas, mercadeo.	Centro Internacional de Capacitación "Golda Meir" Monte Carmel David Pinsky 12 34351 Haifa Israel	Mayo 3 meses	Formación profesional en desarrollo comunitario o temas relacionados. 3 años de experiencia práctica	Enero	\$US 1,200 al mes (con pensión completa)
Small-scale industry	Promotion of income-generating projects for rural women: development, community work, concepts and methodology, working with groups, communication, co-operatives, production, financial management, marketing, study visits, practical work.	The Golda Meir Mount Carmel International Training Centre 12 David Pinsky 34351 Haifa Israel	23 April 1987 14 August 1987	Training in community development or related subjects. Three years of practical experience	-	\$US 1,200 per month (with accommodation and full board)
Organización de la pequeña y mediana empresa agroalimentaria	Problemática del medio rural en diversos países, planes nacionales y programas regionales y locales de apoyo a las industrias alimentarias. Estructuras de las pequeñas y medianas empresas alimentarias, modelos de producción, organización de la unidad económica campesina. Sistema de comercialización de los productos. Crédito agrícola.	Cori SpA Centro Studi Agricoli Borgo a Mozzano 55060 Mutigliano/Ponte del Giglio Italia	Septiembre 1987 12 semanas	Técnicos del sector Español	Junio 1987	A convenir
Small industries development	The concept of small industries and their role in development, identification of opportunities for small industries development, financing small industrial projects, implementation designs, constraints for small industry development, technical assistance, entrepreneurship development and management training, co-ordination and control.	Eastern and Southern African Management Institute Njiro Hill P.O. Box 3030 Arusha Tanzania	May-June 4 weeks	Persons with relevant responsibilities English	30 April 1987	\$US 2,464 per participant

SMALL-SCALE INDUSTRIES AND ENTREPRENEURSHIP (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Developing income-generating enterprise	Design and implementation of effective and eventually self-sustaining programmes of assistance for enterprise, within the context of overall community development.	Enterprise Development Centre Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	18 April 1987	Work in relevant organizations English	February 1987	£2,000
			4 weeks 19 April 1988		February 1988	£2,000
Promotion of small-scale enterprises in developing countries	Design and implementation of integrated assistance programmes, including finance, training, the provision of infrastructure and the framing and monitoring of overall government policy.	Enterprise Development Centre Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	19 July 1987	At least one year's involvement in relevant work and intention to continue English	May 1987	£4,000
			8 weeks 20 July 1988		May 1988	£4,000
Training for enterprise	Enhancement of ability to design and conduct effective training at any level, to produce training materials for own use and use by others and to manage and evaluate self-sustaining training activities.	Enterprise Development Centre Cranfield School of Management Cranfield Bedford MK43 OAL United Kingdom	13 September 1987	Relevant responsibility English	July 1987	£4,000
			8 weeks 14 September 1988		July 1988	£4,000
			4 weeks			

TRAINER DEVELOPMENT  
PERFECTIONNEMENT DU PERSONNEL ENSEIGNANT  
DESARROLLO DE PROFESIONALES DE CAPACITACION

Perfectionnement de professeurs de l'enseignement technique	Cours de perfectionnement destinés aux professeurs de l'ensei, mont technique sur les matières suivantes : définition des besoins de l'industrie; sélection et orientation des étudiants; définitions des programmes; relations usine-école; administration des consommables et entretien; psychologie des étudiants adultes; choix et utilisation des méthodes pédagogiques de formation des jeunes adultes.	Institut belge de formation et de transfert de technologie - I.B.F. Rue Montoyer 63 B-1040 Bruxelles Belgique	Toute l'année sauf juillet et août. Durée 4-8 semaines (éventuellement quelques mois)	Qualifications professionnelles Français, anglais	-	A fixer
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TRAINER DEVELOPMENT (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Sélection et formation d'instructeurs	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.	International Executives Benelux SA "INTEX" 5, rue de la Science B-1040 Bruxelles Belgique	Toute l'année sauf de juillet au 15 septembre A fixer	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	-	A fixer
Training of trainers	Syllabus: Introduction to the world of entrepreneurs, analysis of training needs developing course approaches, planning and running establishment courses, how to get in touch with entrepreneurs through campaign activities (advertising, information meetings), visiting entrepreneurs and information centres, application forms and selection of course members, course evaluation, following up activities, advising entrepreneurs. The course can also be arranged at customer's premises.	The Jutland Technological Institute The Entrepreneur Centre Teknologiparken 8000 Aarhus C Denmark	To be arranged 8 weeks	Applicants should hold a position of managerial responsibility or be nominated for promotion to such a position. Further they must have at least 5 years experience as consultants for small-scale industry. English	-	To be arranged
Training of trainers	The course will cover two weeks general introduction to the concept of training of trainers (training needs analysis, motivation, training methodology, audio-visual aids and implementation), 6 weeks of project work, techniques in case-material development and curriculum development.	The Jutland Technology Institute International Section Teknologiparken 8000 Aarhus C Denmark	To be arranged 8 weeks	Experience: professional skills in subjects to be taught. English	-	To be arranged
Training methods and skills	To understand and gain insight into the dynamics of training/learning process; develop skills in the choice and use of training methods; develop competence in planning a curriculum; develop personal and role effectiveness as a trainer.	National Institute of Small Industry Extension Training (NISIT) Yousufguda Hyderabad 500 045 India	September 9 weeks	Personnel engaged in training. English	-	\$US 2,555
Design and development of training material	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.	Institute of Public Administration 57-61 Lansdowne Road Dublin 4 Ireland	5 May 1987 3 May 1988 10 weeks	English	5 March 1987 3 March 1988	Approx. £Ir 2,850 £Ir 2,995



