**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 5: MPI**

**Lesson 9: Hello World**

**Instructor Guide**

*Developed by Michael N. Groves for the Shodor Education Foundation, Inc.*



*Except where otherwise noted, this work by The Shodor Education Foundation, Inc. is licensed under CC BY-SA 4.0. To view a copy of this license, visit*[*https://creativecommons.org/licenses/by-sa/4.0*](https://creativecommons.org/licenses/by-sa/4.0)

*Browse and search the full curriculum at*[*http://shodor.org/petascale/materials/semester-curriculum*](http://shodor.org/petascale/materials/semester-curriculum)

*We welcome your improvements! You can submit your proposed changes to this material and the rest of the curriculum in our GitHub repository at*[*https://github.com/shodor-education/petascale-semester-curriculum*](https://github.com/shodor-education/petascale-semester-curriculum)

*We want to hear from you! Please let us know your experiences using this material by sending email to* [*petascale@shodor.org*](mailto:petascale@shodor.org)

* Instructors are encouraged to give a brief overview of MPI from Unit 5 Lessons 1 and 9 as well as distributed computing.
* The slides are meant to walk the students through querying how the system keeps track of each process through ranks. Discuss that first and then have the students write and run the code. Then work on the variations outlined in the Student Assessments.

**Common Pitfalls for Students and Instructors**

* Students may not be familiar with Python. The code is written such that it should be straightforward to get started.