iiPM
(Institute on TPM)

Indian Institute for Production Management
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***Announces***

***INTERNATIONAL RESIDENTIAL TRAINING PROGRAMMES***

| Sl.No. | PROGRAMME TITLE | DURATION | DATES |
|---|---|---|---|
| 1 | **Maintenance Engineering and Management** | **10 weeks** | **11 Jul. – 16 Sept. 2011** |
| 2 | **Condition Based Maintenance** | **10 weeks** | **03 Oct. – 09 Dec. 2011** |
| 3 | **Industrial Electronics and Instrumentation** | **10 weeks** | **03 Oct. – 09 Dec. 2011** |
| 4 | **Management Development** | **10 weeks** | **09 Jan. – 17 Mar. 2012** |

## ABOUT THE INSTITUTE

Established in 1983, IIPM is a pioneering centre for the training and development of front-line managers from industries in the frontier areas of technology and management. It is promoted by the ICICI Ltd, with an investment of about US $ 1.6 million. It also enjoys the active support of leading industrial establishments in India.

The Institute has developed excellent Laboratory/Workshop facilities in the areas of Industrial Hydraulics & Pneumatics, Electronics, Instrumentation, Process Control, Welding, Condition Monitoring, Computers etc. Sophisticated Hardware/Software equipment obtained from UK form a major part of these facilities. A good collection of video cassettes, Open Learning packages and Computer Based Training materials is the unique possession of the Institute. These facilities are constantly being updated to meet the growing demand for training in up-coming areas.

The Institute has set up a centre for Condition Based Maintenance in collaboration with Wolfson Maintenance, University of Manchester, UK and is taking up consultancy assignments in this area. The Institute conducts a large number of short duration courses for participants sponsored by the Indian Industries, develops & conducts tailor-made in-house courses at their premises and carries out consultancy assignments in Condition Monitoring apart from offering long-duration training programmes for overseas participants.

Located at Kansbahal, 20 KM away from the Steel City of **Rourkela in Orissa State**, the Institute has scenic surroundings and a plush campus with excellent office and class room facilities, residential accommodation for faculty and fully furnished self-contained hostel rooms for participants. The Institute is administered by a Governing Council, ably supported by a Management Committee consisting of representatives from reputed industries.

## INTERNATIONAL PROGRAMMES AT IIPM

The first group of international participants came to IIPM, in 1985. The Institute has never looked back since then and conducted a number of programmes on Manufacturing Engg. & Management, Maintenance Engg. Management, Industrial Electronics and Instrumentation, Condition Based Maintenance, Management Development etc.

While the first batch of foreign nationals was sponsored by the Colombo Plan Scheme of the Government of India, there are two additional sponsors: The Special Commonwealth African Assistance Plan (SCAAP) and the Indian Technical and Economic Co-operation (ITEC) scheme of Govt. of India

Today IIPM has the expertise to design and conduct tailor-made training programmes on emerging areas of technology and management to successfully execute Consultancy assignments in the area of Condition Based Maintenance and also to set-up training and development centres for clients from the developing parts of the world.

In order to streamline these activities an international Programme Office has been set up at the Institute. IIPM is determined to make every effort to extend the general awareness of the importance of modern technology and its relevance to the quality of life and overall economic growth amongst the developing world.

