



Summer School Courses 2019 - 2026

Industrial Engineering Department

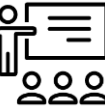
Summer School 2026

IIND4131 MASTERING MACHINE LEARNING: GENERATIVE MODELS



Course Instructor(s):

Juan Fernando Pérez, Universidad de los Andes (Colombia)
Rafael Martínez (USA)



Term dates: June 13 to July 25, 2026

Language: Spanish 100%

Format: Hybrid

Credits: 4, master level

IIND4136 QUANTITATIVE REASONING FOR DECISION MAKING



Course Instructor(s):

Alejandra Tabares, Universidad de los Andes (Colombia)
Germán Tabares (Colombia)
Juan Carlos Duque



Term dates: June 16 to 27, 2026

Language: Spanish 100%

Format: Hybrid

Credits: 4, master level

Summer School 2026

IIND-4233 FACTORYSIM: MODELING THE SMART INDUSTRY



Course Instructor(s):

Jonathan Cuevas (Mexico)



Term dates: June 30 to July 14, 2026

Language: Spanish 100%

Format: On Line

Credits: 4, master level

IND-4362 ENGINEERING WITH SOCIAL IMPACT



Course Instructor(s):

Catalina Ramírez, Universidad de los Andes (Colombia)

Samuel Bernal, Universidad de los Andes (Colombia)

Sandra Merchán (Colombia)

Juan Lucena (USA)

Term dates: July 21 to 25, 2026

Language: Spanish 100%

Format: On Campus

Credits: 4, master level



Summer School 2026

IIND-4363 ENGINEERING, JUSTICE AND CRIME: SYSTEMIC TOOLS FOR COMPLEX PROBLEMS



Course Instructor(s):

Camilo Olaya, Universidad de los Andes (Colombia)
Juliana Gómez (England)



Term dates: June 1 to 5, 2026

Language: Spanish 100%

Format: On Campus

Credits: 4, master level

IIND-4356 SYSTEMIC THINKING, LEADERSHIP AND STRATEGY



Course Instructor(s):

Luis Pinzón, Universidad de los Andes (Colombia)
Roberto Villaseñor (Mexico)



Term dates: June 9 to 16, 2026

Language: Spanish 100%

Format: On Line

Credits: 4, master level

Summer School 2026

IIND-4417 SMART DECISIONS FOR A COMPLEX WORLD



Course Instructor(s):

Jacek Zak (Poland)



Term dates: June 30 to July 9, 2026

Language: English 100%

Format: On Campus

Credits: 4, master level

Summer School 2025

IIND4134 Mastering Machine Learning: Operations (MLOps)



Course Instructor(s):

Cindy Orozco, Stanford University (USA)

Juan Fernando Pérez, Universidad de los Andes (Colombia)

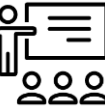
Rubén Manrique, Universidad de los Andes (Colombia)

Term dates: June 11 to 24, 2025

Language: Spanish 100%

Format: Hybrid

Credits: 4, master level



IIND4356 Leadership, systems thinking and strategy: a trilogy for 21st century problems



Course Instructor(s):

Roberto Villaseñor, Instituto Tecnológico de Monterrey (Mexico)

Term dates: July 8 to 12, 2025

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



Summer School 2025

IIND-4232 Operational Excellence through Lean and Simulation: Strategies for Industry 4.0



Course Instructor(s):

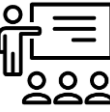
Jonathan Cuevas-Ortuño, Instituto Tecnológico de Monterrey (Guadalajara, Mexico)

Term dates: June 16 to 27, 2025

Language: Spanish 100%

Format: Hybrid

Credits: 4, master level



IIND-4416 Decarbonization of electricity generation systems: Methods, tools, and resources



Course Instructor(s):

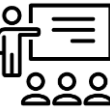
Edgar Virgüez, Stanford University (USA)

Term dates: June 24 to July 11, 2025

Language: Spanish 100%

Format: On Campus

Credits: 4, master level



Summer School 2025

IIND-4361 SUSTAINABLE INNOVATION with Social Impact



Course Instructor(s):

Catalina Ramírez, Universidad de los Andes (Colombia)

Riccardo Mereu, Politecnico de Milan (Italia)

Term dates: July 7 to 12, 2025

Language: Spanish 100%

Format: Hybrid

Credits: 4, master level



Summer School 2024

IIND4231 Supply Chain and Analytical Systems Engineering



Course Instructor(s):

Sepideh Abolghasem, California State University, Northridge (USA)

Term dates: July 8 to 25, 2024

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



IIND4356 Leadership, systems thinking and strategy: a trilogy for 21st century problems



