## REGISTRATION

Name:_____

Company:_____

Name:_____

Company:_____

Name:_____

Company:_____

Contact Email:_____

(*Form May be Photocopied for Additional Attendees)*

**REGISTRATION DEADLINE: WEDNESDAY, MAY 24TH**

**TOTAL DUE**: # of Attendees_____ x $300 = $_____

**PAYMENT OPTIONS:**

☐ Check Enclosed (***payable to MSCI Wisconsin Chapter***) Return Form and Payment to: MSCI Wisconsin Chapter, 18445 Fox Rd, Hiram, OH 44234 * Phone: 216.392.1212
Email: teresa@247officeexpress.com

☐ Credit Card - Please fill out the credit card information below and mail, fax or email to Teresa at contact info. above.

Name on Card:_____

Card #:_____

Sec. Code:_____

Exp. Date:_____

Zip Code:_____

Wisconsin Chapter
**Metals Service Center Institute**
100 YEARS STRONG


**The MSCI Wisconsin Chapter**
Invites you to attend

# Metallurgy Basics Class

(Carbon, Stainless & Aluminum Metallurgy)

Cost: $300 pp

***(Attending this in-person session through the Wisconsin Chapter is VERY AFFORDABLE—A $500 savings from National)***

Tuesday, June 6, 2023
8:00 am—Registration
8:30 am—4:00 pm—Training

MATC

Milwaukee Area Technical College
Mequon Campus-West Parking Lot
Room A131 (see map Pg. 2)
555 West Highland Road
Mequon, WI 53092
262.238.2200

****MAX 30 ATTENDEES****

# Metallurgy Basics

Metals and alloys are used in the greatest variety of applications of all engineering materials. Understanding what metals are, how they behave and how they can be altered by common processing is valuable to employees in the metals supply chain. This course provides important, practical knowledge to the non-metallurgists.

The course is an interactive six-hour session consisting of lecture, discussion and question and answer exercises designed to assess understanding and teaches the relationship between the properties of an alloy and its composition, microstructure, and the manufacturing processes used to form a product. The concepts taught will give students the knowledge to understand why certain wrought stainless and aluminum alloys are selected for specific applications.

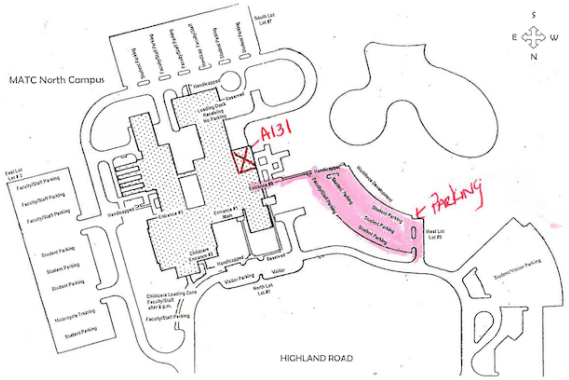
The following topics will be covered:

1. The basic microscopic structures present inside of metals.
2. How these structures and metal composition influence metal strength.
3. How these structures can be modified using common manufacturing processes to obtain specific mechanical properties.
4. The different families of stainless and aluminum alloys and the designations used for different alloys.
5. Effects of alloy composition, cold working, and heat treating on the microstructure and mechanical properties of stainless and aluminum alloys.
6. Design and manufacturing considerations for selection of common stainless and aluminum alloys.

**Who Should Attend:**

The course is appropriate for design, manufacturing, and quality engineers, operations professionals, sales people and purchasing agents with or without technical backgrounds.

**LUNCH WILL BE SERVED**




# About the Trainer

Michael Pfeifer is President of Industrial Metallurgists, LLC, offering metallurgy training courses and engineering consulting to help clients with decisions and problems related to product development and manufacturing. Consultation topics include optimizing materials to improve product performance, reliability and cost, and performing root cause analyses.

Michael has over five years' experience in teaching metallurgy for profe4ssional development. Over the past 20 years, he has worked with numerous companies in a wide variety of industries on projects related to cost reduction, product development, manufacturing process development, quality improvement and root cause analysis.

Prior to founding Industrial Metallurgists, LLC, Michael spent thirteen years with <Motorola, first as a manufacturing engineer in a high-volume integrated circuit factory, working on manufacturing yield improvement, manufacturing cost reduction, cycle time reduction, root cause analysis, and new process development. Later he was a member of a group of materials engineers supporting the entire Automotive Electronics Group business with materials selection for new products, cost reduction, failure analysis/root cause analysis, supplier evaluation and development, manufacturing process development, and quality improvement.

Michael holds a Ph.D. in Materials Scie4nce and Engineering from Northwestern University and is a professional engineer licensed in Illinois. He is an active member of ASM International and has published the book Materials Enable Designs: The Materials Engineering Perspective to Product Design and Manufacturing.