Metal Forming Systems, Inc.
7974 Lilley Road, Canton MI -48187
Tel: 734.658.1716, www.nagform.com

Class Registration Form

Class Name	**Fundamentals of Cold Forging**
Class Date	May 21st, 2025 – May 22nd, 2025
Class Timings	May 21st, 2025 – 10am – 4pm – ***Eastern Standard Time*** May 22nd, 2025 – 10am – 4pm – ***Eastern Standard Time***
Class Location	Online Course with Live Instructor
Cost / Attendee	$600 (Check) or $620 (Credit Card) Current NAGFORM / NAGSIM Users – $400 (Check) or $415 (Credit Card)
Class Presenter	Dr. Vijay Nagpal
Contact Person	Gaurav Nagpal • Email - gaurav@nagform.com • Ph. – (734) 658 1716

Attendees Company Information	
Company Name	
Company Address (for Invoice)	
Method of Payment (Check / Credit Card*)	

Attendees Information			
Name	Job Title	Email Address	Phone Number

**** - Credit card fee of 3% is applied as charged by PayPal. Invoices paid directly through PayPal's secure webpage.***
- Do <u>not</u> provide any Credit Card information on this form.

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COURSE TOPICS

1. Introduction to Metal Forming
2. Introduction to Cold Forging Process
3. Basics of Metal Deformation
4. Material properties and behavior
5. Machines for Cold Forging
6. Principles of forging sequence design
7. Basic forming processes
8. Sequence design rules
9. Preform shapes
10. Forming sequence layout
11. Practical considerations in sequence design
12. Basics of Tool Design for Cold Forging
13. Tool Design Layouts for Cold Forging processes
14. Design of Interference Fit Tool Assemblies
15. Forging Load calculations
16. Introduction of Finite Element Analysis (FEA) for simulation of Forging Processes
17. OPTIONAL - Software program NAGFORM for sequence design
18. OPTIONAL - Validation of design through FEA simulation – NAGSIM software program

INSTRUCTOR'S BACKGROUND

- Ph.D. & ME in Mechanical Engineering – Georgia Institute of Technology, Atlanta
  - Thesis Subject - Analysis of Metal Forming Processes
- Inventor of NAGFORM / NAGSIM / NAGTOOL / DiePress software
- PATENTS (Co-Inventors – Ford Motor Company) in the following subjects:
  - Extrusion forming of internal helical splines
  - Stepped extrusion die assembly
  - Cold extrusion for helical gear teeth
  - Entrance contour design to streamline metal flow in a forging die
- Over 40 publications in journals such as ASME, SME, ASM, Fastener Technology International etc.
- Taught Mechanical Engineering related classes at University of Michigan (Dearborn), Lawrence Tech University and University of Detroit Mercy.
- Work Experience
  - President, Metal Forming Systems, Inc.
  - Transmission Gear Development Consultant, Ford Motor Company
  - Principal Research Scientist, Battelle Labs, Columbus Ohio
  - Tool Engineer, Tata Engineering (TELCO), India