

# **InsAI**

**3-week Short Program**

**78 Contact Hours - 2 Modules**

**6 ECTS / 3 US Credits**

**From June 25th to July 17th 2026**

## **Technical module**

**Artificial Intelligence**

## **Cultural Module**

**French Language and Cross-Cultural Communication**

## LYON – AN ESSENTIAL EUROPEAN CITY

### Prosperity

When you choose Lyon, you choose one of the most attractive cities in Europe, an international competitor and a gateway to the rest of the world. Being France's 2nd most important city, it is located in the heart of the thriving Auvergne-Rhône-Alpes region. The city was classified as World Heritage Site by UNESCO in 1998.

### Heritage

Ancient capital of the Gauls, it testifies of 2000 years of history. Lyon has been recognized as France's 1st city for culture outside of Paris and is indeed characterized above all by the balance between its cultural institutions of excellence offering quality programming, its large-scale festivals, and its cultural venues open to all.

### Commerce

With its many fields of excellence, Lyon is a major international hub: Life Sciences, Clean Technologies, ITC, to name a few. The city is also home to internationally-renowned companies and major players, including: Sanofi, Merial, Lafarge, GL Events, Bank of China, Solvay Rhodia...

### International

In addition, many world-renowned organizations have chosen Lyon as the location for their headquarters or regional offices: Handicap International, World Health Organization, CIRC (International Cancer Research Center), Interpol, Euronews...

### Studies

Lyon is also a favorite city for foreign students who represent 10% of the student population in Lyon and strengthen the city's international character.

## INSA LYON – A LEADING ENGINEERING SCHOOL IN FRANCE

### Excellence

INSA Lyon is one of France's top universities in science and technology. Our five-year programme trains multi-skilled, humanist, innovative engineers with strong entrepreneurial and firm international spirits. Diversity, excellence, open-mindedness, innovation... such are the driving forces that shape our engineers.

### Responsibility

Founded in 1957, INSA Lyon embodies an avant-garde and resolutely modern vision of engineering. INSA engineers possess both excellent scientific and technical expertise, while being capable of understanding the issues at the heart of their companies, and actively contributing to the evolution of the world we are living in.

### Our goal

On the higher education scene, we rank among the top 10 engineering schools in Europe. Our purpose is also to become a centre for research and innovation recognized throughout the world, a partner of choice for business and industry.

## InsAI Short Program on New Technologies

**During this 3-week short program, students will learn about artificial intelligence through innovative and interactive teaching. Students will enjoy hands-on experiments and acquire valuable international experience for their professional futures.**

**At the same time, Students will get to know French culture and the beautiful city of Lyon, while also acquiring basic knowledge about the French language.**

**This short program is also a perfect opportunity for students to discover INSA Lyon, a place they may want to come back to in their course of studies!**

# COURSE DESCRIPTIONS

## Disclaimer

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If you have any questions about the InsAI program, please do not hesitate to contact the Short Programs Team at: [insai@insa-lyon.fr](mailto:insai@insa-lyon.fr)

## Technical module: Artificial Intelligence

**Hours and Credits:** 48 total contact hours; 4 ECTS or 2 US credits

**Prerequisites:** Science and Engineering students (Computer Sciences)

**Language:** English

**Academic Coordinator:** Linda Elmhadhbi, [linda.elmhadhbi@insa-lyon.fr](mailto:linda.elmhadhbi@insa-lyon.fr)

This program provides students with a foundational understanding of Artificial Intelligence (AI) and its key domains, including Machine Learning, Data Mining, and Natural Language Processing, through both theoretical courses and practical applications. It also addresses ethical considerations, security, and privacy challenges in AI. Additionally, students will explore AI's integration with the Internet of Things and its real-world impact. A visit to the INSA Lyon Experimental Platform on Aerial Robots will further enrich the learning experience by offering insights into AI-driven robotics.

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### OBJECTIVES AND METHODS

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### CONTENTS

- Introduction to AI (2h)

This course is an introduction to artificial intelligence to help students understand what AI means and what are the historical development, fundamental concepts, and modern applications of AI.

- Machine Learning (9h)

This course investigates machine learning algorithms capable of performing complex tasks by focusing on how to train algorithms using training data.

- Data Mining (6h)

This course introduces the basics of descriptive data analysis and covers the basic algorithms of clustering and frequent pattern mining.

- Natural Language Processing (9h)

This course focuses on the fundamental concepts of Natural Language Processing and its role in current and emerging technologies (text cleaning and simplification, text transformation into numerical vectors, grammatical and semantic analysis of texts, text analysis using neural networks and language models...).