## LIST OF NATIONS WHO HAVE SPONSORED PARTICIPANTS TO IIPM PROGRAMMES

| | | | | |
|---|---|---|---|---|
| 1. Afghanistan | 20. Eritrea | 39. Kyrgyzstan | 58. Nicaragua | 75. St. Vincent |
| 2. Albania | 21. Egypt | 40. Kenya | 59. Nigeria | 76. Sudan |
| 3. Algeria | 22. Ethiopia | 41. Korea | 60. Oman | 77. Surinam |
| 4. Armenia | 23. Ecuador | 42. Kyrghystan | 61. Panama | 78. Swaziland |
| 5. Azerbaijan | 24. EL Salvador | 43. Laos | 62. Palestine | 79. Syria |
| 6. Bahrain | 25. East Timor | 44. Latvia | 63. Papua New Guinea | 80. Tajikistan |
| 7. Bangladesh | 26. Fiji | 45. Lesotho | 64. PDR of Yemen | 81. Tanzania |
| 8. Belarus | 27. Gambia | 46. Liberia | 65. Philippines | 82. Thailand |
| 9. Benin | 28. Georgia | 47. Macedonia | 66. Romania | 83. Trinidad & Tobago |
| 10. Bhutan | 29. Ghana | 48. Madagascar | 67. Rwanda | 84. Turkmenistan |
| 11. Botswana | 30. Guatemala | 49. Maldives | 68. Senegal | 85. Tonga |
| 12. Bolivia | 31. Guyana | 50. Malawi | 69. Seychelles | 86. Tunisia |
| 13. Cambodia | 32. Indonesia | 51. Malaysia | 70. Sierra Leone | 87. Uganda |
| 14. Cameroon | 33. Iran | 52. Mauritius | 71. Somalia | 88. Ukraine |
| 15. Colombia | 34. Iraq | 53. Mexico | 72. Solomon | 89. Uzbekistan |
| 16. Comoros | 35. Ivory Coast | 54. Mongolia | 73. South Africa | 90. Uruguay |
| 17. Costarica | 36. Jamaica | 55. Myanmar | 74. Sri Lanka | 91. Vietnam |
| 18. Cuba | 37. Jordan | 56. Namibia | | 92. Zambia |
| 19. Dominica | 38. Kazakhstan | 57. Nepal | | 93. Zimbabwe |

## HOW TO GET TO KANSBAHAL

The nearest Train Station is ROURKELA and **the nearest International Airport is KOLKATA (CALCUTTA).** Participants are advised to fly to Kolkata (Calcutta) and then take a train to Rourkela. Participants can buy train ticket and prepaid taxi coupons at Kolkata (Calcutta) Airport. They should buy taxi coupons for Railway station and reach Howarh (name of the Railway station). At Howarh they should board the train and reach Rourkela. On reaching Rourkela Railway Station, please hire a taxi for IIPM, Kansbahal (20 KM).

**If travel plans are informed in advance IIPM shall depute a representative at Kolkata (Calcutta) Airport for assistance. This will make the journey comfortable. IIPM Kolkata (Calcutta) phone numbers are 91-33-22836403 / 22829790, Mobile: 09831040922 / 09432085080**

## TRAIN TIMES AT HOWARH ARE AS FOLLOWS

| Name of Train | Train No. | Departure from Howrah | Arrival at Rourkela | Daily |
|---|---|---|---|---|
| Ispat Express | 2871-UP | 0655 Hours | 1335 Hours | Yes |
| Bombay Express | 8030-UP | 1500 Hours | 2305 Hours | Yes |
| Gitanjali Express | 2860-UP | 1400 Hours | 1950 Hours | Yes |
| Ahmedabad Express | 2834-UP | 2355 Hours | 0615 Hours | Yes |
| Sambalpur Express | 8005-UP | 2135 Hours | 0445 Hours | Yes |
| Howrah-Kurla Super Delux Express | 2102-UP | 2255 Hours | 0455 Hours | (Tue,Thu, Fri, Mon) |

## 01. MAINTENANCE ENGINEERING & MANAGEMENT

**DURATION: 10 WEEKS**

**DATE: 11 Jul. – 16 Sept. 2011**

**The Programme**

This programme is an integration of 4 separate modules viz. Mechanical Maintenance, Electrical Maintenance, Maintenance Management and Man-Management Techniques. It is meant for managers engaged in maintenance activities in industries. This will give a comprehensive exposure not only on various maintenance methods, but also on management techniques with emphasis on human relations. The techniques used for prolonging the life of machines and equipment at reduced cost resulting in higher capacity utilisation will be specifically dealt with.

