

Pioneer Research Institute Evaluation Form

Scholar Information

Scholar's Full Name:	Özmal, Necla Duru (Duru)
Scholar's Research Concentration:	Introduction to Quantum Computing
Title of Scholar's Research Paper:	Effect of Orbital Localization Methods on Quantum Fragmentation and Embedding Accuracy

Grading and Academic Oversight Section

Grade conferred by professor: A

**Full grading rubric approved by Pioneer Academics and Oberlin College*

The Pioneer Research Institute's college accreditation and academic oversight are conducted collaboratively with Oberlin College:

Listing on Common Application:	"Summer Program, Credit Awarded Directly by Oberlin College"
Course Title on Coalition Application:	"099" "Pioneer Research Course"
College Course ID on UC Application:	"INST 099" "Pioneer Research Course"

Comprehensive Evaluation Section

Evaluator Name & Full Title:	Brenda Rubenstein, Associate Professor of Chemistry and Physics
College/University & Department:	Brown University, Depts. of Chemistry and Physics
Full Educational Background of Evaluator:	ScB., Chemical Physics, Brown University (2007) MPhil, Theoretical Chemistry, University of Cambridge (2008) PhD, Chemical Physics, Columbia University (2013) Lawrence Distinguished Postdoctoral Fellow, LLNL (2013-2016)

Please briefly explain the nature and requirements of the research paper and your interaction with the scholar:

In this course, students were asked to progressively construct an original research paper related to quantum computing. The original component involved using different pieces of code to try to come to original findings. Students chose their exact topics after consulting with me to find something feasible and that would complement their interests. We regularly met to discuss and edit milestones such as the Introduction, Background, and Results.

Necla was always very engaged, asking excellent questions. She engaged with a relatively complicated topic on quantum embedding and localization for her paper, but learned it well and wrote a strong research paper. Necla also did a great job of evaluating her peers' papers and learning the group class material.

Please rate the scholar in the following areas:

	Excellent	Good	Average	Below Average	Poor
Ability to form original ideas and concepts	X				
Ability to communicate thoughts in an effective and articulate manner	X				
Ability to synthesize and organize information from disparate sources	X				
Level of scholar's curiosity, aptitude, and industriousness	X				

Based on the scholar's performance throughout Pioneer, how would you rate this scholar's potential for undergraduate-level academic work at a top college/university, relative to other undergraduate students whose academic work you have mentored?

One of the best I have encountered, top 5%	Excellent, top 10% X
Very Good, top 25%	Good, top 50%
Below Average	

Describe some of the scholar's strengths:

Necla is very kind, a strong communicator, and very inquisitive. She always asks the right questions and shows the courage to do so. She is also very persevering, which is important for research.

Describe some areas in which the scholar can improve:

Necla's paper was on a complicated topic, but she could have further learned those details with help.

While the second half of the research work was one-to-one with the professor, the first half involved a small research cohort of 3-6 scholars. Describe the contribution that the scholar made to the research group discussion and learning:

Necla was an excellent communicator and collaborator. She actively helped her peers. Necla also actively engaged with me, asking excellent questions throughout.

Would you recommend this scholar to a college admissions officer at a top college or university? Why or why not?

Yes, I would absolutely recommend Necla to a top university. She demonstrates the dedication and inquisitiveness to succeed in most settings - these are typically the key characteristics. She took on a hard project and excelled, which is very telling.

Evaluator's Signature:	
Evaluator's Printed Name:	Brenda Rubenstein
Date of Evaluation:	8/2/2025
Evaluator's Email:	Brenda_Rubenstein@brown.edu

Pioneer Academics affirms that the scholar whose research paper is attached has followed Pioneer Academics' protocols for developing original research and that their paper has met Pioneer Academics' standards for authenticity. The grading and evaluation have met the standards collaboratively defined by Pioneer Academics and Oberlin College & Conservatory. If there are any questions regarding the work's academic integrity, please contact us at academic.integrity@pioneeracademics.com or by calling (855) 572-8863. We will conduct an immediate review and respond to your questions promptly.