Course Instructor(s):

Roberto Villaseñor, Instituto Tecnológico de Monterrey (Mexico)

Term dates: July 8 to 12, 2024

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



Summer School 2024

IIND4133 Mastering Machine Learning



Course Instructor(s):

Ashish Mahaba, Center for Data Driven Discovery, California Institute of Technology (USA)

Rafael Martínez, Harvard-Smithsonian Center for Astrophysics (USA)

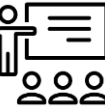
Juan Fernando Pérez, Distinguished Professional, Universidad de los Andes (Colombia)

Term dates: July 17 to 27, 2024

Language: Spanish 50%, English 50%

Format: Hybrid

Credits: 4, master level



Summer School 2023

IIND4230 Simulation approaches with applications in Production and Logistics



Course Instructor(s):

Naly Rakoto, Associate Professor, IMT Atlantique - France

Fidel Torres, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 13 to July 5, 2023

Hours: 42

Language: Spanish 50%, English 50%

Format: On Campus

Credits: 4, master level

IIND4131 Mastering Machine Learning, Generative Models



Course Instructor(s):

Catalina Obando, Research Scientist, Airbus – France

Rafael Martínez, Astrophysicist, Harvard-Smithsonian Center for Astrophysics - USA

Juan Fernando Pérez, Distinguished Professional, Universidad de los Andes - Colombia

Rubén Manrique, Assistant Professor, Universidad de los Andes - Colombia



Term dates: July 5 to 14, 2023

Hours: 44

Language: Spanish 100%

Format: On Campus

Credits: 4, master level

Summer School 2023

IIND4132 Combinatorial Optimization for Machine Learning



Course Instructor(s):

Andrés Gómez, Assistant Professor, University of Southern California - USA

Andrés Medaglia, Full Professor, Universidad de los Andes - Colombia



Term dates: June 15 to July 7, 2023

Hours: 35

Language: Spanish 100%

Format: On Campus

Credits: 4, master level

IIND4355 Innovative Product Development



Course Instructor(s):

David Ochi, Executive Director Innovation Incubator , California State University - USA



Term dates: June 20 to July 12, 2023

Hours: 33

Language: English 100%

Format: Online (live)

Credits: 4, master level

Summer School 2023

IIND4357 Creativity and Systemic Management in the Circular Economy



Course Instructor(s):

José Rodrigo Córdoba, Senior Lecturer (Associate Professor), University of London (Royal Holloway) - England

Term dates: June 13 to 28, 2023

Hours: 30

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



IIND4358 Sustainable Systemic Innovation



Course Instructor(s):

Andrés Acero, Assistant Professor, Tecnológico de Monterrey (Campus Puebla) – Mexico

Catalina Ramírez, Associate Professor, Universidad de los Andes - Colombia

Term dates: June 20 to 28, 2023

Hours: 35

Language: Spanish 100%

Format: On Campus

Credits: 4, master level



Summer School 2023

MIIA-4410 Network Analytics in the Big Data Era

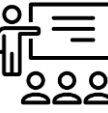


Course Instructor(s):

Jesús Gómez, Associate Professor, Universidad de Zaragoza - Spain

David Soriano, Postdoctoral Researcher, Instituto Gulbenkian de Ciencia - Portugal

Felipe Montes, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 10 to 23, 2023

Hours: 32

Language: Spanish 100%

Format: On Campus

Credits: 4, master level

Summer School 2022

IIND4230 Simulation approaches with applications in Logistics and Production



Course Instructor(s):

Naly Rakoto, Associate Professor, Nantes School of Mines (IMT Atlantique) - France
Fidel Torres, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 6 to July 5, 2022

Hours: 40

Language: Spanish 50%, English 50%

Format: Online (live)

Credits: 4, master level

IIND4354 Sustainable Innovation



Course Instructor(s):

Irene Bengo, Associate Professor, Politecnico di Milano - Italy
Jorge Lozoya, Research Professor, Tecnológico de Monterrey - Mexico
Fernando Jiménez, Associate Professor, Universidad de los Andes - Colombia
Catalina Ramírez, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 13 to 24, 2022

Hours: 45

Language: Spanish 100%

Format: Blended (Online and On Campus)

Credits: 4, master level

Summer School 2022

IIND4355 Innovative Product Development



Course Instructor(s):

David Ochi, Executive Director Innovation Incubator , California State University - USA

Term dates: June 19 to July 18, 2022

Hours: 33

Language: English 100%

Format: Online (live)

Credits: 4, master level



IIND4356 Leadership, systems thinking and strategy: a trilogy for 21st century problems



