## Running jobs on the Prince Cluster

### Accessing the Prince Cluster
- From Windows workstation
- From Mac workstation

### Software and Environment Module

### Job script and resource request
- Introduction to job scheduling
- Submitting jobs with `sbatch`
- Requesting resources
- Using computing nodes interactively

### Monitoring batch jobs
- Monitoring batch jobs - `squeue`
- What is running and where? `slurmtop`

### Canceling your jobs

### Compiling your own software

### Putting all pieces together
- An Amber example
- A R example

### Summary

- You can compile, edit scripts and view results on the login nodes, but **computational work should be run on the compute nodes**
- You can access compute nodes with `srun`
  - Either via a job script, or interactively
  - Compute nodes are allocated to jobs by the scheduler, so your job might not start immediately
  - Jobs must request resources, but mostly need not specify a queue.
  - Requesting just slightly more than when you expect to need is generally the best practice
- **Short jobs get higher priority, and short or small jobs are easier to schedule quickly**
- You can monitor your job’s progress with `squeue`, `sstat`, `sacct`, `scontrol` or slurmtop
- Software is managed by Environment Modules
  - Use `module avail` to find software packages
  - And `module load` to load them into your environment
    - including within job scripts!
  - Use `module purge` to return to a clean environment before loading a new set of modules
  - Other useful commands are `module list` and `module show`