**Designed for**

Degree/Diploma holders in Mechanical/ Electrical Engineering with around 5/10 years of experience respectively in industries in maintenance related activities.

**Objectives**

At the end of the programme participants will be able to -

- Prepare lubrication schedule for plant and equipment
- Carry out trouble-shooting of fluid power systems
- Prepare maintenance schedules for diesel sets
- Perform repair welding operations
- Select electrical drives for industrial applications.
- Workout systematic maintenance procedures for electrical equipment
- Properly plan, schedule and control maintenance activities
- Apply Condition Monitoring Techniques on running equipment
- Improve upon their interpersonal skills for effective shop floor management.
- Make a holistic approach to solve maintenance problems leading to Total Productive Maintenance.

**Coverage**

***Mechanical Maintenance***

- Selection of Materials for Maintenance
- Principles of Lubrication
- Lubrication Management
- Selection & Maintenance of Bearings
- Operation & Maintenance of Diesel Sets
- Repair Welding Techniques
- Industrial Hydraulics & Pneumatics

***Electrical Maintenance***

- Selection of Electrical Drives
- Troubleshooting and Maintenance of Electric Drives
- Operation and Maintenance of Transformers & Switchgear
- Maintenance of Power Distribution Systems

***Maintenance Management***

- Objectives of Maintenance
- Preparation of Maintenance Schedules
- Maintenance Planning and Control
- Condition Monitoring Techniques
- Spare Parts Planning
- Value Engineering
- Maintenance Cost Control
- Computerised Maintenance Management
- Total Productive Maintenance
- Safety Management

***Man-Management Techniques***

- Effective Communication
- Interpersonal Skills
- Team Building and Team Leading
- Motivating Self and Others

***Study Visit***

***Project Work***

## 02. CONDITION BASED MAINTENANCE

| DURATION: 10 WEEKS | DATE: 03 Oct. – 09 Dec. 2011 |
|---|---|

**The Programme**

This programme aims at giving a thorough grounding on the various techniques used in monitoring the health of equipment for the purpose of Need-Based Maintenance of capital-intensive equipment used in modern industries. It will be of great value to maintenance engineers who are looking towards minimising the down-time of their costly machinery. The main thrust will be on improving overall equipment effectiveness through the integration of various condition monitoring techniques.

**Designed for**

Degree/Diploma holders in Mechanical/ Electrical Engineering with around 5/10 years of experience in maintenance departments in industries.

**Objectives**

At the end of the programme participants will be able to:

- Identify critical machines suitable for condition monitoring
- Use correctly various instruments for condition monitoring
- Evolve a systems approach to introduce Condition Based Maintenance
- Apply the concept of Condition Based Maintenance in their industries.
- Bring in improvements in overall equipment effectiveness.

**Coverage**

***Basics***

- Concept of Condition Monitoring
- Identifying Critical Plant
- Diagnostic Techniques and Methodology
- Selection of Techniques

***Vibration Monitoring***

- Vibration Measurement, Analysis and Monitoring
- Vibration Analysis of Different Types of Machinery
- Condition Monitoring of Bearings
- Shock Pulse Techniques

***Lubricant Monitoring***

- Tribological Concepts
- Wear Debris Analysis
- Oil Monitoring
- Lube Oil Conservation

***Thermal Monitoring***

- Temperature Monitoring Techniques
- Infra-red Thermography
- Thermal Imaging Techniques

***Advanced Topics***

- Condition Monitoring of Electrical Equipment
- Non-Destructive Testing
- Corrosion Monitoring
- Performance Monitoring
- Computerised Systems
- Improvement in Overall Equipment Effectiveness
- Case Studies

***Man-Management Techniques***

- Effective Communication
- Interpersonal Skills
- Team Building and Team Leading
- Motivating Self and Others

***Study Visit***

***Project Work***

## 03. INDUSTRIAL ELECTRONICS & INSTRUMENTATION

**DURATION: 10 WEEKS**

**DATE: 03 Oct. – 09 Dec. 2011**

**The Programme**

This programme is an integration of 4 separate modules viz. Basic Electronics, Digital Electronics, Microprocessors and Process Instrumentation. It gives an exposure to the fascinating field of Electronics - starting from basics upto modern microprocessor based controls. Electrical Engineers, who want to have a good foundation in Electronics will find the course quite useful. Troubleshooting & fault finding techniques form an integral part of the course.