Course Instructor(s):

Roberto Villaseñor, Associate Director of the Regional Department - Industrial and Systems Engineering, Tecnológico de Monterrey - Mexico

Term dates: June 13 to 24, 2022

Hours: 30

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



Summer School 2022

IIND4129 Mastering Machine Learning



Course Instructor(s):

Elkin García, Principal Firmware Systems Architect, Synaptics Incorporated- USA

Rafael Martínez, Astrophysicist, Harvard-Smithsonian Center for Astrophysics - USA

Juan Fernando Pérez, Distinguished Professional, Universidad de los Andes - Colombia



Term dates: June 28 to July 2, 2022

Hours: 37

Language: Spanish 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level

MIIA4409 Operations Analytics



Course Instructor(s):

Raha Akhavan, Professor of Operations Management & Business Analytics, Sabanci Business School - Turkey

Term dates: July 1 to 12, 2022

Hours: 30

Language: Spanish 50%, English 50%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level



Summer School 2021

IIND4352 Social Entrepreneurship



Course Instructor(s):

Homero Murzi, Assistant Professor, Virginia Tech. University – USA

Catalina Ramírez, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 21 to July 2, 2021

Hours: 40

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level

IIND4230 Simulation approaches with applications in Logistics and Production



Course Instructor(s):

Naly Rakoto, Associate Professor, Nantes School of Mines (IMT Atlantique) - France

Fidel Torres, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 8 to July 12, 2021

Hours: 40

Language: Spanish 50%, English 50%

Format: Online (live)

Credits: 4, master level

Summer School 2020

MIIA4408 Supply Chain Analytics



Course Instructor(s):

Luis José Novoa, Assistant Professor, James Madison University - USA

Term dates: July 6 to 30, 2020

Hours: 30

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



IIND4229 Digital Twin Simulation of Modern Manufacturing Systems



Course Instructor(s):

Luca Fumagalli, Assistant Professor, Politecnico di Milano - Italy

Elisa Negri, Postdoc Researcher (Manufacturing Group), Politecnico di Milano - Italy

Term dates: June 16 to July 3, 2020

Hours: 36

Language: English 100%

Format: Online (live)

Credits: 4, master level



Summer School 2020

IIND4351 Sustainable Engineering with Social Impact



Course Instructor(s):

Pedro Reynolds, Research Assistant, Massachusetts Institute of Technology - USA

Riccardo Mereu, Assistant Professor, Politecnico di Milano - Italy

Term dates: June 16 to 24, 2020

Hours: 30

Language: Spanish 100%

Format: Online (live)

Credits: 4, master level



Summer School 2019

MIAA4407 Building Successful Data-driven Strategies



Course Instructor(s):

Eduardo Rodríguez, Assistant Professor of Business, University of Wisconsin - USA

Benjamin Ardila, Business Analytics Manager, Kernel Analytics - Spain



Term dates: July 13 to 26, 2019

Hours: 36

Language: Spanish 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level

IIND4348 Methodologies for Engineering with Impact: Population Migration Case



Course Instructor(s):

Richard Arias, Instructor, The University of British Columbia - Canada

Catalina Ramírez, Associate Professor, Universidad de los Andes - Colombia



Term dates: June 13 to 22, 2019

Hours: 30

Language: Spanish 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level

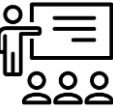
Summer School 2019

IIND4350 Systemic Advanced Modeling



Course Instructor(s):

Roberto Villaseñor, Associate Director of the Regional Department - Industrial and Systems Engineering, Tecnológico de Monterrey – Mexico
Karina Rosas, Associate Director of the Regional Department - Industrial and Systems Engineering, Tecnológico de Monterrey – Mexico



Term dates: June 17 to 21, 2019

Hours: 30

Language: Spanish 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level

IIND4127 Achieving Smart Maintenance through Reliability Analysis and Data Analytics



Course Instructor(s):

Luca Fumagalli, Assistant Professor, Politecnico di Milano - Italy



Term dates: July 2 to 19, 2019

Hours: 36

Language: English 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level

Summer School 2019

IIND4349 Computational Complex Systems Methods for Data Analytics



Course Instructor(s):

Jesús Gómez, Associate Professor, Universidad de Zaragoza - Spain

Felipe Montes, Associate Professor, Universidad de los Andes - Colombia



Term dates: July 22 to 31, 2019

Hours: 36

Language: Spanish 100%

Format: On Campus (Bogotá, Colombia)

Credits: 4, master level



INDUSTRIAL ENGINEERING DEPARTMENT