

# Time series models for ecologists: course pre-requisites

*Andrew Parnell*

In preparation for the course please install the following, preferably in the below suggested order.

Remember you will need to bring your own personal computer for the duration of the course.

## Step 1

Install the following using the corresponding links

- R: <http://www.r-project.org>
- Rstudio (optional but recommended): <https://www.rstudio.com>
- JAGS: <http://mcmc-jags.sourceforge.net>

## Step 2

Now install the following packages by going into Rstudio (or R) and typing:

```
install.packages(c('R2jags',  
                  'rjags',  
                  'lubridate',  
                  'tidyverse',  
                  'forecast'))
```

## Step 3

Install **rstan** by going to this [link](#) and following the instructions for your operating system.

## Step 4

Check that JAGS works by going to a command line terminal and typing **jags**. If it opens successfully type **exit**.

Now go into R and copy and paste the following text:

```
library(R2jags)  
model_code="  
model {  
  y ~ dnorm(mu,1)  
  mu ~ dnorm(0,1)  
}  
"  
model=jags(data=list(y=1),  
           model.file=textConnection(model_code),  
           parameters.to.save = 'mu',  
           n.chains=1)  
plot(model)
```

This should produce a plot.

## Troubleshooting

If you run into any problems please drop us a line at [andrew.parnell@ucd.ie](mailto:andrew.parnell@ucd.ie).