

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 05
Course Title	: Maintenance of Bearings; Selection & Proper Use of Lubricants, Seals, Paints & Protective Coatings
Course Code	: ME- U338
Duration	: 02 Weeks
Period	: 02 ~ 13 February, 2020
Nomination deadline	: 1~2 Weeks before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 12,300/- Per Participant
Designed for	: Junior and mid-level officers working in different industries & other establishments.

Course Objectives:

- To give an understanding about industrial and automotive lubricants.
- To gather knowledge on different viscosity grades of lube oil and greases.
- To gather knowledge on different types of bearings and their functions.
- To achieve knowledge in the selection of proper lubricants and bearings.
- To achieve knowledge about Paints & Protective Coatings
- To be familiarized with safety in mechanical maintenance.

Course Content:

Selection criteria of bearings, Different types of bearings: Construction, Material and Designation, Bearing tolerance and fit system, Causes of bearing failure and storage of bearings; Importance of lubricants, Selection criteria of lubricants, Properties of different types of lubricants, ISO viscosity grades of lube oil, NLGI grades of greases, Lube oil purification and storage, Paints & Protective Coatings, Environmental impact of lubricants. Safety in mechanical maintenance.

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Engr. Rahul Islam, Executive Engineer (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 08
Course Title	: Installation, Troubleshooting & Maintenance of Industrial Pumps
Course Code	: ME- U129
Duration	: 01 Week
Period	: 22 ~ 27 February, 2020
Nomination deadline	: 1 Week before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 7,800/- Per Participant
Designed for	: Mechanical Technicians working in different industries and other establishments

Course Objectives:

- To achieve knowledge about classification and construction of pumps, their working principle, troubleshooting and maintenance activities.
- To gather knowledge about SOP of pump.
- To gather knowledge how to install a pump.
- To achieve knowledge and skill how to assemble & disassemble of a pump.
- To be familiarized with safety in mechanical maintenance.

Course Content:

Classification of pumps and their use; Construction and working principle of centrifugal & reciprocating pumps; Installation and troubleshooting of centrifugal pump; Maintenance of centrifugal and reciprocating pumps; Construction, working principle, troubleshooting and maintenance of Gear, Screw, Vane & Lobe pumps; Bearing, Lubrication and Sealing system of pumps; Disassemble and assemble practice of pumps; Operational behavior of centrifugal pump; Safety in mechanical maintenance.

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Mostofa Abdul Mazid, DCE (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 14
Course Title	: Alignment Technology of Rotating Machines, Level –I
Course Code	: ME- U103
Duration	: 02 Weeks
Period	: 07 ~ 19 March, 2020
Nomination deadline	: 1~2 Weeks before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 12,300/- Per Participant
Designed for	: Mechanical Technicians working in different industries and other establishments

Course Objectives:

- To gather basic knowledge and importance about Alignment of Rotating Machine.
- To achieve practical knowledge about non-precision alignment method.
- To acquire knowledge about the technique of mechanical fabrication and assembly.
- Familiarization with different precision & non-precision alignment method.
- To be familiarized with safety in mechanical maintenance.

Course Content:

Introduction to alignment techniques of rotating machine, Equipment used & terms related to misalignment, Importance of alignment for different types of coupling, General description of different methods of alignment, Centering of rotor and casing, Thermal effect on alignment, Alignment practice on turbine & compressor, Alignment of chain & sprocket, Alignment of coupling with feeler gauge & knife edge, Alignment of V-belt, Alignment by rim & face method of a machine train, Alignment of gear & pinion, Demonstration on LASER alignment. Industrial safety and safety in mechanical maintenance

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Engr. Nur Muhammad, Executive Engineer (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 20
Course Title	: Mechanical Maintenance
Course Code	: ME- U102
Duration	: 01 Week
Period	: 13 ~ 18 June, 2020
Nomination deadline	: 1 Week before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 7,800/- Per Participant
Designed for	: Mechanical Technicians working in different industries and other establishments

Course Objectives:

- To grow awareness of the participants on industrial safety Mechanical Maintenance.
- To develop skill on safe material handling and transportation.
- To motivate the participant about use of PPE.
- To gather knowledge about rescue operation & first aid.
- To work their jobs with a safety conscious in work place, plant operation and mechanical maintenance.

Course Content:

Introduction to industrial safety & safety regulations, Safety in mechanical maintenance, Safe working practice during welding and fabrication, Safe use of hand tools & portable tools, Arrangement of scaffolding works & work platforms, Personal protective equipment, Safety measures associated in confined spaces, Safe handling of gas & gas cylinders, Safe use of hoisting & transportation equipment and ladder practice, fire & explosion hazards and practice on different portable fire extinguishers, fixed fire extinguishing system.

