

## Qiskit Global Summer School 2025 Workshop

★ Time: July 18th- July 19th, 2025 (Friday and Saturday).

★ Venue: Yang Jin-Bao Lecture Hall (Room 104), Center for Condensed Matter.

### Agenda and Timetable

Start	End	Minutes	Session Title
Day 1 - July 18 (Fri)			
09:00	09:30	30	(Registration)
09:30	09:40	10	Opening Speech
09:40	11:00	80	The Coding Challenge: Recreating famous quantum experiments(1/2) Dive into the origins of quantum mechanics by recreating foundational experiments that paved the way for quantum computing.
11:00	11:30	30	(Break)
11:30	13:00	90	The Coding Challenge: Recreating famous quantum experiments(2/2) Dive into the origins of quantum mechanics by recreating foundational experiments that paved the way for quantum computing.
13:00	14:00	60	(Lunch)
14:00	15:30	90	The Coding Challenge: Cutting Through the Noise Lab (1/2) Learn to mitigate quantum noise using transpilation and error correction techniques to achieve accurate results on today's quantum computers.
15:30	15:50	20	(Break)
15:50	17:20	90	The Coding Challenge: Cutting Through the Noise Lab (2/2) Learn to mitigate quantum noise using transpilation and error correction techniques to achieve accurate results on today's quantum computers.
17:20	17:25	5	Wrap-up for Day 1 Encourage participants to continue working on the challenge and submit their answers.
17:25	17:30	5	Closing Speech for Day 1
Day 2 - July 19 (Sat) , Next Page			

Day 2 - July 19 (Sat)			
09:00	09:30	30	(Registration)
09:30	11:00	90	<b>The Coding Challenge : Sampling Quantum Diagonalization (SQD) (1/2)</b> Explore the Power of Many (Samples) to estimate the energy of a chemistry Hamiltonian using SQD techniques. This hands-on lab will demonstrate how SQD can provide accurate results in quantum chemistry.
11:00	11:30	30	(Break)
11:30	13:00	90	<b>The Coding Challenge : Sampling Quantum Diagonalization (SQD) (2/2)</b> Explore the Power of Many (Samples) to estimate the energy of a chemistry Hamiltonian using SQD techniques. This hands-on lab will demonstrate how SQD can provide accurate results in quantum chemistry.
13:00	14:00	60	(Lunch)
14:00	15:30	90	<b>The Coding Challenge: Quantum Error Correction (QEC) Lab(1/2)</b> 1.Classical Error-Correcting Code Revisit: Gain a deeper understanding of classical error correction as a foundation for quantum error correction. 2.Quantum Error Correcting Codes: Learn how to design and implement error-correcting codes that are critical for the future of fault-tolerant quantum computing.
15:30	15:50	20	(Break)
15:50	17:20	90	<b>The Coding Challenge: Quantum Error Correction (QEC) Lab(2/2)</b> 1.Classical Error-Correcting Code Revisit: Gain a deeper understanding of classical error correction as a foundation for quantum error correction. 2.Quantum Error Correcting Codes: Learn how to design and implement error-correcting codes that are critical for the future of fault-tolerant quantum computing.
17:20	17:25	5	<b>Wrap- up for Day 2</b> Encourage participants to continue working on the challenge and submit their answers.
17:25	17:30	5	Closing Speech for Day 2