Aalto University

BSc in Science and Technology
Quantum Technology

School of Science and School of Electrical Engineering
Aalto University

Structure of the BSc

Basic studies	**65cr**
Math	25cr
Programming/IT	25cr
General studies	10cr
Entrepreneurship	5cr

Major studies	**65cr**
Compulsory studies	45cr
Optional courses	10cr
BSc thesis	10cr

Minor 20-25cr

Electives 25-30cr

Quantum technology - timetable

Year 1

Autumn

- MS-A0111 Diff & int calculus 1
- MS-A0011 Matrix algebra
- CS-A1110 Programming 1
- *New* Intro to quantum tech
- Intro for BSc students
- TU-A1300 Industrial eng manag.

Spring

- MS-A0502 Probability & statistics
- MS-A0211 Diff & int calculus 2
- MS-A0311 Diff & int calculus 3
- CS-A1120 Programming 2
- Electromagnetism
- *New* Quantum materials

Year 2

Autumn

- MS-C1350 Part diff eqs
- CS-A1140 Data struct & algorith
- PHYS-E0413 Theoretical mechanics
- PHYS-C0210 Quantum mechanics
- Language course
- Minor/elective

Spring

- CS-A2120 Programming studio 2
- PHYS-C0220 Thermo & stat mech
- *New* Quantum info
- Major optional
- Minor/elective
- Minor/elective

Year 3

Autumn

- CS-A1150 Databases
- *New* Quantum labs
- Major optional
- Minor/elective
- Minor/elective
- Minor/elective

Spring

- BSc thesis
- Minor/elective
- Minor/elective
- Minor/elective
- Minor/elective

Major optional studies – choose 10 cr

	Course	cr	P
ELEC-E3240	Photonics	5	V
PHYS-E0525	Microscopy of nanomaterials	5	III-IV
ELEC-E3230	Nanotechnology	5	IV
PHYS-E0414	Advanced quantum mechanics	5	I-II
PHYS-E0415	Statistical mechanics	5	I-II
Courses from the Finnish BSc program can also be selected			