

# WARSAW SCHOOL OF COMPUTER SCIENCE

# MASTER STUDIES - STUDY PLAN -COMPUTER SCIENCE (practical profile)

Study path for first-cycle studies in Computer Science (2025/26 Academic Year)

# COURSES

# SEMESTER 1

# Common core:

- Information System Modeling and Analysis (lectures + laboratories) 7 ECTS
- Advanced Software Engineering (lectures + laboratories) 6 ECTS
- Advanced Object-Oriented Design (lectures + laboratories) 6 ECTS
- Cybersecurity of Information Systems (lectures + laboratories) 6 ECTS
- Monographic course I: Tele-information systems (lectures + practical classes) 3 ECTS
- Monographic course II: Cloud computing technologies and deployment (lectures + practical classes) 3 ECTS

# Specialized subjects (Cloud Computing specialization):

Advanced data processing in the cloud (lectures) - 7 ECTS

# Specialized subjects (IT Project Management specialization):

- Advanced Software Engineering (PMI<sup>®</sup>, DSDM<sup>®</sup>, Project Quality & Risk Management) lectures + practical classes - 6 ECTS.
- IT Service and Quality Management methodologies (ITIL, ISO20000/22301, FitSM, YASM, Knowledge management KCS) (lectures) 7 ECTS

# Specialized subjects (AI specialization):

- ML Development in Python (lectures + laboratories) 5 ECTS
- Machine Learning Foundations (lectures + laboratories) 7 ECTS

# SEMESTER 2

# Common core:

- Information System Modeling and Analysis (lectures + laboratories) 7 ECTS
- Advanced Database Systems (lectures + laboratories) 5 ECTS
- Data Mining (lectures + laboratories) 4 ECTS
- Monographic course III: Data strategies in an organization (lectures + practical classes) -5 ECTS
- Foundations of Management (lectures) 6 ECTS

# Specialized subjects (Cloud Computing specialization):

- Advanced data processing in the cloud (lectures + laboratories) 7 ECTS
- AWS Cloud Computing (lectures + laboratories) 5 ECTS

# Specialized subjects (IT Project Management specialization):

- IT Service and Quality Management methodologies (ITIL, ISO20000/22301, FitSM, YASM, Knowledge management KCS) (lectures + practical classes) 7 ECTS
- Major project management methodologies (Prince2, Prince2 Agile, PMI, Togaf) (lectures + laboratories) 10 ECTS

# Specialized subjects (AI specialization):

- ML Development in Python (lectures + laboratories) 5 ECTS
- Machine Learning Foundations (lectures + laboratories) 7 ECTS

# <mark>SEMESTER 3</mark>

# Common core:

- Mobile Systems (lectures + laboratories) 5 ECTS
- Monographic course III: Artificial Intelligence (lectures + practical classes) 5 ECTS
- Foundations of Management (lectures) 6 ECTS
- Professional internship (3 months) 15 ECTS

# Specialized subjects (Cloud Computing specialization):

- Cloud Computing examples of deployments (lectures + laboratories) 5 ECTS
- Cloud Computing in the context of Microsoft Azure (lectures + laboratories) 6 ECTS
- Master thesis seminar (practical classes) 16 ECTS

# Specialized subjects (IT Project Management specialization):

- Agile project management methodologies (Agile Scrum, DevOps, Product Owner) (lectures + laboratories + practical classes) 6 ECTS
- Master thesis seminar (practical classes) 16 ECTS

# Specialized subjects (AI specialization):

- Deep learning (lectures + laboratories) 6 ECTS
- MLOps (lectures + laboratories) 5 ECTS
- Master thesis seminar (practical classes) 16 ECTS

# <mark>SEMESTER 4</mark>

# Common core:

Professional internship (3 months) - 15 ECTS

# Specialized subjects (Cloud Computing specialization):

- Information solutions in Cloud Computing (lectures + laboratories) 6 ECTS
- Master thesis seminar (practical classes) 16 ECTS

# Specialized subjects (IT Project Management specialization):

- Supplier Management methodologies (SIAM, Supplier Management) (lectures + practical classes) 6 ECTS
- Master thesis seminar (practical classes) 16 ECTS

# Specialized subjects (AI specialization):

- Generative Artificial Intelligence (lectures + laboratories) 6 ECTS
- Master thesis seminar (practical classes) 16 ECTS