

# Environment modules cheat sheet

JCU HPC uses [environment modules](#) to deliver multiple versions of software in a multi-user HPC cluster.

This page house a "cheat sheet" style glance at some environment modules functionality. You will need to replace any occurrence of `<software-name>` and/or `<version>` below with an appropriate name/value.

## To list all available software

```
module avail
```

## To list all versions of a given piece of software

```
module avail <software-name>
```

## To display a brief summary for a given piece of software

```
module help <software-name>
```

## To list environment modules that have already loaded

```
module list
```

## To load the default version of a piece of software

```
module load <software-name>
```

The default version of a piece of software will usually be a *safe* (rather than latest) version.

## To load a specific version of a piece of software

```
module load <software-name>/<software-version>
```

HPC staff recommend this approach as default versions may change with time.

## To switch to another version of the same piece of software

```
module switch <software-name>/<software-version>
```

## To list changes that would be (or have been) made to your environment from loading a specific module

```
module show <software-name>/<software-version>
```

## To unload a module you have loaded

```
module unload <software-name>
```

Specification of a version shouldn't be required here.

## To unload all of your currently loaded module

```
module purge
```

## Information specific to JCU HPC configuration

Most module files, when loaded, will set an environment variable `<SOFTWARE>_HOME` which holds the installation home for the software. For example, try

```
module load vcftools
echo $VCFTOOLS_HOME
ls -lR $VCFTOOLS_HOME
```

The most common environment variable modified by the loading of an environment variable is `PATH`. This has been done for convenience.