

HPRC SHORT COURSES

Texas A&M High Performance Research Computing is offering introductory short courses on a variety of computing topics. These courses are offered free of charge and are available to anyone at Texas A&M. ACES courses are available to users at Texas A&M and other institutions through ACCESS.

- Most courses require an HPRC account, for which anyone at Texas A&M may apply. To apply for an account, please review the policies at <u>hprc.tamu.edu/policies</u> and apply at <u>hprc.tamu.edu/apply</u>.
- Courses on the ACES cluster require an ACCESS ID, which individuals from both Texas A&M and other institutions can obtain at <u>operations.access-ci.org/identity/new-user</u> (scroll down the page). To learn more about ACCESS, please visit <u>access-ci.org</u>.

Friday September 06 | 10:00 AM-12:30 PM | Blocker Building

Introduction to Linux

Prerequisites: Active HPRC account

Topics in this short course include basic commands, process and filesystem concepts, shells, I/O redirection, and shell scripts. The material covered here is a prerequisite to most other courses.

Details & Registration

Friday September 06 | 01:30 PM-04:00 PM | Blocker Building

Introduction to HPRC Computing Resources

Prerequisites: Active HPRC account, basic Linux/Unix skills

This class includes policies, hardware overviews, getting connected, file systems,

computing environments, development environments, batch processing, and common problems.

Details & Registration

Tuesday September 10 | 10:00 AM-12:30 PM | Zoom

ACES: Introduction to Composable Computing on ACES and FASTER

Prerequisites: Active ACCESS ID, basic Linux/Unix skills

Introduction to composable clusters, where hardware can be reallocated between servers based on user requirements. This class will use HPRC's two composable clusters FASTER (Fostering Accelerated Scientific Transformations, Education, and Research) and ACES (Accelerating Computing for Emerging Sciences). Topics covered include hardware, access, policies, file systems, and batch processing.

Details & Registration

Tuesday September 10 | 01:30 PM-04:00 PM | Zoom

ACES: Using the Slurm Scheduler on Composable Resources

Prerequisites: Active ACCESS ID, basic Linux/Unix skills

Introduction to using the Slurm scheduler on the ACES cluster, a composable accelerator testbed at Texas A&M University. Topics covered include multiple job scheduling approaches and job management tools.

Details & Registration

Friday September 13 | 10:00 AM-12:30 PM | Blocker Building

Intermediate Linux

Prerequisites: Active HPRC account, basic Linux/Unix skills

This course assumes a working knowledge of the Linux environment. Participants will practice running commands on the Grace cluster, including vim, sed, awk, grep, bash scripting, and bc. We will also be covering how to customize your environment.

Details & Registration

Friday September 13 | 01:30 PM-04:00 PM | Blocker Building Applying for Accounts on HPRC Clusters Prerequisites: None

Descriptions of the types of accounts on the HPRC clusters will be explained. User eligibility and requirements for each type of application and allocation will be discussed

Details & Registration

Tuesday September 17 | 10:00 AM-12:30 PM | Zoom ACES: AI TechLab in Jupyter Notebooks Prerequisites: Active ACCESS ID, basic Python skills

This technology lab contains a set of sessions to help a new user start an AI project on the ACES cluster, a composable accelerator testbed at Texas A&M University.

Details & Registration

Tuesday September 17 | 01:30 PM-04:00 PM | Zoom

ACES: Introduction to OpenFOAM

Prerequisites: Active ACCESS ID, basic Linux/Unix skills. Recommended: C++ experience

Introduction to OpenFOAM, the open source CFD Toolbox, and how to use it on HPRC clusters. Hands-on tutorial on how to get started with running your simulations, as well as implementing new theories. Exercises will be performed using the ACES cluster, a

Details & Registration

Friday September 20 and 27 | 09:00 AM-4:00 PM | Blocker Building

Introductory and Intermediate Python for Data Science - Parts 1 and 2

Prerequisites: None

A two-part introduction to programming with Python. These two Friday sessions will cover programming basics and introduce data structures and operations used in Python. Suggested starting place for people new to programming or Python.

Details & Registration

Tuesday September 24 | 10:00 AM-04:00 PM | Zoom

ACES: Introduction to Data Science in R

Prerequisites: Active ACCESS ID, basic Linux/Unix skills

This course is an introduction to the R programming language and covers the fundamental concepts needed to operate in the R environment with a particular focus on data science. This course assumes no prior experience with R.

Details & Registration

This work is supported by NSF Grants: Accelerating Computing for Emerging Sciences (<u>ACES award #2112356</u>), Fostering Accelerated Scientific Transformations, Education and Research (<u>FASTER award #2019129</u>), and Southwest Expertise in Expanding, Training, Education and Research (<u>CC* SWEETER award #1925764</u>).

To see the complete catalog of short courses offered by High Performance Research Computing, please visit <u>hprc.tamu.edu/training</u>. Check out our homepage at <u>hprc.tamu.edu</u> and follow us on <u>X</u> and <u>YouTube</u> The contents of this message do not necessarily represent the positions, strategies or opinions of Texas A&M University or its entities..

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