



## Master In Next-Generation Computing (Quantum Technology)

<i>Common Courses</i>	<i>Credit Hours</i>
Logic and Discrete Mathematics	2
Foundations of Computer Science	2
Artificial Intelligence Fundamentals	2
Object Oriented Programming and Data Analysis	2
Research Methodology	1

<i>Core Courses</i>	<i>Credits</i>
Quantum Mathematics	1
Quantum Fundamentals	2
Quantum Information	2
Quantum Computation	2

<i>Elective Courses</i>	<i>Credits</i>
Quantum Optics	1
Advanced Quantum Optics (requires Quantum Optics)	1
Quantum Machine Learning	1
Quantum Communication and Quantum Internet	1
Applied Quantum Cryptography (requires Quantum Communication)	1
Advanced Realization of Quantum Computers	1
Semiconductor Devices: Quantum Transport at the Nanoscale	1
Ultra-Cold Quantum Gases	1
Quantum Chemistry	1
Quantum Artificial Intelligence	1
Advanced Artificial Intelligence	1
Special Topics Elective	1

<i>Research-Oriented Projects</i>	<i>Credit Hours</i>
Seminar	1
Applied Research Project	4