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Mostofa Abdul Mazid, DCE (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 25
Course Title	: Maintenance of Boiler, Heat Exchanger & Cooling Tower
Course Code	: ME- U339
Duration	: 01 Week
Period	: 18 ~ 23 July, 2020
Nomination deadline	: 1 Week before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 7,800/- Per Participant
Designed for	: Junior and mid-level officers working in different industries & other establishments.

Course Objectives:

- To grow awareness of the participants Mechanical Maintenance of Boiler, Heat Exchanger & Cooling Tower.
- To develop skill on Maintenance of Boiler, Heat Exchanger & Cooling Tower
- To motivate the participant about Maintenance of Boiler, Heat Exchanger & Cooling Tower
- To gather knowledge about Maintenance of Boiler, Heat Exchanger & Cooling Tower

Course Content:

Introduction to Maintenance of Boiler, Heat Exchanger & Cooling Tower, Boiler maintenance procedure, Cooling Tower maintenance procedure Heat Exchanger maintenance procedure, how to remove scaling from boiler tube, heat exchanger tube, cooling tower, different type of cleaning process i.e chemical cleaning , mechanical cleaning.

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Md. Matiur Rahman, DCE (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 33
Course Title	: Maintenance and Troubleshooting of Compressors & Turbines
Course Code	: ME- U328
Duration	: 02 Weeks
Period	: 06 ~ 17 September, 2020
Nomination deadline	: 1 Week before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 12,300/- Per Participant
Designed for	: Junior and mid-level officers working in different industries & other establishments.

Course Objectives:

- To grow awareness of the participants about Maintenance and Troubleshooting of Compressors & Turbines
- To develop skill on Maintenance and Troubleshooting of Compressors & Turbines
- To motivate the participant about Maintenance and Troubleshooting of Compressors & Turbines
- To gather knowledge about Maintenance and Troubleshooting of Compressors & Turbines

Course Content:

Introduction to Maintenance and Troubleshooting of Compressors & Turbines, Construction and working principle of different type turbines, compressors, maintenance and troubleshooting turbine and compressor, sealing and lubrication system of turbine and compressor, governing system of turbine, importance of inter-cooler and after cooler to compressor efficiency and their maintenance, Boiler feed water treatment and steam generation for turbine.

Training Methodology:

- Class-room lecture (Multimedia projector, Overhead projector etc.)
- Practical & Demonstration class
- Group Discussion
- Report preparation and presentation
- Case study

Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Engr. Sipon Mollah, XEN (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 36
Course Title	: Basic Mechanical Design by AutoCAD 2D & 3D
Course Code	: ME- U346
Duration	: 01 Week
Period	: 26 Sept. ~ 01 Oct., 2020
Nomination deadline	: 1 Week before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 7,800/- Per Participant
Designed for	: Junior and mid-level officers working in different industries & other establishments.

Course Objectives:

- To achieve basic knowledge on AutoCAD 2D & 3D.
- To be able to set drawings systematically.
- To gather capability to draw different mechanical components by AutoCAD.
- To gaining hands-on experience with AutoCAD through a series of practical exercises

Course Content:

Basic knowledge on Computer, Installation of AutoCAD software, Creating Workspace & Interface for 2D & 3D Drawing, Drawing techniques using coordinate entry method, Sketch Basic Elements for 2D drawings, Editing the 2D drawings, Input Character & Dimensioning of the drawings, Setting Layers & Organizing the drawings with layers, 2D Drawing Examples & tutorials for Mechanical Components, Sketch Basic Solid Bodies (3D), Editing the Solids (3D), 3D Drawing Examples with tutorials of Mechanical 3D Modeling, Prepare drawing necessary information for plotting, Printing out Drawing both 2D & 3D drawings.

Training Methodology:

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Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Engr. Rahul Islam, XEN (Mech.)

Course Brochure

Mechanical Engineering Department, TICI

Course No.	: 40
Course Title	: Alignment Technology of Rotating Machines, Level –II
Course Code	: ME- U311
Duration	: 02 Weeks
Period	: 11 ~ 22 October, 2020
Nomination deadline	: 1~2 Weeks before commencing date
No. of Course	: 01
No. of Participants	: 20
Course fee	: Tk. 12,300/- Per Participant
Designed for	: Mechanical Technicians working in different industries and other establishments

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Evaluation system:

Attendance, Class participation & Overall performance

Course Advisor	: Executive Director
Course Co-Advisor	: Training Director
Course Director	: Head of Operation & Process Technology Department
Course Coordinator	: Md. Matiur Rahman, DCE (Mech.)