TRAINER DEVELOPMENT (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management of industrial and vocational training	The course will enable participants to assess training needs on an organisational 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.	ANCO - Industrial Training Authority in collaboration with DEVCO Elm House Clanwilliam Court Lr. Mount Street Dublin 2 Ireland	13 July 1987 10 weeks	Professional qualifications. English	May 1987	£Ir 6,900 (including accommodation)
Training of trainers in developing countries	Courses in instructional techniques, job analysis, programme planning, supervision, on-the-job training.	ANCO, The Industrial Training Authority 27-33 Upper Baggot St. Dublin 4 Ireland	Through-out the year 2 weeks to 1 year according to requirements	English	-	To be arranged
Training	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.	Institute of Public Administration 57-61 Lansdowne Road Dublin 4 Ireland	1 September 1987 6 September 1988 10 weeks	English	5 March 1987 3 March 1988	£Ir 2,850 £Ir 2,995
Trainers' workshop	Theory and techniques of teaching adults, personal skills of trainers, preparation of training materials, management of training within an organization.	Irish Management Institute Sandyford Road Dublin 16 Ireland	May 1987 8 weeks	Management trainers from developing countries English	4 weeks before commencement of programme	To be arranged
Training for trainers in developing countries	Improvement of knowledge of instruction techniques, course design, interpersonal relations, instruction communication, management training.	CORI SpA Centro Studi Agricoli Borgo a Mozzano 55060 Mutigliano/ Ponte del Giglio Lucca Italy	April 1987 (English) February 1988 (French)	Professional qualifications.	January 1987 December 1987	To be arranged
Trainer development	Training of trainers for personnel development, management development and for industrial manpower, organization and management of training centres.	CEPECA International Centre for Management Development Otopeni Soseaia Odai No. 20 Bucharest Romania	To be arranged 6-10 weeks	Professional qualifications. English and French	-	\$US 540 per week (Accommodation and meals included)

TRAINER DEVELOPMENT (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Overseas training officers' programme	The management of a training function and its resources, development of human resources within an organization, identification of training needs, design and evaluation of training programmes, implementation and running of training, preparation of training materials, provision of training/development advice to management.	BACIE 16 Park Crescent London W1N 4AP United Kingdom	To be arranged	English	As soon as possible	To be arranged
Training officer training and development	The role and function of a training officer: identifying and formulating training needs, implementing training plans and evaluating training, course and programme design, training systems, costing and budgeting of training, teaching/training methods and techniques, manpower and training planning, manpower development.	British Water International James House 27 London Road Newbury, Berkshire RG13 1JL United Kingdom	12 weeks	Potential or newly appointed training officers English	To be arranged	To be arranged
Training design and management	The training process; the role of the trainer; deciding what training to do; presentation skills; methods of training; organizing training courses; evaluation of training; designing training courses.	Crown Agents for Overseas Governments and Administrations Training Services St. Nicholas House Sutton, Surrey SM1 1EL United Kingdom Venue: Esher, Surrey	29 June 1987 12 weeks	Middle and senior managers with responsibility for staff development English	1 month before start of course	£6,250 (including full board and accommodation)
Training of trainers	This course is for newly appointed training officers or those who require to update or develop their skills and knowledge in training. Its objective is to enable course members to carry out their company's training function for all operative, clerical, technical supervisory and management categories.	Fielden House Productivity Centre Limited The Shirley Campus 856 Wimslow Road Didsbury Manchester M20 8RY United Kingdom	Throughout the year 10 weeks	Professional qualifications. English	-	To be arranged
Training of trainers	Identification of training needs, development of effective training programmes, and selection of appropriate training techniques, concentrating on communications at work, action-centred leadership, job analysis and specification, etc. Course gives eligibility for the Certificate of Training and Development awarded by the Institute of Training and Development.	International Department The Industrial Society 48 Bryanston Square London W1H 7LN	13 January 1987 4 May 1987 21 September 1987 January, May, September 1988 12 weeks	Relevant responsibilities English	One month before start of course	1987 Society Member rate £2,790 + VAT New Member rate £3,310 + VAT

TRAINER DEVELOPMENT (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Overseas training officers' programme	The management of a training function and its resources, development of human resources within an organization, identification of training needs, design and evaluation of training programmes, implementation and running of training, preparation of training materials, provision of training/development advice to management.	BACIE 16 Park Crescent London W1N 4AP United Kingdom	To be arranged	English	As soon as possible	To be arranged
Training officer training and development	The role and function of a training officer; identifying and formulating training needs, implementing training plans and evaluating training, course and programme design, training systems, costing and budgeting of training, teaching/training methods and techniques, manpower and training planning, manpower development.	British Water International James House 27 London Road Newbury, Berkshire RG13 1JL United Kingdom	12 weeks	Potential or newly appointed training officers English	To be arranged	To be arranged
Training Design and management	The training process; the role of the trainer; deciding what training to do; presentation skills; methods of training; organizing training courses; evaluation of training; designing training courses.	Crown Agents for Overseas Governments and Administrations Training Services St. Nicholas House Sutton, Surrey SM1 1EL United Kingdom Venue: Esher, Surrey	29 June 1987 12 weeks	Middle and senior managers with responsibility for staff development English	1 month before start of course	£4,250 (including full board and accommodation)
Training of trainers	This course is for newly appointed training officers or those who require to update or develop their skills and knowledge in training. Its objective is to enable course members to carry out their company's training function for all operative, clerical, technical supervisory and management categories.	Fielden House Productivity Centre Limited The Shirley Campus 856 Wimslow Road Didsbury Manchester M20 8RY United Kingdom	Throughout the year 10 weeks	Professional qualifications. English	-	To be arranged
Training of trainers	Identification of training needs, development of effective training programmes, and selection of appropriate training techniques, concentrating on communications at work, action-centred leadership, job analysis and specification, etc. Course gives eligibility for the Certificate of Training and Development awarded by the Institute of Training and Development.	International Department The Industrial Society 48 Bryanston Square London W1H 7LN	13 January 1987 4 May 1987 21 September 1987 January, May, September 1988 12 weeks	Relevant responsibilities English	One month before start of course	1987 Society Member rate £2,790 + VAT New Member rate £3,310 + VAT

