Post Graduate Diploma in **Piping Design Engineering** as per **ASME Codes**

**INDUS GLOBAL ACADEMY OF TECHINICAL EDUCATION**

Head Office: Michigan States, USA - Offshore Unit:
Corporate Office: # 05, Opp. New Police Station, Basaveshwarnagar, Bangalore-560 079, India.

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ABOUT INDUS

Indus Global Academy of Technical Education, an educational wing of Indus USA Inc Group of companies, started its operation in the year 2001 at Michigan States, United States of America. We welcome candidates who are interested in enhancing their present capabilities to our Academy where latest technology, innovative teaching methodologies and quality education are all blended together with industrial exposure to create a complete engineer.

We build solid engineers, whether it may be students from Industrial Training Institute (ITI), Diploma students from Technical Board of Education, Students with Bachelor of Engineering (BE) or Masters Degree in Engineering (ME / M Tech) from Colleges and Universities. We have courses well defined for each category of students depending upon each individual’s career goals.

Indus Group of companies being in the global market and serving various industries like Automotive, Aerospace, Energy and Oil & Gas sectors, have recognized the need for skilled engineers who are abreast with the latest technology and tools. Indus USA Inc. Group has launched INDUS GLOBAL ACADEMY OF TECHNICAL EDUCATION to impart knowledge on industrial requirements to qualified professionals.

Vision
To emerge as a global center of excellence for hi-tech education by bringing together the industry expertise and today’s education systems to develop world class Engineers to put a basic foundation for 22nd century.

Mission
To develop engineering resources with a focused specialization to meet the global industrial needs based on the greatest & latest available technologies around the world.

www.indus-usa.com
DIRECTOR MESSAGE

Dr. H.N. Prasannachar
Director
Indus Global Academy of Technical Education

Since its inception the Indus Global Academy of Technical Education has assumed a significant responsibility of taking technical education to the door-steps of the masses, thereby, succeeding in providing quality Engineers to the nation, in turn contribute to the nation building activity.

The Indus Global Academy has made sincere efforts for development of learning courseware using communication technologies in its Endeavour to maintain quality of programmes. The unprecedented numerical rise in the strength speaks volumes for its quality program. In its endeavor to maintain quality of programmes & with view to retrain the professional trainers and acquaint them with latest pedagogical advancements.

The Academy offers broad range of professional courses to suite to the requirement of different engineers. To extend the reach of same Indus Global Academy is offering Professional Distance Education program on Process Design Engineering, Piping Design Engineering & Tool Design Engineering.

To disseminate quality education the Academy has introduced online training & adopting various other measures and strategies to augment effective learning. These measures would go a long way to make the system vibrant and serve the learning in an effective way.

H.N. PRASANNACHAR
1. The candidates are advised to go through the Prospectus carefully before filling up the admission form and follow other instructions issued from time to time. The candidates should also remain vigilant and get in touch with the Academy at appropriate time in case of non-receipt of study material, admit card/roll number, examination data sheet, result, etc. from Academy.

2. (i) For further correspondence with Academy and remission of fees etc., please ensure to mention Name, Father’s Name, IGA Ref. No., Course Name, and complete postal address, failing which the Academy may not be held responsible for not sending any response to such communication or non-adjustment of fee and consequences thereof.

   ii) The candidature of a candidate is liable to be cancelled in case of non-payment of any type of dues/fee or part thereof and/or for non-submission of any document. It can, however, be restored during the session on payment of balance dues with late fee and the required documents along with the revival fee, as the case may be. If the outstanding dues are not remitted and the required documents are not submitted before the termination of the examination and roll number is not issued to candidate for the examination, his/her candidature shall not be revived in any case thereafter. Such a candidate can, however, seek admission afresh in the subsequent session to become eligible to appear in the Academy examination after paying all the dues afresh, however, no adjustment/refund of fee paid in previous session will be allowed.

   iii) The date of receipt of fee or any other document will be the date on which the same is actually received in the Indus Academy. The Indus Global Academy will not be responsible for failure on the part of the postal/courier services for non-receipt or late delivery of any document including payment of dues to be deposited by a candidate.

3. Acceptance of Admission forms/fees, allotment of IGA Ref. no, issue of identity card, dispatch of study material, attendance of Personal Contact Programme or online training, etc., will be Provisional subject to confirmation of eligibility subsequently.

