



MASTER OF SCIENCE DEGREE IN PHYSICS-QUANTUM COMPUTING

COURSE REQUIREMENTS

Credits: Students must take a total of 30 credits, of which 15 or more must be at the graduate level, defined as course that carry the “Graduate 50% Y” standing. All students must complete Physics 709, Physics 779, and Physics 707.

Courses: Courses for the degree are all offered by the Physics Department. Course offered by other departments will be allowed only in exceptional circumstances, and must be approved by the MS-QC Committee.

Grades: Students must achieve an overall GPA of 3.0 or better.

Advising: Students will work with MS-P-QC faculty to develop a plan of study. Students will meet with a MS-P-QC faculty advisor soon after they arrive to do this. The plan will be tailored to the needs of the individual.

Residence requirement: A minimum of 16 graduate credits must be earned in residence at UW-Madison. **Time limit:** This is a program designed to be completed in one year. In exceptional circumstances, the Chair of the MS-P-QC Committee may allow an extension of up to two years total.

SUGGESTED CURRICULUM

Fall Semester:

Physics 709 Introduction to Quantum Computing (required, 3 credits)

Physics 531 Introduction to Quantum Mechanics or 731 Quantum Mechanics (3 credits)

Physics 415 Thermal Physics or 715 Statistical Mechanics (3 credits)

Physics Elective (numbered 300 or higher, 3 credits)

Spring Semester:

Physics 779 Advanced Quantum Computing (required, 3 credits)

Physics 551 Solid State Physics or 751 Advanced Solid State Physics (3 credits)

Physics 449 Atomic and Quantum Physics or 545 Introduction to Atomic Structure (3 credits)

Physics Elective (numbered 300 or higher, 3 credits)

Summer Semester:

Physics 707 Quantum Computing Laboratory (required, 4 credits)

Physics 799 Directed Study (2 credits)