**Designed for**

Degree/Diploma holders in Electrical Engineering with around 5/10 years of experience in industries in the field of control, automation, maintenance etc.

**Objectives**

At the end of the programme participants will be able to:

- Identify and specify a range of electronic components
- Use test instruments correctly
- Build up and evaluate a variety of analog & digital circuits
- Configure the architecture of microprocessors
- Specify application of microprocessors in their working areas
- Apply the principles of electronics in the measurement and control of process variables.
- Perform logical fault finding on electronic equipment.

**Coverage**

***Basic Electronics***

- Circuit Elements
- Diodes, Rectifiers, Regulators
- Transistors, Amplifiers
- Operational Amplifiers
- Power Electronics
- Analog Fault Finding
-

***Digital Electronics***

- Number Systems
- Logic Gates
- Flip Flops
- Counters & Shift Registers
- Encoders, Decoders
- A to D and D to A Conversion
- Digital Systems
- Digital Fault Finding

***Microprocessors***

- Computer Arithmetic
- Microprocessor Architecture
- Memories
- Input-Output Techniques
- Microprocessor Programming
- Microprocessor Applications
- Programmable Logic Controllers
- Robotics
- Logical Fault Finding

***Process Instrumentation***

- Measurement Techniques
- Transducers
- Electronic Instrumentation
- Principles of Automatic Control
- Transmitters, Recorders, Controllers
- Final Control Elements
- Data Acquisition, Transmission & Display
- Microprocessor Based Instrumentation
- Computerised Process Control.

***Man-Management Techniques***

- Effective Communication
- Interpersonal Skills
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- Motivating Self and Others

***Study Visit***

***Project Work***

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- Specify application of microprocessors in their working areas
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***Basic Electronics***

- Circuit Elements
- Diodes, Rectifiers, Regulators
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- Operational Amplifiers
- Power Electronics
- Analog Fault Finding
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***Digital Electronics***

- Number Systems
- Logic Gates
- Flip Flops
- Counters & Shift Registers
- Encoders, Decoders
- A to D and D to A Conversion
- Digital Systems
- Digital Fault Finding

***Microprocessors***

- Computer Arithmetic
- Microprocessor Architecture
- Memories
- Input-Output Techniques
- Microprocessor Programming
- Microprocessor Applications
- Programmable Logic Controllers
- Robotics
- Logical Fault Finding

***Process Instrumentation***

- Measurement Techniques
- Transducers
- Electronic Instrumentation
- Principles of Automatic Control
- Transmitters, Recorders, Controllers
- Final Control Elements
- Data Acquisition, Transmission & Display
- Microprocessor Based Instrumentation
- Computerised Process Control.

***Man-Management Techniques***

- Effective Communication
- Interpersonal Skills
- Team Building and Team Leading
- Motivating Self and Others

