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FACILITATE-AI

GUIDELINES FOR FACILITATING THE LEARNING OF ARTIFICIAL INTELLIGENCE
BY SCHOOL STUDENTS OF GRADES 7-12



Partner organization: University of Plovdiv “Paisii Hilendarski”, Bulgaria

FACILITATE - AI: Guidelines for Facilitating the Learning of Artificial
Intelligence (AI) by School Students of Grades 7-12

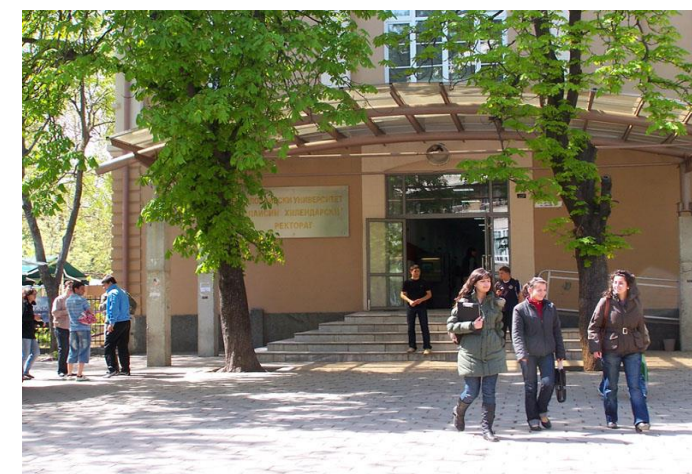
R2. A Training Course for Teacher Facilitators of Learning in AI-STEAME+
Education

10-12 March 2022, Cyprus



University of Plovdiv “Paisii Hilendarski”

- The University of Plovdiv “Paisii Hilendarski” is the second biggest in Bulgaria. The University was founded in 1961.
- It has nine faculties.
- More than 8,000 full-time students and approximately 5,000 part-time students study in the nine faculties of the University.



FACULTY OF MATHEMATICS AND INFORMATICS



- The Faculty of Mathematics and Informatics (FMI) is the first autonomic faculty in the almost half century history of the University of Plovdiv "Paisii Hilendarski"
- Annually at the Faculty of Mathematics and Informatics over 2000 students study in the bachelor and master programs for "Mathematics", "Informatics and computer sciences", "Pedagogy for the education in mathematics", and many others.
- Programs for scientific degree-level Ph.D. are also available – over 40 PhD students study in them now.
- There are 7 departments in FMI
 - Department of Algebra and Geometry
 - Department of Mathematical Analysis
 - Department of Computer Informatics
 - Department of Computer Systems
 - Department of Computer Technologies
 - Department of Software Technologies
 - Department of Methodology of Mathematics and Informatics Education



FACULTY OF MATHEMATICS AND INFORMATICS



- **There are 9 specialties in the bachelor programs:**

- Software Technology and Design (full-time, 4 years)
- Business Information Technology (full-time, 4 years)
- Informatics (full-time, 4 years)
- Software Engineering (4 years)
- Mathematics, Informatics and Information Technology (full-time, 4 years)
- Applied Mathematics (full-time, 4 years)
- Mathematics (full-time, 4 years)
- Business Mathematics (full-time, 4 years)
- Information Technology, Mathematics and Educational Management (full-time, 4 years)

- **There are 11 specialties in the master programs**

- Business Informatics with English
- Software Technology with Specialization in Graphical Environments and User Interfaces
- Software Technology with Specialization in Mobile Systems and Applications
- Software Technology with Specialization in Software Architectures and Tools
- Software Technology with Specialization in Artificial Intelligence Systems
- Teaching Informatics and Information Technology in the Schools
- Teaching Information Technology in the Primary Schools
- Teaching Information Technology in the Secondary Schools
- Teaching Mathematics in the Schools
- Applied Mathematics

- **We also offer doctoral training programs in:**

- mathematics,
- informatics and
- pedagogy of education in mathematics , informatics and computer technologies .

In addition, FMI provides two postgraduate training programs leading to the qualifications of Teacher of Mathematics and Teacher of Informatics and Information Technologies, respectively.

AI in the Bachelor and Master Programs in FMI



• **Mandatory courses in AI:**

- Artificial Intelligence (fundamentals);
- Intelligent systems
- Discrete mathematics
- Intelligent agents
- Intelligent software architectures
- Ontology engineering
- Big Data

• **Elective courses in AI:**

- Semantic Web
- Machine learning
- Cognitive robotics
- Artificial intelligence and IoT
- Semantic modelling
- Discrete logistic models,
- Introduction in theory of informatics
- Introduction in Artificial Neural Network and Deep Learning
- Graph theory



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Participants from the University of Plovdiv



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Professor Sava Grozdev, PhD – Mathematics and Pedagogy of Education in Mathematics



Professor Stanimir Stoyanov, PhD – Artificial Intelligence, Software Engineering



Professor Asen Rahnev, PhD – Informatics and Pedagogy of Education in Computer Technology, Head of the Department of Computer Technology



Assoc. Professor Ivaylo Staribratov, PhD – Pedagogy of Education in Mathematics



Assoc. Prof. Dobrinka Milusheva - Boykina, PhD - Pedagogy of Education in Mathematics, Vice Dean of FMI



Chief Assistant Professor Veneta Tabacova- Komsalova, PhD - informatics



Professor Todorka Terzieva, PhD – Pedagogy of Education in Computer Technologies, Head of the Department of Software Technology



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