4. (a) ALL FEES WILL BE ACCEPTED ONLY THROUGH CROSSED BANK DRAFTS bearing the signature of the issuing authority, identity No. and Code No. of Payee’s Bank and should be drawn in favor of the INDUS INTEGRATED TECHNOLOGY SOLUTIONS PRIVATE LIMITED, payable at Bangalore only from a bank having its branch at Bangalore.

   (b) NO FEE SHALL BE ACCEPTED IN THE FORM OF MONEY-ORDERS OR BY CHEQUES, However, the candidates may deposit the fees in cash directly at Indus Global Academy head office at Bangalore or PROSPECTUS 2011-12
Deposit cash to ICICI account, following are details of same:

1. Name of Account: Indus Integrated Technology Solutions Pvt. Ltd.
2. ICICI Bank A/C: 015905004967
3. Branch: Bangalore

The Deposited counterfoil of ICICI Bank needs to be scanned & softy copy should be sent to contact@indusedu.com email.

5. Admission Form, attached with this Prospectus duly filled in and signed by the candidate may be submitted along with other required documents along with fees at the time of admission.

Documents to be presented with attestation from authorized notary public:

2. Photocopy of Convocation certificate along with all graduation marks sheet.
3. Two photographs
4. Photocopy of Identity Proof & Address Proof
5. Latest C.V.

6. Indus Global Academy has not authorized any Agency/institute or appointed Agent to deal with any matter relating to admission to Distance Education course of Indus Global Academy are advised to contact Head office at Bangalore. The Students are advised to bring with them their identity cards issued by the Academy to enable it to extend prompt service whenever they visit the Academy for any purpose during the course of their study and thereafter for collection of material & examination form etc.,

7. Direct Contact Classes (Regular or Online): The Distance Education is offered in blended mode with one compulsory Direct Contact Classes. Much of the interaction shall be one to one with course coordinators. The DCC will be scheduled on 3rd & 4th Week ends i.e., Friday to Sunday of every month. Candidates are advised to complete their DCC within 60 days of registration for P.G.D programme. DCC Application form should be filled & submitted to the Academy 15 days earlier. Candidates are free to choose regular or online classes.

Important points to be noted:

1. If a candidate fails to take up DCC, he\she will not eligible for the certification.
2. The DCC should be completed with in 60days of registration, however candidates are allowed to reschedule the DCC for maximum of 80days from registration days or course start date by paying Fine of Rs. 2000/-
3. To get online training candidates should have PC with internet connectivity and Head phone.
1. Introduction:

Indus Global Academy of Technical Education is happy to announce its Professional Training program on **Piping Design Engineering along with PDMS & CAESAR II software's.** The program is developed by the industrial experts as per the exact requirement of industry. The program is designed in such a way that it caters the needs of both fresh graduates & experienced piping engineers who are seeking training of PDMS & CEASER II.

The **Plant Design Management System (PDMS)** is one of the advanced and widely used 3D Modeling software for Piping Design. PDMS is a customizable, multi-user and multi-discipline, engineer controlled design software package for engineering, design and construction projects in, but not limited to, offshore and onshore Oil & Gas industry, chemical, process Plant, Mining, Pharmaceutical & food industry, Power Generation and Paper Industries.

The **Pipe Stress Analysis** plays an vital role in section & structure of pipe system. The pipe Stress Analysis is carried out to ensure the safe operation of Piping system by verifying their structural and pressure retaining integrity under the loading conditions postulated to occur during the life time of the Piping in the Plant. Indus Global Academy has provided the PG.D in Piping Design Engineering for nearly 200 candidates form past 28 months in Bangalore.

We are offering this career oriented training programme in following different modes:

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<th>REGULAR BATCH</th>
<th>WEEKEND BATCH</th>
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<td>Distance Education / Instructor Lead Online Training</td>
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**A) Regular Batch**: Is one of the most preferred mode of training as candidates will get opportunity get direct training from instructors. The regular classes will be scheduled during week days 4 hours/day for 40 to 45 days. Periodical assignments & project works will be given to candidates for better industrial exposure.

**B) Weekend Batch**: This training mode is designed for working professional who cannot take long leave for regular batch but they can get the training during weekend. The candidates will be given course material at the start of the course and the same will be discussed by the instructors. Minimum 10 hours training per week for total 12 weeks

**C) Distance Education / Instructor Lead Online Training**

The Post Graduate Diploma in Process Design Engineering through Distance Education flow through three different stages:

- **Self Study Stage**
- **Compulsory Contact Classes**
- **Assignments & Certification**
Self Study Stage: This is first stage of the program; where candidates will be provided with detailed course material & assignments for different modules. The candidates are requested to study the course material and send across the assignments within due dates.