CHAPTER 3: OTHER TRAINING OPPORTUNITIES AND SHORT COURSES  
 CHAPITRE 3 : AUTRES POSSIBILITES DE FORMATION ET SESSIONS D'ETUDE DE BREVE DUREE  
 CAPITULO 3: OTRAS OPORTUNIDADES DE CAPACITACION Y CURSOS CORTOS

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Industria metal-mecánica	Cursos en: tecnología de fundición, metalurgia física, maquinaria e implementos agrícolas, teoría y práctica en la lucha contra la corrosión, tratamiento térmico, soldadura de piezas fundidas, máquinas ordeñadores e instalaciones de ordeño.	Dirección General de Asesoramiento Técnico Salta 2752 - 2000 Rosario Argentina	Abril-Julio 2 semanas	Profesionales jóvenes o técnicos con experiencia. Español	-	\$US 200
Iron and steel industry	Short courses on: technology of iron and steelmaking (levels I, II and III); production and maintenance in 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.	Voest-Alpine Industrial Services Corp. Ltd. Kremlstr. 5 P.O. Box 2 A-4020 Linz Austria	Throughout year 1 week	Professional qualifications. English	To be arranged	AS 23,630-25,250 including lunch and in-plant transport
Medical technologies	Evaluation of the most modern medical technologies. These technologies are aimed towards developing countries; this means medical tools which can be easily handled and transported.	International Training and Contact (I.T.C.) Formation et Contact International (F.C.I.) a.s.b.l. Velodroomstraat No. 68 2600 Antwerpen Belgium	Throughout the year except in July and August 4 weeks	Professional qualification. English, French or Spanish	-	To be arranged
Diagnostics d'entreprises ou de départements	Diagnosics généraux d'entreprises, de départements ou de services; analyse des fonctions, validité des outils de gestion; fiabilité des informations, systèmes et procédures; rentabilité; stratégie d'entreprise; études de marchés.	Helping S.A. 38, avenue Montjoie B-1180 Bruxelles Belgique	A arranger	Qualifications professionnelles. Français, anglais, néerlandais, allemand	-	A arranger
Gestion de production	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.	Helping S.A. 38, avenue Montjoie B-1180 Bruxelles Belgique	A arranger	Minimum baccalauréat ou niveau équivalent. Français, anglais, néerlandais, allemand	-	A arranger

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Formation des contremaîtres et des ingénieurs à l'élaboration des modes opératoires	Connaissances théoriques et techniques nécessaires à l'élaboration des modes opératoires, ces derniers étant non seulement la clef de l'utilisation correcte de l'équipement et de sa longévité, mais également l'outil de base de la formation de ces contremaîtres et ingénieurs.	International Executives Benelux S.A. "INTEX" 5, rue de la Science B-1040 Bruxelles Belgique	Toute l'année sauf de juillet au 15 septembre A fixer	Ingénieur ou contremaître possédant une expérience de plusieurs années dans sa spécialisation, son secteur d'activité ou sa profession. Français, anglais	-	A arranger
Formation d'ingénieurs	Cet enseignement est conçu dans une vue très large dépassant le sens restreint de "formation" classique. Il vise plus spécialement le transfert de méthodes, le transfert de technologies et aussi de know-how.	International Executives Benelux S.A. "INTEX" 5, rue de la Science B-1040 Bruxelles Belgique	Toute l'année sauf de juillet au 15 septembre A fixer	Ingénieurs possédant une certaine expérience dans leur spécialisation. Français	-	A arranger
Fertilizer industry CAD/CAM wood processing	Short courses on: fertilizer granulation, chemical analysis of fertilizers, fertilizer production, agricultural inoculants production. Courses also offered in CAD/CAM and technological characteristics of wood processing.	Ciidade Universitaria Caixa Postal 7141 05508 São Paulo, SP Brazil	5-10 working days	Professional qualifications. Portuguese	1 April 1 May 1 October 1987	\$US 200-250
Machining	Short courses on: improvement of milling practice; reading and interpretation of drawings.	Centro Estadual de Educação Tecnológica "Paula Souza" São Paulo Brazil	2 March 1987 3 August 1987 70 hrs	Professional qualifications. Portuguese	16-27 February 1987 15-31 July 1987	Free
Computer graphics	Short courses on: introduction to interactive computer graphics, advanced computer graphics and computer-aided design, 2-D interactive graphics system, 3-D interactive system for 16-bit microcomputers (IBM compatible), introduction to CAD for managers.	CAD Research and Development Laboratory P.O. Box 112 Sofia 1113 Bulgaria	To be arranged 2-6 days	Professional qualifications. English	-	To be arranged
Television: industrial applications	Short courses on industrial TV applications for observation and non-contact measurements; demonstration on CCTV systems. On completion, participants should be able to advise on and to design industrial CCTV systems.	Bulgarian Ship Hydrodynamics Centre Varna 9003 Bulgaria	Throughout the year 5-15 working days	Professional qualifications. English, Russian	-	To be arranged

