

28<sup>th</sup> McMaster University

## Blast Furnace Ironmaking Course

May 10-15, 2026

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**Lectures** take place in the Michael DeGroot Center for Learning and Discovery (MDCL), Room 1110

**Blast Furnace Computer Game** takes place the McMaster University Student Centre (MUSC), CIBC Hall, 3<sup>rd</sup> floor.

**Case Study** will take place the LR Wilson Hall (LRW), Room 1055

### Sunday, May 10

17:00-18:30 REGISTRATION – MDCL southeast corner

18:00-19:00 Introduction to Ironmaking (optional lecture) – Marco Lopez, U.S. Steel Corporation  
*For those who have no background in high school chemistry and/or have no knowledge of the blast furnace.*

19:00-21:00 Welcome Reception and Registration, Faculty Club (Alumni Memorial Hall)

### Monday, May 11

07:15-08:15 REGISTRATION & BREAKFAST – MDCL southeast corner

**AM SESSION** Chair: John D'Alessio, Stelco Inc.

08:15-08:30 Opening Remarks and Course Orientation – Derek Gray, Stelco and Hatem Zurob, McMaster University

08:30-09:30 Recent History of Ironmaking - Maarten Geerdes, Danieli-Corus

09:30-10:30 Fundamental Principles Applied to Blast Furnace Safety - Shawn Tilbury, ArcelorMittal Dofasco

10:30-10:45 BREAK

10:45-11:45 Transitioning the Iron and Steel Industry Towards a Low-Carbon Future: Climate Change Policies and Approaches - Katie Chan, Stelco

11:45-13:00 LUNCH

**PM SESSION** Chair: Chris DiGiovanni, McMaster University

13:00-14:00 Blast Furnace Reactions – Leili Tafaghodi, McMaster University

14:00-14:15 BREAK

14:15-16:15 Blast Furnace Energy Balance and Recovery: Rules of Thumb and Other Useful Information

Blast Furnace Computer Game Instructions – John Busser and Mitren Sukhram, Hatch

**EVENING** Location: McMaster University Student Centre (MUSC), CIBC Hall, 3rd floor

19:00-22:00 Blast Furnace Computer Game – John Busser and Mitren Sukhram, Hatch

## Tuesday, May 12

08:00-08:45 BREAKFAST

**AM SESSION** Chair: Jason Entwistle, U.S. Steel Corporation

08:45-09:45 Blast Furnace Design I – Brian Black, SMS group Americas

09:45-10:45 Blast Furnace Design II - Guilherme Guidugli, Primetals Technologies

10:45-11:00 BREAK

11:00-12:00 Blast Furnace Design III Campaign Extension - Salustiano Pinto, Consultant

12:00-13:00 LUNCH

**PM SESSION** Chair: Jason Entwistle, U.S. Steel Corporation

13:00-14:00 Iron-Bearing Burden Materials - Renard Chaigneau, Baffinland Iron Mines Corp.

14:00-15:00 Coke Production for Blast Furnace Ironmaking – Ka Wing Ng, NRCAN

15:00-15:15 BREAK

15:15-16:15 Day-to-Day Blast Furnace Operation - Jason Entwistle, U.S. Steel Corporation

17:00-18:15 BBQ at The Phoenix (optional)

**EVENING** Location: McMaster University Student Centre (MUSC), CIBC Hall, 3rd floor

18:30-21:00 Blast Furnace Game – John Busser and Mitren Sukhram, Hatch

## Wednesday, May 13

07:45-8:30 BREAKFAST

**AM SESSION** Chair: Ron Timmer, Algoma Steel Inc.

08:30-09:30 Burden Distribution and Aerodynamics – Joseph Morey, Consultant

09:30-10:30 Challenging Blast Furnace Operations – Fred Rorick, Rorick Inc.

10:30-10:45 BREAK

10:45-12:00 Blast Furnace Control Measurement Data and Strategy – Bob Nightingale (Retiree), University of Wollongong and Bluescope Steel

12:00-13:00 LUNCH

**PM SESSION** Location L.R. Wilson Hall– Room 1055  
Chair: Ron Timmer, Algoma Steel Inc.

13:15-14:45 Chilled Hearth Case Study – Sean Crawford, ArcelorMittal Dofasco and John D’Alessio, Stelco Inc

14:45-15:00 BREAK

15:00-16:15 Chilled Hearth Case Study (continued)

**EVENING** Location: McMaster University Student Centre (MUSC), CIBC Hall, 3rd floor

18:30-21:00 Blast Furnace Computer Game – John Busser and Mitren Sukhram, Hatch

## Thursday, May 14

- 07:45-08:45 BREAKFAST
- AM SESSION** Chair: Derek Gray, Stelco
- 08:45-09:45 Fuel Injection in the Blast Furnace - John D'Alessio, Stelco
- 09:45-10:45 Maintenance Reliability Strategies in an Ironmaking Facility – Johan van Ikelen, Blast Furnace Consultant
- 10:45-11:00 BREAK
- 11:00-12:00 Ironmaking/Steelmaking Interface - Mike Pomeroy, ArcelorMittal Dofasco
- 12:00-13:00 LUNCH
- PM SESSION** Chair: Derek Gray, Stelco
- 13:00-14:00 Comprehensive Numerical Modelling of the Blast Furnace Ironmaking Process - Sam Neilson, Purdue University Northwest
- 14:00-15:00 Ironmaking Refractories - Floris van Laar, Allied Mineral Technical Services
- 15:00-15:15 BREAK
- 15:15-16:15 Overview of the DRI Process - Kevin Persad, Nucor Steel Louisiana
- 17:30 BANQUET, bus departure from MUSC to Burlington Golf & Country Club
- 18:30-21:00 DINNER

## Friday, May 15

- 07:15-08:00 BREAKFAST
- AM SESSION** Chair: Husain Tapia, ArcelorMittal Dofasco
- 08:00-09:00 Ironmaking in Western Europe – Jan van der Stel, Tata Steel
- 09:00-10:00 Chinese Blast Furnace Practice – Dennis Lu, ArcelorMittal USA
- 10:00-10:15 BREAK
- 10:15-11:15 Low-Carbon Technologies in Japanese Blast Furnace Ironmaking - Kaoru Nakano, Nippon Steel Corporation
- 11:15-12:15 Future Trends in Ironmaking - Mitren Sukhram and Ian Cameron, Hatch
- 12:15-12:30 Closing Remarks
- 12:30 LUNCH
- PLANT TOURS** Pre-registration required. Bus pickup from MUSC.
- 12:45-15:30 Stelco Lake Erie Works tour with boxed lunch for bus
- 12:45-15:30 ArcelorMittal Dofasco tour with boxed lunch for bus