



## Specialization A

### Core courses example 1

Quantum Physics I

Introduction to Quantum science and technology

Introduction to Quantum Information Processing

Introduction to Quantum Computation

## Specialization A

### Core courses example 2

Introduction to Quantum science and technology

Solid State Systems for Quantum Information

Semiconductors devices I

Introduction to Quantum Computation



# Specialization A

## Options Example 1

Information Theory and Coding

Advanced algorithms

Optimization for machine learning

Quantum Information Theory

Computational Quantum Physics

Quantum optics and quantum information

Computational Methods in Molecular  
Quantum Mechanics

# Specialization A

## Options Example 2

Information Theory and Coding

Cryptography and security

Machine learning

Quantum Information Theory

Computational Quantum Physics

Quantum Electrodynamics and  
Quantum Optics

Molecular quantum  
dynamics