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Metalurgia	Cursos en: muestreo de materiales a granel; la molienda autogena y sus aplicaciones al procesamiento de minerales; aplicabilidad de los modelos matematicos al dimensionamiento y optimización de circuitos de molienda - clasificación; hidrometalurgia - lixiviación; pirometalurgia del cobre.	Centro de Investigación Minera y Metalúrgica (CIMM) Av. Pargue Institucional 6.500 Manquehue (Lo Recabarren) Castilla 170 - Correo 10 Santiago, Chile	Marzo-octubre 5 días 1-2 semanas	Calificación profesional. Español o inglés	1 mes antes del inicio del curso	\$US 400 - 1,200
Industrias mecánicas	Cursos en: ensayos no destructivos, inspección y control de calidad de soldadura, metrología industrial.	CESMEC Ltda. Av. Marathon 2595 Santiago, Chile	A definir 2 semanas	Educación secundaria	-	\$US 500
Instrumentación y control de procesos industriales	Conceptos de control e instrumentación; conceptos de modelación de sistemas; estrategias de control; elementos de proyecto para sistemas de control.	Instituto Nacional de Capacitación Profesional (INACAP) Casilla 10205 Avenida Chesterton 7028 Santiago, Chile	A determinar 2 semanas	Ingenieros civiles. Español	-	\$US 250
Production and combustion of wood chips	Different systems of chippers and combustion; storing and handling of wood chips; financial calculations for the use of wood chips for fuel.	The Danish Institute of Forest Technology Amalievej 20 1875 Frederiksberg C Denmark	To be arranged 1-2 days	English	None	To be arranged
International dairy training programme	International seminar on dairy industry management.	FAO/FINNIDA Finland	May 1988 5 days	English		No fee
Automatisation	Cours de : conception et fabrication assistée par l'ordinateur (CAO/FAO); informatique général; automatique et robotique industrielle; organisation et gestion de production; sciences de l'ingénieur.	Université de Paris-Nord IUT de St. Denis/ Département de génie mécanique et productive Place du 8 mai 1945 93206 St. Denis Cedex 1, France	Novembre chaque année 60-200 h	Technicien supérieur. Français	Fin juin chaque année	FF 2 400 - 12 000

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Contrôle industriel et qualité, normalisation et analyse de la valeur	Cours sur : initiation à l'analyse de la valeur; la normalisation d'entreprise; comment améliorer l'efficacité de la maintenance; la gestion des rechanges; la conduite des projets informatiques; le contrat de maintenance; concepts de qualité; la qualité à la production; la qualité aux études et au marketing; formation à l'audit qualité; la micro-informatique au service du contrôle qualité; les services qualité des entreprises et les logiciels; analyse de la valeur; motivation à la qualité; qualité aux approvisionnements; comprendre la normalisation OSI; comment optimiser la codification dans l'entreprise; 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; auto contrôle; manuel qualité et procédures.	AFNOR (Association française de normalisation) Tour Europe Cedex 7 F-92080 Paris La Défense France en collaboration avec AFCIO, AFANOR et AFAU	Toute l'année 2 jours - 1 semaine	Qualifications professionnelles. Français	-	A fixer
Electricité	Cours sur : production d'électricité, distribution de l'énergie électrique, transport et distribution, économique, ressources humaines.	Electricité de France international 68, rue du Faubourg Saint-Honoré 75008 Paris France	Avril-décembre 1987 9-12 jours	Français (traduction simultanée en anglais)	10 jours avant commencement du cours	FF 8 000
Pulp technology, papermaking and paper converting	Process technology of paper production; water technology and environment; energy in the paper industry; wastepaper recycling; coating of paper and board; testing of core papers and cores; testing of food packages; process engineering fundamentals in paper and board converting; materials testing of books; coating and testing of paper and board; testing of pressure sensitive materials; cost accounting in paper and board converting; sales know-how for converted paper and board products; adhesives; process technology and machinery in the corrugated board industry; testing of materials for the corrugated board industry; de-inking of paper and board.	Papiertechnische Stiftung (PTS) Hess-Str. 130a D-8000 Munich 40 Federal Republic of Germany	January-November 2-4 days	Professional qualifications. German, English	-	DM 380-1,030
Standardization	Seminars and courses on: commercial efficiency/valuation in standardization; word processing in standardization documentation planning and control using the system of tabular layouts of article characteristics; design of diaphragm type expansion vessels for heating systems conforming to DIN 4751; current standardization activities in the field of drawings; international standardization - basic means; international standardization activities - methods and data processing systems; numbering techniques; standardization and regulation; rules for calculating the heat requirements of buildings; pipeline network calculation; management knowledge in company standardization; distribution and clearing of heating costs; graphic symbols and diagrams, charts and tables in electrical engineering; current activities in the standardization of materials; decimal classification; electrical symbols; tolerances for linear dimensions and geometrical tolerances; warm water floor heating system; simplified design of chimneys.	DIN Deutsches Institut für Normung e.V. Burggrafenstr. 4-10 D-1000 Berlin (West) 30	Throughout year 1-3 days	Professional qualifications. German	-	DM 320-1,500

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Import management of paper and board	Total concept of import management, international trade in paper and board, product factors affecting importation of paper and board, import procurement, materials management.	PRODEC Lapuankatu 4 SF-00100 Helsinki Finland in co-operation with ITC Helsinki	September 1987 2 weeks	Persons with relevant responsibilities in the public and private sectors in Latin American DCs. English	-	-
Technology transfer	Negotiation and evaluation of contracts connected with technology transfer.	PRODEC Lapuankatu 4 SF-00100 Helsinki Finland in co-operation with UNCTAD Helsinki	June 1987 2-3 weeks	Representatives of ministries, central planning and financial agencies with relevant responsibilities in Asian DCs	-	-
Technology transfer and development perspectives in the energy sector	Strategy for technological transformation for developing countries, investment policies and the transfer of technology, utilization of technology, evaluation of the effects of the transfer of technology - two successive seminars.	PRODEC Lapuankatu 4 SF-00100 Helsinki Finland in co-operation with UNCTAD Helsinki	September 1987 2 weeks	One seminar each for persons with relevant responsibilities (a) in the LDCs and (b) in the more developed SADCC countries. English	-	-
Management	Short course on: strategic planning and management	GIMPA P.O. Box 50 Greenhill Achimota Ghana	1 week	Senior personnel in public and private organizations	-	C 2,500
Financial management for engineers	Financial management, planning, budgeting, controlling direct and indirect costs, pricing decisions, profit planning, cash management, financial reporting systems, computerized financial systems, project management, capital equipment acquisitions, international operations.	The Hong Kong Management Association 14/F Fairmont House 8 Cotton Tree Drive Central Hong Kong	March 1987 One day	Middle to senior level engineers. English	February 1987	HK\$ 1,215
Industrial technology	Short courses on: automation technology, CAD/CAM technology.	The Hong Kong Productivity Council Room 1313-1316 World Commerce Centre Harbour City, 11 Canton Road, Tsimshatsui, Kowloon, Hong Kong	To be arranged	English	-	To be arranged



OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management techniques	Short courses on: supervisory and personnel management, office management, trade and marketing, quality control and industrial engineering, quality control circles and special courses for small manufacturing enterprises.	The Hong Kong Productivity Council Room 1313-1316 World Commerce Centre Harbour City 11 Canton Road Tsimshatsui, Kowloon Hong Kong	To be arranged	Position in management. English	-	To be arranged
Industrial management	Short courses on: project control systems, purchasing management, management information systems, game and decision theory, management and systems theory.	Industrial Management Organization Vali-Asr Road Jam-Jam Ave. Tehran Iran	6-9 days	Professional qualifications	-	\$US 1,000-1,300 including hotel
Development	Short courses and seminars on: entrepreneurial skills, small industries development, developmental issues, productivity measurement, monitoring and analysis at sub-sectoral level, strategic management, energy and national development from the macro-economic perspective.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo, Japan 107 Several venues: India, Malaysia, Sri Lanka, Thailand	To be arranged 1-2 weeks	Government officials and technical consultants of national productivity organizations, etc. of APO member countries. English	3 months before commencement	\$US 50 per participant from profit-making organizations
Industry	Short courses and seminars on: technology management, automation for small and medium industries, appropriate technology for small and medium industries, air and water pollution control techniques for small and medium industries, metal finishing, plant layout and materials handling, construction management.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo, Japan 107 Several venues: Hong Kong, Japan, Republic of Korea, Republic of China	To be arranged 1-2 weeks	Production engineers, managers and technical consultants of national productivity organizations, etc. and manufacturing industry of APO member countries. English	3 months before commencement	\$US 50 per participant from profit-making organizations
Management	Short courses and seminars on: personnel management practices, training techniques, computer applications in marketing, physical distribution.	Asian Productivity Organization 4-14 Akasaka 8-chome Minato-ku Tokyo Japan 107 Several venues: India, Japan, Republic of Korea	To be arranged 2 weeks	Personnel managers and consultants of national productivity organizations, etc. of APO member countries. English	3 months before commencement	\$US 50 per participant from profit-making organizations

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Top management seminar on Japanese business	The Japanese management system, corporate strategy, technological innovation, etc. Case studies through group discussions. Plant visits.	The Association for Overseas Technical Scholarship 30-1 Senjuazuma 1-chome, Adachi-ku Tokyo Japan	September 1987 and 1988 One week	Top managers	5 months before start of programme	¥ 150,000
Energy conservation in industry	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.	TNO Division of Technology for Society Heat and Refrigeration Engineering Dept. P.O. Box 342 Dept. 7300 AH Apeldoorn Netherlands	To be arranged 5-10 days	Professional qualifications. English (Chinese textbooks available)	-	To be arranged
Management	Short course on: business modelling using computers, production planning and control, advanced PERT/CPM.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) P.O. Box 8913 Karachi Pakistan	March, April 1987 5 days	In-service personnel. English	One month before commencement of course	\$US 400 per course
PC packages	Short course on: fundamentals of computer hardware and software and PC applications packages.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) P.O. Box 8913 Karachi Pakistan	21 June 1987 5 days	In-service personnel. English	One month before commencement of course	\$US 400 per course
Technical development programmes	Short courses on: management information systems, protective devices and controls, productivity improvement techniques, quality assurance for the pharmaceutical and chemical industries, design and selection of pressure vessels, boilers and heaters, electrical and mechanical industrial maintenance, industrial electronics (advanced), transformer design, operation and maintenance, piping engineering.	Petroman (A division of Enar Petrotech Services (Private) Ltd.) P.O. Box 8913 Karachi Pakistan	January, February, March, April, June 1987 5 days	In-service personnel. English	One month before commencement of course	\$US 400 per course

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Textile industry	Short courses on: quality control (spinning), weaving shed supervision, dyeing of polyester and polyester/cellulosic blends, printing of polyester and polyester/cellulosic blends, quality control and testing in wet processing, production planning and control, training of instructors for spinning operatives and weavers, training of spinning supervisors, basic work study.	Textile Industry Research and Development Centre Karachi Pakistan	Throughout the year 8-18 working days	Professional/technical qualifications. English/Urdu	-	-
Laser technologies	Principles and applications of laser technologies in metrology, sensing, control, quality assurance and manufacturing. The economic outlook for laser technologies.	EPA Council of Europe Information available from: Laboratorio de Física Faculdade de Ciências Universidade do Porto 4000 Porto Portugal	April 1987	English	February 1987	\$US 200
Laser technologies for the year 2000	Perspective of the applications of laser technologies in industry and their impact up to the end of the century.	AITII Information available from: Laboratorio de Física Faculdade de Ciências Universidade do Porto 4000 Porto, Portugal	July 1988	English	February 1987	\$US 400
Quality management	Total quality control with involvement of all management levels and all functions.	SWEDEC International Ad Riddargatan 37 S-114 57 Stockholm Sweden (can also be conducted at customers' site)	5 October 1987 2 weeks	Professional qualifications. English	15 March 1987	\$US 2,000 (May 1986 exchange rate)
Microcomputer awareness	To introduce participants to the micro-computer capabilities, show how micro-computers and software can produce low-cost solutions to information processing problems and relate microcomputers to existing mainframe environments.	ESAMI P.O. Box 3030 Arusha Tanzania	31 November 1987 2 weeks	Computer programmers. English	28 October 1987	\$US 1,140
Ferrocement	Short course on ferrocement technology.	International Ferrocement Information Center (IFIC) AIT, G.P.O. Box 2754 Bangkok, Thailand	To be arranged 1-2 weeks	Civil engineers. English	-	To be arranged

