

Using R as GIS offers a massive advantage over the current standard: ESRI ArcGIS. R is free, and all packages are free, whereas a license for ArcGIS is several hundred dollars per year. (The free student version of ArcGIS has reduced functionality, and cannot be used as a post-doc or professor.) Further, ArcGIS is not the most user-friendly program, and the open community of R package developers can more easily address usability. Downsides of using R include requiring multiple packages, and a less well-developed online community of problem-solvers than with (non-spatial) statistical packages.

See also Table 1 of this web page for more advantages/disadvantages:
<http://robinlovelace.net/r/2014/11/28/r-as-a-gis-geoinformatics.html>
(But note that this person is influenced by the "steep learning curve" of R.)

Before class, you will need to install the following packages: `rgdal`, `rgeos`, `raster`.

You will also need to download the folder "Layers". If you look in this folder, you will notice that there are, for example, four files that are named "hydro" with different file types. If you have never used spatial files before - A shape file is actually a compilation of several files of different types, and you need all of these files for the layer "hydro" to work properly.