

Content

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|-------------------------|----------|--------|----------|-----|--------|------|
| INF444 | Artificial Intelligence | 7 | 3 | 0 | 0 | 3 | 5 |

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| Prerequisites | INF224 |
| Admission Requirements | INF224 |

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| Language of Instruction | French |
| Course Type | Compulsory |
| Course Level | Bachelor Degree |
| Objective | This course is an introduction to artificial intelligence and its applications. The objective of the course is to introduce the fundamental methods and approaches to define, formalize and solve AI problems through simple examples and applications. |
| Content | <ol style="list-style-type: none"> 1. Intro to AI 2. Intelligent agents and environments 3. Problem formalization 4. Introduction to search algorithms 5. Uninformed search algorithms 6. Informed search algorithms 7. Adversarial search and game theory 8. Constraint satisfaction problems 9. Intro to knowledge, reasoning and planning 10. Propositional logic 11. First-order logic 12. Neurons and artificial neural networks 13. Uncertainty and probabilistic approaches 14. Project presentations |
| References | Artificial Intelligence: A Modern Approach, 4th edition, Stuart Russel & Peter Norvig, Pearson, 2020. Intelligence artificielle et informatique théorique, 2ème édition, J-M.Alliot & T.Schiex, Cépaduès, 2002. |

Theory Topics

| Week | Weekly Contents |
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| 1 | Intro to AI |
| 2 | Intelligent agents and environments |
| 3 | Problem formalization |
| 4 | Introduction to search algorithms |
| 5 | Uninformed search algorithms |
| 6 | Informed search algorithms |
| 7 | Adversarial search and game theory |
| 8 | Constraint satisfaction problems |
| 9 | Intro to knowledge, reasoning and planning |
| 10 | Propositional logic |
| 11 | First-order logic |
| 12 | Neurons and artificial neural networks |

| Week | Weekly Contents |
|------|--|
| 13 | Uncertainty and probabilistic approaches |
| 14 | Project presentations |