Master of Science in Artificial Intelligence

Prof. George Vouros
Director of the MSc in AI
...thoughts on Artificial Intelligence...

... the question ‘Can machines think!’ I believe to be too meaningless to deserve discussion. Nevertheless I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted.
Why choose an MSc in AI now?

- Master programmes offer a specialization in the Artificial Intelligence domain: a hot topic with endless possibilities
Career opportunities in AI

- Career Opportunities

Related job roles:

- AI scientists
- ML engineers
- Data scientists
Who is it addressed to?

- Degree from Greek Universities in a scientific domain related to the subject of the programme
- Equivalent Degree from foreign Institutions
Why choose this MSc in Artificial Intelligence?

- The Masters programme offers a comprehensive academic curriculum and a rich learning experience.
- Students are educated to deeply understand, successfully apply, analyse and provide support for solving real-life problems in the business domain.
- Graduates acquire skills so as to continue to PhD level in this exciting field of study.
Two leading Institutions

Involved Laboratories with many years of experience in teaching and research in Artificial Intelligence

AI-Lab @ University of Piraeus

Prof. George Vouros (Director)
http://ai-group.ds.unipi.gr/ai-group/

Institute of Informatics & Telecommunications

Dr. Theodoros Giannakopoulos
https://www.iit.demokritos.gr
Programme Details

- Duration: 1.5 year
- Award level: Masters
- Full-Time
- 3 Semesters
- Language: English/Greek
- 90 ECTS programme is delivered over three 30 ECTS semesters
Programme Objectives

To train Scientists who design, develop, and implement:

i. methods of **machine learning**, aiming for the highest possible degree of automation in the decision-making process by utilizing historical data

ii. methods of **knowledge representation & reasoning**

iii. methods for developing **intelligent agents & robotic systems**

iv. methods of **optimization**

v. methods of **natural language processing**
Entry requirements

● A relevant Master’s Degree or equivalent
● A primary Bachelor’s Degree or equivalent
● Candidates with an equivalent qualification and a period of appropriate professional experience may also be considered for this programme
● An English language certification is required
Tools used during the classes (basic knowledge required)
Semester 1 Syllabus

○ **Semester 1**

  - 6 compulsory modules
  - 13 lectures for each course
  - Afternoon classes (18:00-21:00)
  - 2 weeks of exams

<table>
<thead>
<tr>
<th>Semester 1 (Autumn)</th>
<th>Type</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Fundamentals and Background on Artificial Intelligence</td>
<td>Compulsory</td>
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<tr>
<td>Intelligent Agents &amp; Multiagent Systems</td>
<td>Compulsory</td>
<td>5</td>
</tr>
<tr>
<td>Artificial Intelligence Ethics and Regulatory Frameworks</td>
<td>Compulsory</td>
<td>5</td>
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<td>Algorithmic methods in Artificial Intelligence</td>
<td>Compulsory</td>
<td>5</td>
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<tr>
<td>Machine Learning</td>
<td>Compulsory</td>
<td>5</td>
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<tr>
<td>Knowledge Representation and Reasoning</td>
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Semester 2 Syllabus

- **Semester 2**
  - 4 Elective and 2 compulsory modules
  - 13 lectures for each course
  - Afternoon classes (18:00-21:00)
  - 2 weeks of exams

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<thead>
<tr>
<th>Semester 2 (Spring)</th>
<th>Type</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Deep Learning</td>
<td>Compulsory</td>
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<tr>
<td>Artificial Intelligence Applications</td>
<td>Compulsory</td>
<td>7,5</td>
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<tr>
<td>Robotics</td>
<td>Elective</td>
<td>7,5</td>
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<tr>
<td>Natural Language Processing</td>
<td>Elective</td>
<td>7,5</td>
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<td>Scalable Artificial Intelligence Methods</td>
<td>Elective</td>
<td>7,5</td>
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<td>Machine Learning on Multimedia Data</td>
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<td>7,5</td>
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Semester 3 Syllabus

- Semester 3

Master Thesis

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<th>Semester 3</th>
<th>Type</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MASTER THESIS</td>
<td>Compulsory</td>
<td>30</td>
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</table>
A developing network of industrial and research partners

- Research opportunities (partnered thesis)
- Internship positions
- Career networking
Contact us: [https://msc-ai.iit.demokritos.gr/el](https://msc-ai.iit.demokritos.gr/el)

Email: ai@iit.demokritos.gr  Tel: +30 210 6503216