



Practical Introduction to HPC and Research Computing

CAMSA Team

**CAMSA
FACULTY-HACK**

4: Syllabus

- This course provides exposure to advanced topics in computer networks including recent research findings in this field. The topics include: internetworking, Internet concept, Client-server model for applications, Network and internet management. Also, this course covers recently emerging protocols and technologies such as: Virtualization and Software Defined Networks (SDNs), IPv6, wireless networks, Secure Socket Layer, and Transport Layer Security.
- The course integrates also hands on labs about the usage of High-Performance Computing (HPC) in computer networks and other computing Disciplines. The goal is to allow students to use such resources in their other courses or future research or experiments.

5: Sample Exercises

- In the past I used existing public materials in testbeds such as Geni.net, XSEDE, Deterlab, etc. Additionally, I provide samples of my own experience implementing those experiments and my own feedback to previous students.
- There is one particular example I used and like this year is ChameleonCloud shared experiments portal:
(<https://www.chameleoncloud.org/experiment/share/>)
- The portal focuses on an idea that I like (reproducibility), and allows users to submit their feedback and also their own experiments.
- I am planning also to utilize the new TAMU cluster ACES
(<https://portal-aces.hprc.tamu.edu/pun/sys/dashboard>)
- I am a member of SWEETER grant with TAMU with the aim of enabling the spread of usage of HPC resources across A&M system and the region.

6: Supporting Gateways

- <https://access-ci.org/>
- <https://hprc.tamu.edu/>