***Study Visit***

***Project Work***

## 04. MANAGEMENT DEVELOPMENT

| DURATION: 10 WEEKS | DATE: 09 Jan. – 17 Mar. 2012 |
|---|---|
| **The Programme**<br><br>A manager being the key link between the workforce at one end and the senior executives at the other, their effective working contributes significantly to the success of any industrial set-up. In the developing world, where industries are fast growing, there is a need to mould excellent cadres of managers. This programme aims at bringing the necessary 'Management Mindedness' in them.<br><br>**Designed for**<br><br>Degree/Diploma holders in Engineering and Post-Graduates/Graduates in Science/ Arts with around 5/10 years of experience in any functional area in organisations and those who are recently promoted to management positions will find the programme very useful.<br><br>**Objectives**<br><br>At the end of the programme participants will be able to:<br><br>• Specify their roles in the Organisational set up<br>• Identify their various responsibilities<br>• Properly plan, organise & control their work<br>• Adopt appropriate productivity improvement techniques in their work areas<br>• Bring-in cost effectiveness in their operations<br>• Improve upon their interpersonal skills for effective management<br>• Train and develop their subordinates<br>• Take actions for self development. | **Coverage**<br><br>***Management Principles***<br><br>• Role of Managers<br>• Principles of Management<br>• Planning, Organising and Controlling Work<br><br>***Management Techniques***<br><br>• Productivity Improvement Techniques<br>• Problem Solving Techniques<br>• Financial Management<br>• Total Quality Management<br>• Value Engineering<br>• Time Management<br><br>***Man-Management***<br><br>• Effective Communication<br>• Interpersonal Skills<br>• Team Building<br>• Leadership<br>• Motivation<br>• Self Development<br><br>***Advanced Management***<br><br>• Management of change<br>• Management of Technology<br>• Stress Management<br>• Information Technology<br><br>***Study Visit***<br><br>***Project Work*** |

## FOR ALL PROGRAMMES

**Faculty**

In addition to Institute faculty, experts from industries, higher education/research institutes and consultancy organisations will share their experience with the participants.

**Methodology**

The programmes will be held through class-room lectures supported by audio-visual presentations, practical demonstrations/ hands-on exercises, case studies, group discussions, study visits, Project work etc. **Participants are strongly advised to bring a live problem with them so that they can work on it during the course of programme to find possible solutions.**

**Venue**

The programmes will be held at the Institute campus at Kansbahal. Participants will be accommodated in fully furnished self-contained double-seated rooms in the hostel, where recreational facilities like TV, indoor/outdoor games etc. are available. Breakfast, Lunch, Evening Snacks and Dinner are served in the hostel. The temperature variation at Kansbahal during the programme period is approximately as follows:

| | |
|---|---|
| July-September | : 40°C-30°C |
| September-December | : 30°C-15°C |
| January-March | : 15°C-30°C |

**Nominations**

Applications, duly sponsored, must reach the Institute as early as possible, but not later than one month before the commencement of the programmes. The total intake in each programme will not be more than 30.

After screening of all applications, selected candidates will be invited to join the programme, when further details as to how to reach the Institute will be given. Please note that late applications will be considered only if there are vacancies. Hence, care must be taken to ensure that the nominations reach the Institute in time. The decision, made by the Institute on the selection of candidates, will be final and any correspondence regarding the reasons for non-selection will not be attended to.

Nominations should be sent to:

**Director**
**IIPM**
**Kansbahal P.O.**
**(Near Rourkela)**
**Orissa - 770 034**
**INDIA**

Phone: 91-6624-280322 / 280948
Fax : 91-6624-2280122
E-mail: info@iipm@ac.in, pal_rn@iipm.ac.in

**Scholarships**

Scholarships to attend these programmes are available under ITEC/SCAAP/COLOMBO PLAN Schemes of the Government of India. Details of these Scholarships and applications can be obtained from Indian Missions in the member countries.

**Few self - sponsored** participants will also be taken at a fee of US$ 3500.00 per participant The fee includes tuition, course material, board & lodging.

**Money Change**

Money change facilities don't exist at Rourkela which is the nearest town to Kansbahal. Participants are advised to change their entire money into Indian Rupees at the major Airport of landing (Kolkata, Mumbai, New Delhi & Chennai). Only American Express Travellers Cheques and US Dollars can be changed at State Bank of India, Rourkela. Anything other than this must be changed at the major Airport of landing in India.