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Trainer development	Short courses on: fundamentals of group training; workplace training methods; developing participative techniques and skills; developing trainers' feedback skills; training roles in the development of organizations; behavioural sciences for teachers; new perspectives on the identification of training needs; job analysis; training design; training evaluation; visual aids workshop; supervision - an introduction to managing people.	BACIE 16 Park Crescent London W1N 4AP United Kingdom	To be arranged 3-5 days	English	-	To be arranged
Scientific laboratory instrumentation	Training in topics relevant to the understanding of modern scientific laboratory equipment.	Department of Science Bristol Polytechnic Coldharbour Lane Bristol BS16 1QY United Kingdom	January or June 1-12 months	Professional qualifications. English	-	To be arranged
Management	Short courses on: management; multi-cultural effectiveness; communication; supervisory skills; personal effectiveness; managing change.	Cargil Attwood International 8 Teddington Park Teddington TW11 8DA United Kingdom	Throughout year 2-14 days	Professional qualifications or special interest. Various, mainly English	-	To be arranged
Petroleum industry	Short courses in: production equipment and practices; production economics; evaluating, managing and financing of major capital projects in oil and gas; oil recovery and developments in enhanced oil recovery techniques; structure and development of the international petroleum and petrochemical industries; the use of microcomputers in supply planning and refinery operations; planning and economics of refinery upgrading; refinery non-fuel streams; liquified petroleum gases; economics, marketing and international trading; loss control of petroleum products by improved measurement and operating techniques; the design and development of injection systems; petrochemical marketing and economics; speciality chemicals requirements and market opportunities; refinery process chemicals; synthetic lubricants.	The College of Petroleum Studies Oxford United Kingdom	March-November 3-5 days	English	One month in advance	£475-825
Corrosion monitoring and inspection in industrial plant	Corrosion management for industrial plant.	Corrosion Monitoring Consultancy - CMC St. Pirans Denchworth Road Wantage Oxfordshire OX12 9AU United Kingdom	To be arranged 2-4 days (Can also be carried out at client's site)	Professional qualifications. English	-	To be arranged
Training	Short courses on: design of CNC training programmes; managing the training function; new technology training; operator training; technician instructor training; supervisor development.	EITB Webton Court Allerton Park Leeds LS7 4ND United Kingdom	January-March 1987 4-19 days	English	3 weeks before start of course	£90-110 per day

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Industrial production	Courses on fundamentals of mechanical and pneumatic instrumentation; SPEC 200 systems maintenance; fundamentals of electronic measuring devices; functional spectrum; introduction to process computers; process control technology; process measurement technology; control system applications; industrial boiler control systems.	Foxboro Great Britain Limited Redhill Surrey RH1 2HL United Kingdom	To be arranged 1-2 weeks	Professional qualifications. English	-	To be arranged
Injection mould design	Short courses in: basic mould design; basic mould making; operation of injection moulds; advanced mould design.	Fulmer Research Institute Ltd. Stoke Poges Slough SL2 4QD United Kingdom	April, September 2 weeks	Professional qualifications English	February, July	£1,000 per course
Production engineering	Courses on: foundry technology; industrial metallurgy; materials selection for design engineers; analytical procedures for testing laboratories; investigation of the failure of metallic components and structures; design, construction and maintenance of precision engineering equipment; product design for injection moulded plastic parts; basic drawing techniques; testing of plastics and other polymers; analytical procedures for testing laboratories - plastics; specialized product design; injection mould design; operation of injection moulds for plastics.	Fulmer Research Institute Ltd. Stoke Poges Slough SL2 4QD United Kingdom	To be arranged 1-6 months	Professional qualifications. English	-	£2,000-3,000 per month
Project planning and control for research managers	Project planning, project scheduling, decision analysis, monitoring and control.	Fulmer Research Institute Ltd. Stoke Poges Slough SL2 4QD United Kingdom	To be arranged 2-day seminars held at approx. 3-month intervals	Graduate level in science or technology English	-	£280 per participant
Furniture technology and production management	Short courses on: upholstery fabrics, design of seating; effective panel construction; improving supervisory performance; problems with timber.	Furniture Industry Research Association Maxwell Road Stevenage Hertfordshire SG1 2EW United Kingdom	Throughout 1986/87 1-2 days	Senior managers with furniture management experience English	-	£210-735
Industrial and commercial training	Sharing British training expertise. A programme for training and development specialists from countries other than the United Kingdom.	Industrial Training Service Limited Overseas Division 43 Market Place Wetherby West Yorks. LS22 4LN United Kingdom	21 September 1987 and 19 September 1988 3 months	Professional qualifications English	6 weeks before start of course	To be arranged

