Syllabus for the MSc QT program

Semester 1

Mandatory

Quantum Mechanics I	Mandatory	4
Electrodynamics I	Mandatory	4
Optics	Mandatory	4
Electronics with lab	Mandatory	4
Physics Lab	Mandatory	3

Any one of the following two

Mathematical Methods II	Optional	3
Methods in Experimental Physics	Optional	3

Total: 22 credits

Semester 2

Mandatory

Quantum Information & Quantum Computing	Mandatory	3

Any four of the following five

Quantum Mechanics II	Optional	4
Statistical Mechanics I	Optional	4
Condensed Matter Physics I	Optional	4
Atomic and Molecular Physics	Optional	4
Computational Physics	Optional	4

Any one of the following two

Quantum Optics	Optional	3
Electronics & Instrumentation	Optional	3

Total: 22 credits

Syllabus for the MSc QT program

Summer semester

Mandatory

Summer python camp	Mandatory	2
Summer project	Mandatory	2

Total: 4 credits

Semester 3

Mandatory

Q Lab II	Mandatory	4
Quantum Industry	Mandatory	3
Quantum Projects	Mandatory	3
Quantum metrology & sensing	Mandatory	4
Quantum Devices	Mandatory	3

Any one of the three

Quantum Communication & Cryptography	Optional	3
Physics at nanoscale	Optional	3
Condensed matter physics II	Optional	3

Total: 20 credits

Semester 4 (Proposal)

Mandatory

Final MSc Thesis project	Mandatory	27

Total: 27 credits

Summary: Semester wise credits

Semester 1	**22**
Semester 2	**22**
Summer	**4**
Semester 3	**20**
Semester 4	**27**
Total	**95**