Compulsory Contact Classes: The important part of the Distance Education is Compulsory Contact Classes. The Post Graduate Diploma in Piping Design Engineering is a design oriented programme and the highlights of the programme are Piping Design Engineering, Pipe wall thickness calculations, operating pressure, design pressure, operating & design temperature, max allowable operating pressure & Pipe Stress Analysis along with CAESAR II in either of following method.

A) Direct Contact Class: 7 days Direct Contact Classes held in Bangalore, where candidates will have an opportunity to meet the Instructors & get their doubts cleared. Further Indus is help the candidates to get accommodation facility.

B) Instructor Lead Online Training: Candidates who are not in a position to attend the Direct Contact Class due to time, distance or any other reason, then he/she is welcome to take the same training through Instructor Lead Online Training where candidates will be given in-depth knowledge though online class for Minimum 2Hrs training for 12 Weeks.

Assignment & Certification: The Post Graduate diploma in Piping Design Engineering consists of Assignments for 8 Modules, Project work & online examination. Candidates will be awarded certificate on the basis of their performance in the assignments, project work & examination. Final Examination will be online Examination and it should availed by candidate with in 120 days of training programme by filling Examination Register Form.

Indus grading system is as follows:

A) Above 80% : A+
B) From 71 to 80% : A
C) From 60 to 70% : B

3. Duration:
The Duration of PGD programme will be 3 months (Minimum) and 5 Months (Maximum) The Maximum duration can be extended by one more month with permission of the Director of Indus Global Academy.

4. Eligibility Criteria:
A Candidate will be eligible for admission and registration for the Post Graduate Diploma in Piping Design Engineering in Online Training provided he/she has Bachelor Degree/Diploma or ITT in Mechanical / Industrial Production / Chemical Engineering.
5. Programme Fees:

For Indian Candidates:
Eligible candidates are required to pay Rs. 45,000/- (Rupees Forty Thousand only) including taxes towards Post Graduate Diploma in Piping Design Engineering. (Please refer important instruction point number 4 for further information)

For International Candidates:
Post Graduate Diploma in Process Design Engineering can be pursued by international candidates by paying USD 1250.00.

Fee Policy:
No exemptions are granted from paying fees unless specifically approved in advance by the Board.
All persons, unless specifically exempted, who are using Indus facilities and services must register and pay the appropriate fees.

Refund Policy:
- All tuition and fees paid by the applicant will be refunded if the applicant is rejected by the Academy before enrollment.
- An applicant fee of not more than Rs. 500/- will be retained by the school as processing fee if the applicant is denied.
- All tuition and fees paid by the applicant will be refunded if requested within three business days after signing a contract with the school. All refunds will be returned within 30 days.
- Students withdrawing during the second and third week of classes will be assessed 50 percent of the tuition.
- Students withdrawing subsequent to the third week of classes will be assessed the tuition in full.
- Registration fees are nonrefundable.
- The effective date of refund is the date the withdrawal notice is received in the administrative Office.
- Any refund as per above terms due to the student will be mailed to his or her address of record.

Adjustment in Fees
Students who drop classes during the first two weeks of classes will have their tuition adjusted appropriate to new elections.
The concerned students are allowed to attend remaining classes only during subsequent three batches.
PIPING DESIGN ENGINEERING AS PER ASME CODES

A) PIPING LAYOUT ENGINEERING:
Piping basics and fundamentals
Introduction to piping, Evolution of piping, Manufacturing methods, Piping materials and selection, Pipe dimensioning, Schedule numbers, Common piping abbreviations, Major organizations for standards, Commonly American code in piping ASME/ANSI, Common abbreviations.

Piping components
Fittings; elbows, weld tee, stub in, couplings, reducers, weld cap, use of fittings screwed and socket welded fittings, Pipe nipples, flanged fittings, flange types, flange P-T ratings, flange facings, flange types, gaskets, bolts and nuts. Valves types \operations, applicability, codes and specifications

Process plant equipments/ mechanical equipments
Horizontal vessels/accumulators, fractionation columns, pumps, heat exchangers, recoiled, airfan, cooling towers, heaters/boilers, storage tanks, fractional distillation process, vendor data drawings.

