QUANTUM INFORMATION SCIENCES (QIS)

Overview

Master of Science

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Opportunities for study are those usually associated with large research universities, while the atmosphere of a small liberal arts university with an ideal faculty/student ratio is maintained.

For admission to the MS program, students should have knowledge of senior level undergraduate mechanics, electricity and magnetism, and quantum physics. For admission to the certificate program, students should have knowledge of senior level undergraduate and quantum physics. The course of study for each student is planned in conference with the graduate advisor after an evaluation of academic background and experience

Our mission is to nurture the upcoming wave of thinkers, scientists, and engineers in the expanding fields of quantum information and quantum technologies. We concentrate on the intersection where quantum information processing connects with quantum machines, creating a synergy for innovation and discovery.

The curriculum encompasses: 1) an understanding of fundamental quantum principles and quantum information concepts, 2) the theoretical and experimental aspects of quantum matter, exploring the boundaries of information capacity and transmission, 3) the development and functionality of quantum devices, focusing on the production and operation of quantum decision-makers, and 4) the comprehensive study of quantum computing, from gate-level operations to programming languages, incorporating the quintessential quantum algorithms that characterize the field.

For more details email the program director, Dr. Fred Salsbury (salsbufr@wfu.edu)

Programs

- Quantum Information Sciences, MS (https://bulletin.wfu.edu/graduate/programs/degree-programs/quantum-information-sciences/quantum-information-sciences-ms/)
- Quantum Information Sciences, Certificate (https://bulletin.wfu.edu/graduate/programs/certificates/quantum-information-sciences-certificate/)