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## Building Quantum Information Science Capabilities at HBCUs: Insights and Recommendations

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The IBM HBCU Quantum Center is at the forefront of revolutionizing education and research through a one-of-a-kind industry academic partnership. Here, we delve into strategies for building Quantum Information Science and Engineering (QISE) capabilities at HBCUs, drawing insights from initiatives such as the HBCU Quantum Center while considering the broader context of the CHIPS and National Quantum Initiative Renewal Acts. Our discussion encompasses the current status of QISE initiatives at HBCUs, including curriculum development, research capabilities, and faculty research output across physics, computer science, and engineering.

We also explore the interdisciplinary nature of quantum education and research, emphasizing collaborative efforts aimed at equipping students with the skills necessary for success in advanced computing technologies of the future. Additionally, we offer actionable recommendations for enhancing capacity-building efforts including curriculum enhancement, faculty recruitment and retention strategies, and fostering cross-institutional research collaboration.

In conclusion, this presentation provides a comprehensive overview of the ongoing efforts to build QISE capabilities at HBCUs, informed by specific initiatives in the HBCU Quantum Center and broader HBCU community. Through collaboration and strategic investment, we aim to further advance quantum education and research, ensuring that HBCUs play a pivotal role in shaping the future of quantum information science.

### Academic or Professional Status

Faculty

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