Flow diagrams& instrumentation/ pipe routing concepts
Uses of flow diagrams, process flow diagrams, mechanical flow diagrams, utility flow diagrams, piping symbols, line symbols, valve symbols, piping isometrics, general arrangement drawings- sections/elevations/detail drawings, plot plan procedures,

Process & instrumentation diagrams (P&ID)/ process flow diagram (PFD)
Purpose of P&ID’S, study of P&ID’S, stages of development of P&ID’S, process and instrumentation diagrams, process equipments, symbols usage according to industrial practices. Purpose and development of PFD’S and their usage in process industrial/plants

ASME/ANSI codes and specifications
ASME/ANSI Codes & Specification, Specification classes, Piping abbreviations, General abbreviations.

Equipment layout drawings
Plant Co-ordinate Systems, Site Plans, Unit Plot Plan, Equipment Location Drawing, Foundation Location Drawing.

Standard piping details/ piping system
Pipe Rack Spacing, Drawing pipe in the rack, pipe insulation shoes, pipe guides, field supports, dummy supports, hanger rods, spring hangers, pick-up pipe supports. Plant utilities, control valve manifolds, utility stations, sewer and under ground piping system.

GET REGISTERED
By sending a confirmation email along with your latest C.V. to contact@indusedu.com, visit url: www.indus-usa.com or Call+91-96862 02291
Course Content

B) PIPING DESIGN ENGINEERING:

**Pressure design of process piping per ASME B31.3**
Pipe wall thickness calculations, operating pressure, design pressure, operating & design temperature, max allowable operating pressure.

**Pressure design of piping components per ASME B31.3**
Pipe, elbows, mitre bends, reinforcement pad calculation for branch connections, flanges, blanks, reducers, expansion joints, gaskets.

**Hydraulic design of liquid piping systems**
Flow rate, velocity, pipe sizing calculations, Reynolds number- laminar/turbulent flow, Darcy weisbach & hazen William equations, pressure drop calculations, NPSH calculations.

C) PIPE STRESS ANALYSIS - CAESAR II:

Over view of NDT (non-destructive testing) methods for piping inspections Radiography testing, ultrasonic testing, computed tomography, etc.

D) PLANT DESIGN MANAGMENET SYSTEM (PDMS):

1 EQUIPMENT MODELING

2 PIPE ROUTING

3 EXTRACTION OF ISOMETRICS USING ISO DRAFT

4 STRUCTURAL MODELING

5 DRAFTING METHODOLOGY

6 INTRODUCTION TO ADMIN HIERARCHY

(Please note: Candidates will be allowed to work on one Mock project which starts from Creation of 3D module in PDMS to Pipe Stress Analysis using CAESAR II. Further candidates will be evaluated according to their performance in this project)

GET REGISTERED

By sending a confirmation email along with your latest C.V. to contact@indusedu.com, visit url: www.indus-usa.com or Call+91-96862 02291
Name of the program

Semester

1) Name of the Candidate

(In Block Letters)

2) Father’s Name

(In Block Letters)

3) Guardian Name

(If applicable)

Relationship

4) Date of Birth (dd/mm/yyyy)

5) Male/Female

6) Permanent Address

City.........................State ....................Pin

7) Correspondence Address

City.........................State ....................Pin

8) Communication Number (O) .............. (R)............... (M)...........

(With STD Code)

9) ACADEMIC QUALIFICATIONS

Exam. Passed University/Board/Institute Year Class (%)

(Attach certified / attested photocopies of all qualification certificates after verification of original and certification by Study Center)
10) **Demand Draft (DD) Details:**

In favor of **Indus Integrated Technology Solutions Private Limited payable at Bangalore**

Crossed Bank Draft No. .................................. Date ......................... Amount........................................

Name and place of Bank ..........................................................

(Candidates are advised to write their Name, Application No, Study center Code & Program applied for, without fail, at the back of the Bank Draft)

11) **List of Documents attached (Please fill without fail)**

1 ................................................................. 2 .................................................................

3 ................................................................. 4 .................................................................

**Note:1. Candidates are required to attach the following documents with this form:**

Attested Photocopies of the Certificate / Detailed Marks Card of the Qualifying exams

Two stamp-size photograph with name and program written on the back, to be put in a separate cover and firmly attached to the application. Do not deface them Identity card (Duly filled and photographs pasted by the candidate

Date : _______________ .................................................................

(Signature of the Candidate)

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(For Office Use Only)

Indus Global Academy of Technical Education

Course eligibility (Program/Semester) .................................................................

Checked by ................................................................. Verified By .................................................................

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