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Quality assurance and related subjects	Regular and comprehensive programme of short courses on all subjects relating to quality assurance. They include statistical quality control, metrology, quality costing, reliability engineering, quality in design, the quality of software, test and inspection, QA and process control in the process industries, system management of specification writing, prevention of human error, and overall quality management.	The Institute of Quality Assurance 54 Princes Gate Exhibition Road London SW7 2PG United Kingdom	Throughout year 1-5 days	Professional qualifications English	-	To be arranged
Construction	The seminar will cover all types of structural assessment from testing models at large scale and monitoring behaviour of full scale structures: large scale testing; prototype and proof testing; structural performance of redundant structures during demolition, dismantling and decommissioning; criteria for assessment of physical data and interpretation of testing data for the designer including liability and accuracy measurements.	Institution of Structural Engineers Informal Study Group Building Research Establishment Garston Watford WD2 7JR United Kingdom	6-8 April 1987	English	8 March 1987	£175 + VAT
Management	Short courses on basic supervisory skills and instructional techniques.	Metcon Training 14 Pall Mall London United Kingdom	Throughout the year 3-10 days	English	-	-
Metallurgy	Short courses on: foundry appreciation; cupola control; casting defects; electric melting; casting design; practical metallurgy (ferrous and non-ferrous).	Metcon Training 14 Pall Mall London United Kingdom	Throughout the year 3-10 days	English	-	-
Maintenance	Short courses on: applied pneumatics, industrial hydraulics and electronics for maintenance personnel.	Metcon Training 14 Pall Mall London United Kingdom	Throughout the year 3-10 days	English	-	-
Materials handling	Short courses on: parts storage system design; planning and control of physical distribution management; introduction to physical distribution management; warehouse layout and methods; warehouse management and industrial relations.	National Materials Handling Centre Cranfield Institute of Technology Cranfield Bedford MK43 0AL United Kingdom	February to November 4.5 days	English	-	To be arranged

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Automation	Short courses on: microcomputer system design; computer aided engineering; computer aided design and draughting; introduction to microprocessors; advanced 16 bit microprocessors; digital signal processing; fibre optics; test equipment in electronic and microelectronic servicing; microcomputer interfacing; programmable logic controller projects.	New Technologies Section Faculty of Technology Nene College St. Georges Avenue Northampton United Kingdom	Throughout year 15 hours	-	-	£70
Maintenance and repair, quality control	Short courses on: industrial maintenance; quality control, quality assurance.	PERA Training Melton Mowbray Leicestershire LE13 OPB United Kingdom	Throughout year 3-5 days	Professional experience or qualifications English	-	To be arranged
Analogue electronics, computers, and industrial instrumentation	Analogue electronics, digital electronics and logic, microprocessor technology, microprocessor applications, instrumentation and measurement, process control, measurement and control application.	Training Centre Roxby Engineering International Limited Lagonda Road Billingham Cleveland TS23 4JA United Kingdom	Various 5-6 times a year 2 weeks	-	-	£550 (2-week course)
Quality assurance	This short course is designed to provide engineers, technologists and management with an up-to-date appraisal of quality assurance and covers: economic, communication and planning elements of QA; statistical concepts, quality control charts, QA and the consumer. QA test procedures prior to, during and after manufacture; specification interpretation; manual production liability.	Scottish School of Non-Destructive Testing Paisley College High Street Paisley PA1 2BE Scotland United Kingdom	6 modules and 2 symposia between September 1986 and June 1988 1 day each	Professional qualifications English	-	£50 per module £75 per symposium
Quality engineering	The primary purpose of this course is to equip the student for a career in quality engineering and to consider the technical and management factors involved in prescribing realistic quality programmes, quality systems and quality levels and the assurance of product quality; the principles and practice of non-destructive testing methods; those aspects of electronics and instrumentation that are relevant to quality engineering with NDT.	Scottish School of Non-Destructive Testing Paisley College High Street Paisley PA1 2BE Scotland United Kingdom	23 September 1987 6 months	Degree science or engineering English	1 September 1987	£1,100

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Quality practice	The management of quality with the utilization of information technology; the interpretation and use of international standards and the criteria for acceptance levels ranging from general to high quality requirements.	Scottish School of Non-Destructive Testing Paisley College High Street Paisley PA1 2BR United Kingdom	May 1987 and 1988	Professional qualifications English	5 May 1987 5 May 1988	£500
Farm management	Short courses on: mechanization management for farmers, farm business management using microcomputer spreadsheets, farm machinery structure, operation and maintenance, electricity for better farm productivity.	Silsoe College Silsoe Bedford MK45 4DT United Kingdom	Various dates on inquiry 2-19 days	English	-	To be arranged
Management	Short courses on: staff management; programmable logic controllers; selection interviewing; training of trainers.	Silsoe College Silsoe Bedford MK45 4DT United Kingdom	February, March 1987 3-4 days	English	One month before course	To be arranged
Trainer development	Designed for training staff from countries outside the United Kingdom who are in their first few years in a training role, and who wish both to learn about sound training and development practice and to transfer relevant parts of it to their own work situation.	Slough College of Higher Education Wellington Street Slough Berkshire SL1 1YG United Kingdom	Throughout the year To be arranged	Professional qualifications English	-	To be arranged
Automation	Short courses on: computer aided design and computer aided manufacture; understanding computers; access to information technology.	Thames Training Ltd. Deanfield Avenue Henley-on-Thames Oxon RG9 1UF United Kingdom	Various 3-5 days	Professional qualifications English	1 month before start of course	£180-500
Engineering	Short courses on: advanced pneumatics logic control technology; service course in pneumatics; hydraulics systems.	Thames Training Ltd. Deanfield Avenue Henley-on-Thames Oxon RG9 1UF United Kingdom	Monthly 3 days	Basic knowledge of subject	2 weeks before start of course	£160
Training	Short courses on: training for supervisors; training for part-time trainers.	Thames Training Ltd. Deanfield Avenue Henley-on-Thames Oxon RG9 1UF United Kingdom	June 1987 5 days	Candidates for supervisory posts or newly appointed supervisors	1 month before start of course	£250



OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Essential techniques in gene manipulation Recombinant DNA techniques	Basic techniques for DNA handling and study, more advanced techniques such as DNA sequencing and oligonucleotide synthesis, and specialist skills such as <u>in vitro</u> mutagenesis, gene synthesis and synthetic peptides. The emphasis is on practical training.	Department of Biochemistry and Applied Molecular Biology UMIST Manchester M60 1QD United Kingdom	September 1987 6 days	Active laboratory workers with a good knowledge of basic biochemical and microbiological techniques	1 May	To be arranged
Chemical industry	Short courses on: gas chromatography, spectroscopic interpretation, identification and assessment of hazards (hazard and operability studies and hazard analysis).	Department of Chemistry UMIST P.O. Box 88 Manchester M60 1QD United Kingdom	June and July 1987 5 days	Professional qualifications English	-	£290 - approx. £450 depending on the course
Electrical engineering and electronics	Short courses on: power systems, design for industrial power systems, C MOS VSLI design, assessment of semi-conductor materials and devices, semi-conductor manufacturing technology, data acquisition - dials to digits, control systems analysis and design, professional training in microprocessors.	Department of Electrical Engineering and Electronics UMIST Manchester M13 9PL United Kingdom	1/2 - 10 days by arrangement	Professional qualifications English	-	From £100 per day
Maintenance	Short courses on: computers and maintenance, cost effective maintenance, condition-based maintenance, maintenance organization, planning and use of computers.	Wolfson Maintenance Dept. of Engineering Simon Engineering Labs University of Manchester Manchester M13 9PL United Kingdom	Throughout year 1-3 days	English	-	£120-£320 depending on the course
Engineering	Short courses on: experimental techniques in fluid mechanics and heat transfer, developments in combined sewer design, introduction to signal processing and applications, the place of the engineer in the community.	Dept. of Engineering University of Manchester Manchester M13 9PL United Kingdom	Throughout year 2-5 days	Professional qualifications English	-	To be arranged
Management of research and development	Current thinking on R&D, critical analysis of trends in management, techniques for project evaluation, etc., matching scientific and technical developments to market and user needs, identification of issues of importance to organizations, applications of microcomputers in R&D.	Manchester Business School Booth Street West Manchester M15 6PB United Kingdom	17 November 1987 1 week	Relevant experience	-	£780 Residential

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Fluoropolymers	Symposium on the synthesis and applications of fluoropolymers.	Registrar (Special courses) UMIST P.O. Box 88 Manchester M60 1QD United Kingdom	6 January 1987 2 days	Graduate level in chemistry or polymer science English	First day if not previously oversubscribed	£75
Practical electronics	Practical work building and testing analog and digital electronic circuits including amplifiers for various transducers, signal processing circuits and some binary and control techniques. Participants work individually.	Department of Pure and Applied Physics UMIST Manchester M60 1QD United Kingdom	-	Knowledge of Ohm's law English or French	-	Approx. £250
Engineering project management	Cash flow analysis, contractual arrangements, planning, estimating and risk analysis, and management.	Project Management Group Department of Civil Engineering, UMIST Manchester United Kingdom	April 1987	Graduate/professional qualifications	-	£440
Management and planning	Short courses on: (a) systems analysis for managers; (b) project planning and evaluation.	Salford University Management Development Unit Salford M5 4WT United Kingdom	(a) February 1987 3 days (b) Through-out year 1 day	-	(a) January 1987 (b) None	(a) £300 (b) £100
Vibration	Courses on: engine noise and vibration control; vibration and acoustical topics; vibration measurement using laser technology.	ISVR The University Southampton Hampshire United Kingdom	March 1987 Sept. 1987 1 week	Professional qualifications	February 1987 August 1987	£300- 470 approx.
Industrial audiology - hearing conservation	An assessed course for safety officers, industrial nurses, medical officers involved with hearing conservation programmes.	ISVR The University Southampton Hampshire United Kingdom	September 1987 1 week	English	August 1987	£320
Electromagnetic compatibility (E.M.C.)	A short course on the theoretical background of E.M.C. measurements.	The York Electronics Centre University of York York YO1 5DD United Kingdom	To be arranged 2.5 days	Professional qualifications English	-	To be arranged

OTHER TRAINING OPPORTUNITIES AND SHORT COURSES (continued)

Course or seminar	General description	Organizer; Venue	Commencing date; Duration	Qualifications; Language requirements	Last date for receipt of applications	Fee
Management	Short courses including: The Urwick Management Programme; senior executive programme; effective management; leadership in management; finance for the non-financial executive; management in research and development; project management; negotiation skills workshop; presentation skills; senior management in construction; production management in construction.	The Urwick Management Centre Baylis House Stoke Poges Lane Slough, Berks. United Kingdom	Throughout year 3 days - 3 weeks	English	-	To be arranged
Strategic management program for senior government executives	Strategic planning and management for policy-making officials from developing countries to assist them in efficient development of their nations. Problem-solving workshops are tailored to participants' needs. Private consultation.	Graduate School USDA International Programs 600 Maryland Ave. SW Washington, DC 20024 United States of America	14 September 1987 2 weeks	Professional qualification English	14 August 1987	\$US 2,500
Entrepreneurship and management	Short courses on: entrepreneurship training for development, management and communication, project planning, implementation and evaluation, microcomputers.	Management Training & Development Institute P.O. Box 23975 Washington DC 20026 United States of America	Throughout year 5-12 days	Professional qualifications English	-	\$US 500-1,150
Measurement systems dynamics and engineering	Measuring dynamic mechanical and thermal quantities by electrical means. Electrical measurement of mechanical quantities.	Stein Engineering Services, Inc. 5602 East Monte Rosa Phoenix, Arizona 85018 United States of America	March 1987 5 days (each course)	Engineering/ Science degree English	27 February 1987	\$US 950 each course \$US 1,750 if taken together
Control de calidad	Círculos de la calidad.	Instituto Uruguayo de Normas Técnicas San José 1029 P.7 Montevideo Uruguay	28 de octubre 4 días	Gerentes y técnicos Español	21 de octubre	\$US 110