- AI and IoT(3h)

This course explores the integration of AI and IoT(Internet of Things), covering fundamental concepts, architectures, and practical applications.

- Security and Privacy in Machine Learning and AI (3h)

This course examines security and privacy challenges in AI and machine learning, focusing on vulnerabilities, attack strategies, and advanced security mechanisms.

- Ethics of AI (2h)

This course focuses on ethical challenges in AI, emphasizing bias, accountability, transparency, and the societal impact of intelligent systems.

- Artificial Intelligence in Healthcare (3h)

This course examines the role of AI in healthcare, focusing on its applications, and benefits.

- Visit of the Experimental Platform "Aerial Robots" of INSA Lyon (2h)

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## **FINAL EVALUATION**

The students will work on a mini-project of 9 hours which will be the basis of the evaluation (1h of defense).

## Cultural module: French Language and Cross Cultural Communication

Hours and Credits: 30 total contact hours; 2 ECTS / 1 US credits

Prerequisites: none

Academic Coordinator: Elisabeth AUMEUNIER, [elisabeth.aumeunier@insa-lyon.fr](mailto:elisabeth.aumeunier@insa-lyon.fr)

### PART I.A: INTRODUCTION TO FRENCH LANGUAGE AND CULTURE

#### OBJECTIVES AND METHODS

The focus of this unit will be on the oral French used in daily life. Using action-based language teaching methods, this class will require students to use the French they learn in various situations both during in-class activities and in real-life situations on-site in Lyon. The overall goal is to introduce the students to various cultural aspects of life in Lyon.

#### FINAL PROJECT

During the final class, the students will go on a shopping trip to Les Halles de Lyon with their teachers where they will be expected to use the language skills they have acquired to find their way from the INSA campus to Les Halles and once there, to interact appropriately with the vendors in order to greet, explain their needs, taste local products and make their purchases.

Examples of on-site activities:

- A neighborhood treasure hunt: finding your way around and learning about the neighborhood
- Discovering French lifestyle, shopping at a street market, going to a café...

Some of the linguistic tools necessary:

- Greeting and taking leave
- Introducing yourself
- Describing where you are and how to get where you are going
- Express your preferences and personal tastes
- Sample, order, purchase, pay

### PART I.B: FRENCH LANGUAGE AND CULTURE FOR STUDENTS AT INTERMEDIATE AND ADVANCED LEVELS

Intermediate and advanced French learners, depending on their number, will either be taught in a class or tutored by a teacher to accomplish a couple of tasks independently. Whether you have a class or work independently, the main objective of the course is to discover the city of Lyon: social life, cultural activities, points of interest, history and more. At the end of the course, you will give a presentation on one aspect of the city of Lyon. Of course, all of it in French!

## PART II: DEVELOPING INTERCULTURAL COMPETENCE

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### COURSE INTRODUCTION

#### Why do we need of this course today?

In today's globalized world, with the rise of the internet and the shrinking of time and space, intercultural interactions have become an essential part of daily life. This course is designed to address the challenges of living in a world where we increasingly engage with people who may differ from us in fundamental ways. Its overarching goals are to enhance sensitivity to cross-cultural communication, equip students with the knowledge and skills needed for successful intercultural interactions, and connect these insights to language learning.

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### MAIN CONTENT OF THE COURSE

This course is designed to interrogate different aspects of cross-cultural communication and cultural differences: language, family life, social relationships, work, government, education, love, and religion. Throughout the exploration of these topics, we will strive to engage in self-reflection, practical experience, and understanding of connections to larger social structures.

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### OBJECTIVES

Specifically, the goals of this course are to describe, learn about, and see social and cultural differences conformed to a model, to provide a space for students to reflect on their own personal experiences. Students will be encouraged to engage with different cultures in practical ways and to experience cross-cultural communication in meaningful ways, including:

- Understand the role of communication in culture
  - Recognize cultural variables
  - Become familiar with communication norms, rituals, and taboos of other cultures
  - Discover cross-cultural communication barriers, adaptation to other cultures and culture shock
  - Practice communication activities as they would occur in other cultures
  - Learn how differences in intercultural communication show themselves in professional contexts
  - Increase sensitivity to one's own cultural context and its impact on how one communicates, increase knowledge of ethical issues in cross-cultural communication, and increase sensitivity to communicating with people from different cultures
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### GRADE DISTRIBUTION

Participation – 10%

(Inter)cultural self-analysis – 30%

Cultural presentation – 30%

Final test – 30%



# The InsAI Team is looking forward to welcoming you next summer!

## CONTACT

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